FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT

SAN BERNARDINO COUNTY

2007 GENERAL PLAN PROGRAM

SCH# 2005101038

Prepared for:
County of San Bernardino
Land Use Services Division, Advance Planning Division
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 94215-0182

February 2007

Prepared by:

URS Corporation
2020 East First Street, Suite 400
Santa Ana, CA 92705
# TABLE OF CONTENTS

## CHAPTER I. EXECUTIVE SUMMARY

A. PROPOSED ACTIONS ........................................................................................................... I-1
B. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY ........................................... I-2
C. SUMMARY OF ENVIRONMENTAL IMPACTS/ISSUES TO BE RESOLVED ....................... I-2
D. CONTENTS OF THE FINAL EIR ..................................................................................... I-2

## CHAPTER II. INTRODUCTION

A. PURPOSE OF THE FINAL ENVIRONMENTAL IMPACT REPORT .................................... II-1
B. LEAD AGENCY .................................................................................................................. II-1
C. INTENT AND USE OF THE FEIR .................................................................................. II-1
D. ORGANIZATION OF THE FEIR ..................................................................................... II-1
E. LOCATION OF DOCUMENTS ......................................................................................... II-2
F. PREPARATION PROCESS ............................................................................................... II-3
G. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY .................................... II-8
   1. Incompatible Uses/Development Standards/Code Enforcement .................................. II-8
   2. Economic Development .............................................................................................. II-8
   3. Preservation of Rural Character ................................................................................ II-9
   4. Public Transportation ................................................................................................. II-9
   5. Infrastructure and Community Facilities .................................................................. II-9
   6. Public Safety ............................................................................................................... II-9

## CHAPTER III. PROJECT DESCRIPTION

A. LOCATION AND BOUNDARIES ...................................................................................... III-1
B. PROJECT CHARACTERISTICS ...................................................................................... III-1
   1. General Overview ....................................................................................................... III-1
   2. Jurisdictional Issues ................................................................................................. III-2
C. PROJECT OBJECTIVES .................................................................................................. III-3
D. PROJECT COMPONENTS .............................................................................................. III-3
   1. General Plan ............................................................................................................. III-3
   1. General Plan ............................................................................................................. III-4
   2. Planning Regions of the County ............................................................................. III-4
   3. Community Plans .................................................................................................... III-5
   4. Development Code .................................................................................................. III-8
   5. Land Use/ Zoning Designation Changes .................................................................. III-8
E. INTENDED USES OF THE FEIR .................................................................................. III-9

## CHAPTER IV. PROJECT ANALYSIS

A. AESTHETICS .................................................................................................................. IV-1
   1. Setting ....................................................................................................................... IV-4
   2. Significance Criteria ................................................................................................. IV-8
   3. Impact Analysis ........................................................................................................ IV-8
   4. Mitigation Measures ................................................................................................. IV-10
   5. Significant Unmitigated Impacts ............................................................................. IV-14
B. AGRICULTURAL RESOURCES .................................................................................. IV-14
   1. Setting ....................................................................................................................... IV-19
   2. Significance Criteria ................................................................................................. IV-23
   3. Impact Analysis ........................................................................................................ IV-23
# TABLE OF CONTENTS

1. **Setting** .......................................................... IV-26
2. **Significance Criteria** ........................................ IV-26
3. **Impact Analysis** .............................................. IV-28
4. **Mitigation Measures** ........................................ IV-29
5. **Significant Unmitigated Impacts** ....................... IV-30

C. **AIR QUALITY** .................................................. IV-31
1. **Setting** .......................................................... IV-31
2. **Significance Criteria** ........................................ IV-31
3. **Impact Analysis** .............................................. IV-33
4. **Mitigation Measures** ........................................ IV-34
5. **Significant Unmitigated Impacts** ....................... IV-35

D. **BIOLOGICAL RESOURCES** ............................. IV-39
1. **Setting** .......................................................... IV-39
2. **Significance Criteria** ........................................ IV-40
3. **Impact Analysis** .............................................. IV-41
4. **Mitigation Measures** ........................................ IV-42
5. **Significant Unmitigated Impacts** ....................... IV-43

E. **CULTURAL AND PALEONTOLOGICAL RESOURCES** ... IV-60
1. **Setting** .......................................................... IV-60
2. **Significance Criteria** ........................................ IV-60
3. **Impact Analysis** .............................................. IV-61
4. **Mitigation Measures** ........................................ IV-62
5. **Significant Unmitigated Impacts** ....................... IV-63

F. **GEOLOGY AND SOILS** ...................................... IV-70
1. **Setting** .......................................................... IV-70
2. **Significance Criteria** ........................................ IV-70
3. **Impact Analysis** .............................................. IV-71
4. **Mitigation Measures** ........................................ IV-72
5. **Significant Unmitigated Impacts** ....................... IV-73

G. **HAZARDS AND HAZARDOUS MATERIALS** ........ IV-77
1. **Setting** .......................................................... IV-77
2. **Significance Criteria** ........................................ IV-77
3. **Impact Analysis** .............................................. IV-78
4. **Mitigation Measures** ........................................ IV-79
5. **Significant Unmitigated Impacts** ....................... IV-80

H. **HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY** ... IV-90
1. **Setting** .......................................................... IV-90
2. **Significance Criteria** ........................................ IV-90
3. **Impact Analysis** .............................................. IV-91
4. **Mitigation Measures** ........................................ IV-92
5. **Significant Unmitigated Impacts** ....................... IV-93

I. **LAND USE AND PLANNING** ............................. IV-103
1. **Setting** .......................................................... IV-103
2. **Significance Criteria** ........................................ IV-107
3. **Impact Analysis** .............................................. IV-108
4. **Mitigation Measures** ........................................ IV-109
5. **Significant Unmitigated Impacts** ....................... IV-110

J. **MINERAL RESOURCES** ...................................... IV-110
1. **Setting** .......................................................... IV-110
2. **Significance Criteria** ........................................ IV-112
3. **Impact Analysis** .............................................. IV-112
## TABLE OF CONTENTS

4. **Mitigation Measures** ........................................................................................................ IV-112
5. **Significant Unmitigated Impacts** ................................................................................ IV-114

K. **NOISE** ........................................................................................................................ IV-115
1. **Setting** ........................................................................................................................ IV-115
2. **Significance Criteria** ...................................................................................................... IV-116
3. **Impact Analysis** ........................................................................................................... IV-116
4. **Mitigation Measures** .................................................................................................... IV-117
5. **Significant Unmitigated Impacts** ................................................................................ IV-119

L. **POPULATION AND HOUSING** ................................................................................ IV-122
1. **Setting** ....................................................................................................................... IV-122
2. **Significance Criteria** .................................................................................................... IV-122
3. **Impact Analysis** .......................................................................................................... IV-124
4. **Mitigation Measures** .................................................................................................... IV-124
5. **Significant Unmitigated Impacts** ................................................................................ IV-126

M. **PUBLIC SERVICES** .................................................................................................. IV-127
1. **Setting** ........................................................................................................................ IV-127
2. **Significance Criteria** .................................................................................................... IV-129
3. **Impact Analysis** .......................................................................................................... IV-130
4. **Mitigation Measures** .................................................................................................... IV-132
5. **Significant Unmitigated Impacts** ................................................................................ IV-133

N. **RECREATION** ............................................................................................................ IV-136
1. **Setting** ........................................................................................................................ IV-136
2. **Significance Criteria** .................................................................................................... IV-138
3. **Impact Analysis** .......................................................................................................... IV-138
4. **Mitigation Measures** .................................................................................................... IV-139
5. **Significant Unmitigated Impacts** ................................................................................ IV-142

O. **TRANSPORTATION/TRAFFIC** .............................................................................. IV-147
1. **Setting** ........................................................................................................................ IV-147
2. **Significance Criteria** .................................................................................................... IV-175
3. **Impact Analysis** .......................................................................................................... IV-175
4. **Mitigation Measures** .................................................................................................... IV-184
5. **Significant Unmitigated Impacts** ................................................................................ IV-187

P. **UTILITIES AND SERVICE SYSTEMS** ..................................................................... IV-188
1. **Setting** ........................................................................................................................ IV-188
2. **Significance Criteria** .................................................................................................... IV-193
3. **Impact Analysis** .......................................................................................................... IV-194
4. **Mitigation Measures** .................................................................................................... IV-196
5. **Significant Unmitigated Impacts** ................................................................................ IV-199

CHAPTER V. **ALTERNATIVES TO THE PROPOSED PROJECT** .................................. V-1

A. **ALTERNATIVE NO. 1 – NO PROJECT ALTERNATIVE (1989 GENERAL PLAN AS AMENDED)** .................................................................................................................. V-1
B. **ALTERNATIVE NO. 2 – REDUCED DEVELOPMENT ALTERNATIVE** ............... V-1
C. **ALTERNATIVE NO. 3 – FUTURE GROWTH IN CITIES SPHERE-OF-INFLUENCE ALTERNATIVE** .......................................................................................................................... V-2
D. **COMPARISON OF THE ALTERNATIVES** ................................................................. V-2

CHAPTER VI. **CUMULATIVE IMPACTS** ........................................................................ VI-1
# Table of Contents

A. Potential Aesthetic Impacts ................................................................. VI-1
B. Loss of Productive Agricultural Resources ........................................... VI-1
C. Degradation of Air Quality ................................................................. VI-1
D. Loss of Biological Resources ............................................................. VI-1
E. Potential Disturbance of Cultural Resources ......................................... VI-2
F. Geology and Soils Impacts ................................................................. VI-2
H. Impacts to Hydrology and Water Quality ............................................. VI-2
I. Impacts to Land Use and Planning ....................................................... VI-2
J. Potential Loss of Mineral Resources .................................................. VI-2
K. Generation of Noise ........................................................................... VI-3
L. Population and Housing ....................................................................... VI-3
M. Increased Demand for Public Services ............................................... VI-3
N. Increased Demand for Recreational Opportunities .............................. VI-3
O. Increased Transportation and Traffic ................................................ VI-3
P. Increased Demand for Utilities and Service Systems ............................ VI-3

## Chapter VII. Growth-Inducing Impacts  

A. Background ......................................................................................... VII-1
B. Elimination of Obstacles to Population Growth .................................. VII-1
C. Promotion of Economic Growth ....................................................... VII-1
D. Summary/Conclusions ....................................................................... VII-2

## Chapter VIII. Preparers of the FEIR, Persons and Agencies Consulted, Reference Documents  

A. Preparers of the FEIR ......................................................................... VIII-1
B. Reference Documents/Persons and Agencies Consulted ....................... VIII-2
C. List of Acronyms ................................................................................ VIII-4
# TABLE OF CONTENTS

## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table I-1.</td>
<td>Summary of Impacts and Mitigation Measures</td>
<td>I-3</td>
</tr>
<tr>
<td>Table I-2.</td>
<td>Summary of Potential Impacts That Cannot Be Mitigated to Below a Level of Significance</td>
<td>I-54</td>
</tr>
<tr>
<td>Table I-3.</td>
<td>Summary of Potential Effects Which Have Been Found Not to Be Significant</td>
<td>I-55</td>
</tr>
<tr>
<td>Table IV-A-1.</td>
<td>Eligible State Scenic Routes in San Bernardino County</td>
<td>IV-16</td>
</tr>
<tr>
<td>Table IV-A-2.</td>
<td>County Designated Scenic Routes</td>
<td>IV-17</td>
</tr>
<tr>
<td>Table IV-B-1.</td>
<td>Top 10 Products</td>
<td>IV-19</td>
</tr>
<tr>
<td>Table IV-B-2.</td>
<td>Total Acreages of Agricultural Land by Category</td>
<td>IV-20</td>
</tr>
<tr>
<td>Table IV-B-3.</td>
<td>Product Type by Acreage for the Valley Region</td>
<td>IV-21</td>
</tr>
<tr>
<td>Table IV-B-4.</td>
<td>Product Type by Acreage for the Desert Region</td>
<td>IV-22</td>
</tr>
<tr>
<td>Table IV-C-1.</td>
<td>State and Federal Ambient Air Quality Standards</td>
<td>IV-33</td>
</tr>
<tr>
<td>Table IV-C-2.</td>
<td>2004 Statewide Emissions Inventory</td>
<td>IV-35</td>
</tr>
<tr>
<td>Table IV-C-3.</td>
<td>2003 South Coast Air Basin Emissions Inventory</td>
<td>IV-36</td>
</tr>
<tr>
<td>Table IV-C-4.</td>
<td>2004 Mojave Desert Air Basin Emissions Inventory</td>
<td>IV-37</td>
</tr>
<tr>
<td>Table IV-D-1.</td>
<td>Native Vegetation Types and Plant Communities within the Valley Region</td>
<td>IV-39</td>
</tr>
<tr>
<td>Table IV-D-2.</td>
<td>Native Vegetation Types and Plant Communities within the Mountain Region</td>
<td>IV-42</td>
</tr>
<tr>
<td>Table IV-D-3.</td>
<td>Native Vegetation Types and Plant Communities within the Desert Region</td>
<td>IV-44</td>
</tr>
<tr>
<td>Table IV-G-1.</td>
<td>Public Use Airports in San Bernardino County</td>
<td>IV-77</td>
</tr>
<tr>
<td>Table IV-G-2.</td>
<td>Known Hazardous Waste Activities in San Bernardino</td>
<td>IV-80</td>
</tr>
<tr>
<td>Table IV-G-3.</td>
<td>Recommendations on Siting New Sensitive Land Uses</td>
<td>IV-83</td>
</tr>
<tr>
<td>Table IV-H-1.</td>
<td>Flood Control District Zones</td>
<td>IV-101</td>
</tr>
<tr>
<td>Table IV-H-2.</td>
<td>Master PlansWithin the County</td>
<td>IV-102</td>
</tr>
<tr>
<td>Table IV-J-1.</td>
<td>Prominent Mine and Processing Plant Locations in San Bernardino County</td>
<td>IV-110</td>
</tr>
<tr>
<td>Table IV-K-1.</td>
<td>Noise Level Standards</td>
<td>IV-120</td>
</tr>
<tr>
<td>Table IV-K-2.</td>
<td>Hourly Noise Level Performance Standards – Locally – Regulated Sources</td>
<td>IV-121</td>
</tr>
<tr>
<td>Table IV-L-1.</td>
<td>Housing Trends by Regional Statistical Area (RSA) 1980-2010</td>
<td>IV-123</td>
</tr>
<tr>
<td>Table IV-M-1.</td>
<td>School Districts, 2002-03</td>
<td>IV-134</td>
</tr>
<tr>
<td>Table IV-M-2.</td>
<td>Schools by Type, 2002-03</td>
<td>IV-135</td>
</tr>
<tr>
<td>Table IV-M-3.</td>
<td>Colleges, San Bernardino County</td>
<td>IV-135</td>
</tr>
<tr>
<td>Table IV-N-1.</td>
<td>Regional and Community Parks in San Bernardino County</td>
<td>IV-143</td>
</tr>
<tr>
<td>Table IV-N-2.</td>
<td>Regional Parks and Community Parks in the Valley Region</td>
<td>IV-144</td>
</tr>
<tr>
<td>Table IV-N-3.</td>
<td>Regional Parks and Community Parks in the Mountains Region</td>
<td>IV-145</td>
</tr>
<tr>
<td>Table IV-N-4.</td>
<td>Regional Parks and Community Parks in the Desert Region</td>
<td>IV-146</td>
</tr>
<tr>
<td>Table IV-O-1.</td>
<td>Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Freeways Located in San Bernardino County</td>
<td>IV-160</td>
</tr>
<tr>
<td>Table IV-O-2.</td>
<td>Existing Lane Configuration, Average Daily Traffic Volumes and Peak Hour Level of Service for State Highways Located in San Bernardino County</td>
<td>IV-161</td>
</tr>
<tr>
<td>Table IV-O-3.</td>
<td>Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Federal Highways Located in San Bernardino County</td>
<td>IV-162</td>
</tr>
<tr>
<td>Table IV-O-4.</td>
<td>Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Major Roadways Located in San Bernardino County</td>
<td>IV-162</td>
</tr>
<tr>
<td>Table IV-O-5.</td>
<td>Existing Transportation Facilities Currently Operating at Level of Service For within San Bernardino County</td>
<td>IV-166</td>
</tr>
<tr>
<td>Table IV-O-6.</td>
<td>San Bernardino County Airports</td>
<td>IV-170</td>
</tr>
<tr>
<td>Table IV-O-7.</td>
<td>San Bernardino County Heliports</td>
<td>IV-171</td>
</tr>
<tr>
<td>Table IV-O-8.</td>
<td>Roadway Daily Volume Thresholds</td>
<td>IV-176</td>
</tr>
<tr>
<td>Table IV-O-9.</td>
<td>Roadway Segments Deficient in 2030 Without Mitigation</td>
<td>IV-177</td>
</tr>
<tr>
<td>Table IV-P-1.</td>
<td>Primary Water Wholesalers in San Bernardino County</td>
<td>IV-199</td>
</tr>
<tr>
<td>Table IV-P-2.</td>
<td>San Bernardino County Water Providers</td>
<td>IV-200</td>
</tr>
<tr>
<td>Table IV-P-3.</td>
<td>San Bernardino County Sewer Service Providers</td>
<td>IV-202</td>
</tr>
<tr>
<td>Table IV-P-4.</td>
<td>Solid Waste Disposal Trend 1995-2002, San Bernardino County</td>
<td>IV-203</td>
</tr>
<tr>
<td>Table IV-P-5.</td>
<td>2000 Electricity Consumption, San Bernardino County</td>
<td>IV-203</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

Table IV-P-6. Renewable Capacity in San Bernardino County in Megawatts (MW) ...................... IV-203
Table V-1. Relative Comparison of Environmental Impacts Among General Plan Alternatives........ V-3

List of Figures
Figure III-1. Regional Location Map.......................................................... III-10
Figure III-2. Planning Regions Map ............................................................. III-11
Figure IV-C-1. Air Districts ........................................................................ IV-38

Appendices
Appendix A: Initial Study / Notice of Preparation and EIR Scoping Process
Appendix B: Comment Letters on the Notice of Preparation
Appendix C: 2030 Growth Projections - Background Information, prepared by Stanley R. Hoffman
   Associates, March 20, 2006
Appendix D: Traffic Analysis Report/Circulation Background Report
Appendix E: Land Use Background Report
Appendix F: Housing Background Report
Appendix G: Open Space Background Report
Appendix H: Conservation Background Report
Appendix I: Noise Background Report
Appendix J: Safety Background Report
Appendix K: Economic Development Background Report
Appendix L: Comments on the Draft EIR/Responses to Comments on the Draft EIR
Appendix M: Mitigation Monitoring Program
CHAPTER I.
EXECUTIVE SUMMARY

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
A. PROPOSED ACTIONS

The San Bernardino County Board of Supervisors, as Lead Agency, proposes to update the General Plan for the County, which presently comprises 20,106 square miles. The current population (1/1/05) is approximately 1,946,202 people, of which 1,642,730 persons reside in 24 incorporated cities and 303,472 persons reside in unincorporated territory.

The previous General Plan, originally adopted in 1989 and subsequently amended, projected a population of 2.2 million within the time horizon of the year 2010. The present General Plan Update projects a population of 2.56 million within a time horizon of the year 2030.

Proposed actions are as follows:

1. Adopt a New General Plan

   The General Plan provides a projection of growth in the County through the year 2030. Text, tables and maps in the draft Plan and its elements identify goals and policies that will guide the future development of residential, commercial, industrial, public facilities, transportation facilities and other land uses that are desired by the public and county decision-makers. The goals and policies are intended to provide a basis for achieving the objectives of the update program while reducing potential impacts on the environment that may result from development during the 25-year planning horizon incorporated into the update of the General Plan. Goals and Policies are provided on a countywide and regional (Valley, Mountains, Desert) basis.

2. Adopt New Community Plans

   Community Plans focus on a particular region or community within the overall County’s General Plan. As an integral part of the overall General Plan, Community Plans must be consistent with the General Plan. To facilitate consistency, the Community Plans build upon the goals and policies of each element of the General Plan. In addition, policies that are included within the Community Plans are regarded as refinements of the broader General Plan goals and policies that have been customized to meet the specific needs or unique circumstances raised by the individual communities. Eleven Community Plans that existed prior to the 1989 General Plan have been incorporated into the County General Plan program. The Community Plans have been updated and revised in a policy-oriented format consistent with the format of the Countywide and Regional Goals and Policies. Two new Community Plans, Lucerne Valley and Muscoy, have been prepared where none existed previously. The Oak Hills Community Plan, because of its relatively recent adoption in 2003, has merely been converted to the current format consistent with the other 13 community plans.

   The following is a listing of each of the 14 Community Plans that are included in the update program:

   - Bear Valley
   - Bloomington
   - Crest Forest
   - Hilltop
   - Homestead Valley
   - Joshua Tree
   - Lake Arrowhead
   - Lucerne Valley
   - Lytle Creek
   - Morongo Valley
   - Muscoy
   - Oak Glen
   - Phelan/Pinon Hills
   - Oak Hills
3. Adopt a New Development Code

The Development Code implements the policies of the San Bernardino County General Plan by classifying and regulating the uses of land and structures within the County. The purpose of the Development Code is to promote and protect the public health, safety, and general welfare of County residents. The proposed San Bernardino Development Code (Title 8 of the County Code) would replace the existing County Development Code in its entirety.

4. Various Administrative Actions to Implement Items 1-3

B. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

As required by Section 15123(a)(2) of the CEQA Guidelines, following are the issues identified through the public participation process for the General Plan Update. These is issues are explained in more detail in Section II- G of this Final Environmental Impact Report.

1. Incompatible Uses/Development Standards/Code Enforcement
2. Economic Development
3. Preservation of Rural Character
4. Public Transportation
5. Infrastructure and Community Facilities
6. Public Safety

C. SUMMARY OF ENVIRONMENTAL IMPACTS/ISSUES TO BE RESOLVED

Tables I-1 through I-3 summarizes the potential environmental effects of the project. Table I-1 summaries those potential effects which can be mitigated, while Table I-2 presents which cannot be mitigated to a level below significance despite the imposition of mitigation measures. Table I-3 summarizes impact found not to be significant.

D. CONTENTS OF THE FINAL EIR

This Final Environmental Impact Report (EIR) consists of the Draft EIR and changes to the draft to respond to comments received from the public, County decision-makers and responsible agencies. Appendix L to this Final EIR provides a complete list of those comments on the Draft EIR and provides, as necessary, responses to each comment. Some of the comments on the Draft EIR also require changes in the text of the Draft EIR. Changes made to the text of the Draft EIR to reflect the comments and responses are identified by a bar in the margin adjacent to the text that has been changed.
## Table I-1. Summary of Impacts and Mitigation Measures

Table I-1 summarizes potential environmental impacts and mitigation measures.

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AESTHETICS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Impact AES-1</strong></td>
<td>Within the Development Code, one overlay district was established relating specifically to preserving aesthetic or scenic areas within the County. These areas are designated under the “SR” or Scenic Resources Overlay District (Chapter 82.22). The intent of the Scenic Resources Overlay District is to provide development standards that will protect, preserve and enhance the aesthetic resources of the County. Design considerations can be incorporated in many instances to allow development to coexist and not substantially interfere with the preservation of unique natural resources, roadside views and scenic corridors. It is also the intent of the Scenic Resources Overlay District to implement state and federal programs and regulations regarding scenic highway routes.</td>
</tr>
<tr>
<td>Potential damage to scenic resources within a federal, state, county or local scenic highway or by-way.</td>
<td>Mitigation AES-2 Direct future growth to areas where infrastructure facilities and public services exist or can easily be provided or acquired and where other desired attributes of the land, such as open space, watershed areas and scenic resources, will not be adversely impacted.</td>
</tr>
<tr>
<td><strong>Impact AES-2</strong></td>
<td>Mitigation AES-3 The County shall maintain and enhance the visual character of scenic routes in the County.</td>
</tr>
<tr>
<td>Impact to scenic resources recognized by federal, state and local jurisdictions, including open space and recreational areas throughout the County that offer scenic vistas and views.</td>
<td>Mitigation AES-4 To improve access to scenic vistas, the County seeks to establish off-street pull-outs at designated view points where appropriate along scenic highways.</td>
</tr>
<tr>
<td><strong>Impact AES-3</strong></td>
<td>Mitigation AES-5 The County desires to retain the scenic character of visually important</td>
</tr>
<tr>
<td>Create additional amounts of light at night that will impact dark sky areas in the County.</td>
<td></td>
</tr>
</tbody>
</table>
**CHAPTER I**

**Executive Summary**

**County of San Bernardino Final Program Environmental Impact Report 2007 General Plan Program**

**Impacts**

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to have beauty to the County.</td>
</tr>
<tr>
<td>Therefore, the County designates the following routes as scenic highways, and applies all applicable policies to development on these routes:</td>
</tr>
<tr>
<td>SR-71 — All of the route in unincorporated County area;</td>
</tr>
<tr>
<td>Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy, in the Mountain Region;</td>
</tr>
<tr>
<td>SR-83 (Euclid Avenue/Mountain Avenue) --- 24th Street northwest to San Antonio Dam;</td>
</tr>
<tr>
<td>Oak Glen Road in the Mountain Region;</td>
</tr>
<tr>
<td>Sand Canyon Road;</td>
</tr>
<tr>
<td>SR-2 from SR-138 southwest to the Los Angeles County line;</td>
</tr>
<tr>
<td>Lone Pine Canyon Road;</td>
</tr>
<tr>
<td>SR-330 from the San Bernardino National Forest Boundary northeast to SR-18;</td>
</tr>
<tr>
<td>Green Valley Lake Road/101 Mile Drive;</td>
</tr>
<tr>
<td>Crest Forest Drive from SR-18 west to Sawpit Canyon Road;</td>
</tr>
<tr>
<td>Playground Drive;</td>
</tr>
<tr>
<td>Devil’s Canyon Road;</td>
</tr>
<tr>
<td>Sawpit Canyon Road/Sawpit Creek Road;</td>
</tr>
<tr>
<td>Lake Gregory Drive;</td>
</tr>
<tr>
<td>San Moritz Drive;</td>
</tr>
<tr>
<td>Dart Canyon Road;</td>
</tr>
<tr>
<td>North Road from Lake Gregory Drive northeast to SR-189;</td>
</tr>
</tbody>
</table>
### Executive Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Drive from Knapps Cutoff northeast to Dart Canyon Road;</td>
<td></td>
</tr>
<tr>
<td>Grass Valley Road;</td>
<td></td>
</tr>
<tr>
<td>Kuffel Canyon Road;</td>
<td></td>
</tr>
<tr>
<td>Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park;</td>
<td></td>
</tr>
<tr>
<td>Amboy Road from Bullion Mt. Road northeast to Amboy;</td>
<td></td>
</tr>
<tr>
<td>SR-127 from I-15 at Baker northwest to Inyo County line;</td>
<td></td>
</tr>
<tr>
<td>*Kelbaker Road from I-15 southeast to I-40;</td>
<td></td>
</tr>
<tr>
<td>*Kelso-Cima Road from Kelso northeast to Cima;</td>
<td></td>
</tr>
<tr>
<td>*Cima Road from I-15 southeast to Cima;</td>
<td></td>
</tr>
<tr>
<td>*Essex Road from Essex northwest to Mitchell Caverns;</td>
<td></td>
</tr>
<tr>
<td>*Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road;</td>
<td></td>
</tr>
<tr>
<td>*Black Canyon Road;</td>
<td></td>
</tr>
<tr>
<td>*Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation;</td>
<td></td>
</tr>
<tr>
<td>I-15 from the intersection with I-215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East</td>
<td></td>
</tr>
</tbody>
</table>

* Designated by the BLM as a part of their Back Country Byway Program, a component of the National Scenic Byway System
**Impacts**

- Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side, and all incorporated areas;
- SR-38 within the Redlands and Yucaipa SOIs; from the Yucaipa SOI northeast to Big Bear Dam;
- SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County line;
- SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI;
- Cokey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive, with some of this truck trail located on privately owned land;
- Rim of the World Drive from Green Valley Lake Road to SR-38;
- SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line;
- Baldwin Lake Road from SR-18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road;
- National Trails Highway from Oro Grande northeast to Lenwood;
- I-40 from Newberry Springs northeast to Needles, excepting the Highway Commercial designation at the Hector Road Interchange and the Crucero Road Interchange;
- Burns Canyon
- Piper Canyon
- Lanfair/Ivanpah Road;
- Pioneer Town Road from Pipes Canyon Road to the Town of Yucca.
## EXECUTIVE SUMMARY

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valley; and SR-247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.</td>
<td><strong>Mitigation AES-6</strong> The County shall provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation AES-7</strong> Areas in new developments which are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its build-able area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation AES-8</strong> Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation AES-9</strong> The County shall preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation AES-10</strong> The County shall protect the scenic and open space qualities of cinder cones and lava flows. Permit extractive uses of cinder resources only when the scenic values can be adequately maintained.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation AES-11</strong> Features meeting the following criteria shall be considered for designation</td>
</tr>
<tr>
<td>Impacts</td>
<td>Mitigation Measures</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>as scenic resources:</td>
<td>A roadway, vista point, or area that provides a vista of undisturbed natural areas;</td>
</tr>
<tr>
<td></td>
<td>Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and</td>
</tr>
<tr>
<td></td>
<td>Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).</td>
</tr>
<tr>
<td><strong>Mitigation AES-12</strong></td>
<td>The County shall define the Scenic Corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail or path. Development along scenic corridors shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.</td>
</tr>
<tr>
<td><strong>Mitigation AES-13</strong></td>
<td>The County shall require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.</td>
</tr>
<tr>
<td><strong>Mitigation AES-14</strong></td>
<td>The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County shall continue the review undertaken as part of this General Plan Update of the Land Use Zoning Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.</td>
</tr>
<tr>
<td><strong>Mitigation AES-15</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Mitigation Measures

The County shall design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat and the preservation of the scenic values of the County’s streams and creeks.

### Mitigation AES-16
The County shall utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply and water recharge.

### Mitigation AES-17
Additional Development Code sections that help to preserve County aesthetics.

### Agricultural Resources

<table>
<thead>
<tr>
<th>Impact AG-1</th>
<th>Mitigation AG-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decline of agricultural uses within the County due to urban expansion and economic considerations.</td>
<td>The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact AG-2</th>
<th>Mitigation AG-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land uses allowed by the update to the General Plan will further accelerate the conversion of the Chino Dairy Preserve to urban uses.</td>
<td>Highly alkaline soils present special problems for all plant species and should generally be avoided. Desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation AG-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The County shall allow the development of areas of prime agriculture lands, as designated in this Plan’s Land Use Policy Map supporting commercially viable and valuable agriculture to urban intensity only after the supply of non-productive areas have been exhausted.</td>
</tr>
</tbody>
</table>
CHAPTER I

Executive Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| **Mitigation AG-4**  
Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the Resource Overlay Maps, will be considered as an integral portion of the Conservation Element when reviewing development proposals. | |
| **Mitigation AG-5**  
The County shall utilize the provisions of the Williamson Act to further the preservation of commercially viable agricultural open space and designate preserves on the Resource Overlay Maps. | |
| **Mitigation AG-6**  
The County shall support property and estate tax relief measures that assess long-term agriculture at farm-use value. | |
| **Mitigation AG-7**  
The County shall encourage agricultural use of commercially productive agricultural lands; and discourage city SOI extensions into areas containing commercially productive agricultural lands. | |

**AIR QUALITY**

| Impact AQ-1  
New residential, commercial and industrial development will occur as a result of the update of the 2007 General Plan resulting in the creation of more air pollutants that will impact the existing poor air quality in the county. | **Mitigation AQ-1**  
Because development during construction would be subjected to wind hazards (due to increased dust, the removal of wind breaks, and other factors), the County shall require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:  
Grading restrictions and/or controls on the basis of soil types, topography or season;  
Landscaping methods, plant varieties, and scheduling to maximize successful revegetation; and |
| Impact AQ-2  
The growth allowed by the update of the General Plan will either create emissions of NOx, hydrocarbons, pesticides and PM10 or new residents will be exposed to these pollutants. This would be particularly significant to sensitive populations in the county (e.g., those with respiratory illnesses and the older population). | |
| Impact AQ-3 | |
### Impacts

Growth facilitated by the update to the County’s General Plan will result in the need to develop new roads within the county to allow for the movement of goods within the county that will result in exposing the county’s population to diesel fumes that are known to be harmful to people.

### Mitigation Measures

<table>
<thead>
<tr>
<th>Mitigation AQ-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The County shall establish incentives and/or regulations to eliminate work trips including such actions as:</td>
</tr>
<tr>
<td>Implementing staggered, flexible and compressed work schedules in public agencies; and</td>
</tr>
<tr>
<td>Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage.</td>
</tr>
</tbody>
</table>

**Mitigation AQ-3**

The County shall locate and design new development in a manner that will minimize direct and indirect emissions of air contaminants through such means as:

- Promoting mixed-use development to reduce the length and frequency of vehicle trips;
- Providing for increased intensity of development along existing and proposed transit corridors; and
- Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

**Mitigation AQ-4**

The County shall provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).
### Impacts
The County shall replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-effective and meet the vehicle use needs.

**Mitigation AQ-6**
The County shall manage the County’s transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet.

**Mitigation AQ-7**
The County shall establish programs for priority or free parking on County streets or in County parking lots for alternative fuel vehicles.

**Mitigation AQ-8**
The County shall require the use of building materials and coatings that minimize air pollution consistent with the requirements of the AQMD.

**Mitigation AQ-9**
The County shall provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

### BIOLOGICAL RESOURCES

#### Impact BIO-1
Development allowed by the General Plan Update will adversely affect candidate, sensitive, or special-status plant and animal species in the Valley and Mountain Regions of the County.

#### Impact BIO-2
Development allowed by the General Plan Update will adversely impact riparian habitat or other sensitive natural communities as identified by state and federal agencies in the Valley, Mountain and Desert Regions of the County.

#### Impact BIO-3

#### Mitigation BIO-1
The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay as discussed in Mitigation Measures BIO-3 and BIO-13 below. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon.

#### Mitigation BIO-2
## CHAPTER I

### Executive Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development allowed by the General Plan update will adversely impact protected wetlands as defined by Section 404 of the Clean Water Act and impact native habitat downstream of the limits of a project in the Valley Region. General Plan implementation within the Mountain and Desert Regions will not directly impact federally protected wetlands, but indirect effect to downstream wetland and other natural habitat may occur from loss of sediment, natural sediment deposition, and flood control management but these are not issue within the scope of the General Plan.</td>
<td>The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with ACOE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation.</td>
</tr>
<tr>
<td><strong>Impact BIO-4</strong></td>
<td>Development allowed by the General Plan within the Valley Region may affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites.</td>
</tr>
<tr>
<td><strong>Impact BIO-5</strong></td>
<td>Development allowed by the General Plan within the Valley Region may affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies or ordinances.</td>
</tr>
<tr>
<td><strong>Impact BIO-6</strong></td>
<td>Development allowed by the General Plan within the Valley Region may conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan.</td>
</tr>
<tr>
<td><strong>Impact BIO-7</strong></td>
<td>Development allowed by the General Plan within the Mountain Region may impact candidate, sensitive or special status plant and animal species that may occur within this region of the County.</td>
</tr>
<tr>
<td><strong>Impact BIO-8</strong></td>
<td>Development allowed by the General Plan update will adversely impact riparian habitat or other sensitive natural communities identified by state and federal agencies for projects developed within the Mountain Region.</td>
</tr>
</tbody>
</table>
## Executive Summary

### Impacts

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>that are mostly located on privately owned lands.</td>
<td>provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant.</td>
</tr>
<tr>
<td><strong>Impact BIO-9</strong></td>
<td></td>
</tr>
<tr>
<td>Development allowed by the General Plan with the Mountain Region may</td>
<td></td>
</tr>
<tr>
<td>directly and indirectly affect federal protected wetlands.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-10</strong></td>
<td></td>
</tr>
<tr>
<td>Development allowed by the General Plan within the Mountain Region</td>
<td></td>
</tr>
<tr>
<td>may affect movement of native resident or migratory fish or wildlife</td>
<td></td>
</tr>
<tr>
<td>species or established wild life corridors or impede the use of native</td>
<td></td>
</tr>
<tr>
<td>wildlife nursery sites.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-11</strong></td>
<td></td>
</tr>
<tr>
<td>Development of land uses allowed by the General Plan within the</td>
<td></td>
</tr>
<tr>
<td>Mountain Region may adversely affect or conflict with local policies or</td>
<td></td>
</tr>
<tr>
<td>ordinances protecting biological resources such as tree preservation</td>
<td></td>
</tr>
<tr>
<td>policies or ordinances.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-12</strong></td>
<td></td>
</tr>
<tr>
<td>Development of land uses allowed by the General Plan in the Mountain</td>
<td></td>
</tr>
<tr>
<td>Region may conflict with provisions of an adopted Habitat Conservation</td>
<td></td>
</tr>
<tr>
<td>Plan, Natural Community Conservation Plan or other approved local,</td>
<td></td>
</tr>
<tr>
<td>regional or state habitat conservation plan.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-13</strong></td>
<td></td>
</tr>
<tr>
<td>Development allowed by the General Plan update in the Desert Region</td>
<td></td>
</tr>
<tr>
<td>will adversely affect candidate, sensitive or special-status plant</td>
<td></td>
</tr>
<tr>
<td>animal species.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-14</strong></td>
<td></td>
</tr>
<tr>
<td>Development allowed by the General Plan update in the Desert Region</td>
<td></td>
</tr>
<tr>
<td>will impact riparian habitat or other sensitive natural communities as</td>
<td></td>
</tr>
<tr>
<td>identified by state and federal agencies that may be directly affected</td>
<td></td>
</tr>
<tr>
<td>by ongoing development or indirectly affected by development of adjacent</td>
<td></td>
</tr>
<tr>
<td>buffer habitat and public use and access. Regional growth may affect</td>
<td></td>
</tr>
<tr>
<td>provided to reduce impacts to less than significant in cases where a</td>
<td></td>
</tr>
<tr>
<td>Mitigated Negative Declaration is used for CEQA compliance. Direct and</td>
<td></td>
</tr>
<tr>
<td>growth inducing impacts determined to cause a significant adverse effect</td>
<td></td>
</tr>
<tr>
<td>on rare, threatened or endangered desert species shall be mitigated by</td>
<td></td>
</tr>
<tr>
<td>avoidance, habitat restoration or compensated by off-site mitigation</td>
<td></td>
</tr>
<tr>
<td>and evaluated through a project level EIR. Mitigation will be required</td>
<td></td>
</tr>
<tr>
<td>for adverse impacts to critical areas around residential land</td>
<td></td>
</tr>
<tr>
<td>conversion when it can be shown that the indirect effects of pets,</td>
<td></td>
</tr>
<tr>
<td>associate human activity and other encroachments into sensitive</td>
<td></td>
</tr>
<tr>
<td>habitats will be significant.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation BIO-6</strong></td>
<td></td>
</tr>
<tr>
<td>The County shall work with local communities to improve trash</td>
<td></td>
</tr>
<tr>
<td>collection, recycling programs, and reduce illegal dumping in</td>
<td></td>
</tr>
<tr>
<td>unincorporated areas. The County shall sponsor mitigation efforts that</td>
<td></td>
</tr>
<tr>
<td>minimize landfill growth, reduce trash haul routes that spread litter</td>
<td></td>
</tr>
<tr>
<td>and increase predator species numbers (i.e., raven or crow in the</td>
<td></td>
</tr>
<tr>
<td>Desert Region), and reduce illegal dumping of large bulk items (e.g.,</td>
<td></td>
</tr>
<tr>
<td>furniture, appliances, tires, batteries).</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation BIO-7</strong></td>
<td></td>
</tr>
<tr>
<td>The County shall coordinate with local, state, and federal agencies to</td>
<td></td>
</tr>
<tr>
<td>create a specific and detailed wildlife corridor map for the County of</td>
<td></td>
</tr>
<tr>
<td>San Bernardino. The map will identify movement corridors and refuge</td>
<td></td>
</tr>
<tr>
<td>area for large mammal, migratory species, and desert species dependent</td>
<td></td>
</tr>
<tr>
<td>on transitory resource based on rainfall. The wildlife corridor and</td>
<td></td>
</tr>
<tr>
<td>refuge area map will be used for preparation of biological assessments</td>
<td></td>
</tr>
<tr>
<td>prior to permitting land use conversion within County jurisdictional</td>
<td></td>
</tr>
<tr>
<td>areas.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation BIO-8</strong></td>
<td></td>
</tr>
<tr>
<td>The County shall require all new roadways, roadway expansion, and</td>
<td></td>
</tr>
<tr>
<td>utility installation within the wildlife corridors identified in the</td>
<td></td>
</tr>
<tr>
<td>Open Space and Biological Resource Overlays to provide suitable wildlife</td>
<td></td>
</tr>
<tr>
<td>crossings for affected wildlife. Design will include measures to reduce</td>
<td></td>
</tr>
<tr>
<td>or prevent habitat fragmentation and provide wildlife a means of safe</td>
<td></td>
</tr>
<tr>
<td>egress through respective foraging and breeding habitats. A qualified</td>
<td></td>
</tr>
<tr>
<td>biologist will assist with the design and implementation of wildlife</td>
<td></td>
</tr>
<tr>
<td>crossing.</td>
<td></td>
</tr>
</tbody>
</table>
### CHAPTER I

**Executive Summary**

**County of San Bernardino Final Program Environmental Impact Report**

**2007 General Plan Program**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact BIO-15</strong>&lt;br&gt;Development allowed by the General Plan in the Desert Region may adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act.</td>
<td>including culverts, overcrossings, undercrossings, and fencing.</td>
</tr>
<tr>
<td><strong>Mitigation BIO-9</strong>&lt;br&gt;The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-16</strong>&lt;br&gt;Development allowed by the General Plan within the Desert Region may adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policies or ordinances.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation BIO-10</strong>&lt;br&gt;All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report. The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.</td>
<td></td>
</tr>
<tr>
<td><strong>Impact BIO-17</strong>&lt;br&gt;Development allowed by the General Plan within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.</td>
<td><strong>Mitigation BIO-11</strong>&lt;br&gt;In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County’s role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights.</td>
</tr>
</tbody>
</table>
Within the County’s Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated “BR” or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.

The County shall consider whether projects may lead to a significant environmental impact as a result of the conversion of oak woodlands consistent with new provisions added to the County Development Code Subsection 88.01.050(e)(4). Upon determination of a significant effect, the County shall employ one or more of the following measures: preservation, replacement or restoration, in-lieu mitigation fee, or other mitigation measures.

**Preservation.** Preserve existing oak woodlands by recording conservation easements in favor of the County or an approved organization or agency.

**Replacement or restoration.** Replace or restore former oak woodlands. The review authority may require the planting and maintenance of replacement trees, including replacing dead or diseased trees. The replacement ratio and tree sizes shall be based on the recommendation of an Oak Reforestation Plan prepared by a registered professional forester. The requirement to maintain trees in compliance with this paragraph shall terminate seven years after the trees are planted.

**In-lieu mitigation fee.** Contribute in-lieu mitigation fee to the Oak Woodlands Conservation Fund, established under Fish and Game Code Section 1363 for the purpose of purchasing oak woodlands conservation easements. A project applicant who contributes funds in compliance with this Subsection shall not receive or use a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project. The in-lieu mitigation fee is contributed on an annual basis as prescribed by the Fish and Game Code Section 1370 and 1374.
### Impacts

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>fee for replacement trees shall be calculated based upon their equivalent value as established by the International Society of Arboriculture’s (ISA) current edition of Guide to Establishing Values for Trees and Shrub, etc.)</td>
</tr>
</tbody>
</table>

**Other mitigation measures.** Perform other mitigation measures as may be required by the review authority (e.g., inch-for-inch off-site replacement planting; transfer of development rights, enrollment of project with offset provider for carbon credits in greenhouse gas emission registry, carbon reduction, and carbon trading system; etc.).

### CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>Impact CR-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is possible that future development may disturb known and unknown archaeological sites, historic buildings or structures, or paleontological resources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation CR-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>The County shall identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation CR-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>The County shall require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped cultural resource overlay area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation CR-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigation of impacts to important cultural resources shall follow the standards established in Section 15064.5 of the California Environmental Quality Act Guidelines, as amended to date. For historic resources this includes the Secretary of Interior Standards for the Treatment of Historic Properties with Guidelines for Previously Rehabilitating, Restoring and Reconstructing Historic Buildings according to CEQA Section 15126.4 (b)(1).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation CR-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>The County shall require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County’s application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and</td>
</tr>
</tbody>
</table>
## Impacts

In lands located outside of planning regions.

### Mitigation CR-5

The County shall comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

### Mitigation CR-6

Site record forms and reports of surveys, test excavations, and data recovery programs shall be filed with the Archaeological Information Center at the San Bernardino County Museum, and shall be reviewed and approved in consultation with that office. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed shall be required prior to project grading and/or building permits; and Final reports shall be submitted and approved prior to project occupancy permits.

### Mitigation CR-7

Any artifacts collected or recovered as a result of cultural resource investigations shall be catalogued per San Bernardino County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.

### Mitigation CR-8

When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured shall be developed and approved prior to conditional approval.

### Mitigation CR-9

In areas of potential but unknown sensitivity, field surveys prior to grading shall be required to establish the need for paleontologic
### Impacts

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitoring.</td>
</tr>
</tbody>
</table>

**Mitigation CR-10**
Projects requiring grading plans that are located in areas of known fossil occurrences or demonstrated in a field survey to have fossils present, shall have all rough grading (cuts greater than three feet) monitored by trained paleontologic crews working under the direction of a qualified professional, in order that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

**Mitigation CR-11**
All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of the San Bernardino County Museum for their scientific information potential to be preserved.

**Mitigation CR-12**
A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved prior to granting of building permits, and a final report shall be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

**Mitigation CR-13**
Consistent with Senate Bill 18, as well as possible mitigation measures identified through the CEQA process, the County shall work and consult with local tribes to identify, protect and preserve TCPs. TCPs include man-made sites and resources, as well as natural landscapes, which contribute to the cultural significance of areas.

**Mitigation CR-14**
The County shall protect confidential information concerning Native American cultural resources with internal procedures, such as keeping confidential archaeological reports away from public view or discussion in
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>public meetings. Information provided by tribes to the County shall be considered confidential or sacred.</td>
<td></td>
</tr>
</tbody>
</table>

**Mitigation CR-15**
The County shall work in good faith with the local tribes, developers/applicants and other parties should the local affected tribe request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe’s request for artifacts. Artifacts not desired by the local tribe shall be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts shall be donated to the local tribe.

**Mitigation CR-16**
The County shall work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites with the “gated community.” If a site is identified within a gated community project, and preferable preserved as open space, the development shall be conditioned by the County allow future access to Native Americans to view and/or visit that site.

**Mitigation CR-17**
Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions shall be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:

The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders shall be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments.
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>The concerns of the Native American community shall be fully considered in the planning process.</td>
<td></td>
</tr>
<tr>
<td>If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to the state Health and Safety Code.</td>
<td></td>
</tr>
<tr>
<td>In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting U.S. Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.</td>
<td></td>
</tr>
<tr>
<td>If Native American cultural resources are discovered, the County shall contact the local Tribe. If requested by the Tribe, the County shall, in good faith, consult on the discovery and its disposition with the Tribe.</td>
<td></td>
</tr>
</tbody>
</table>

**Mitigation CR-18**

Within the County’s Development Code, two overlay districts have been established relating specifically to preserving cultural resources within the County. These areas are designated Cultural Resources Preservation “CP” Overlay District and Paleontological Resources “PR” Overlay District.

The intent of the “CP” District is to identify and preserve important archeological and historic resources. The intent of the “PR” District is to identify and preserve significant paleontological resources since they are unique and non-renewable, thus promoting County identity and conserving scientific amenities for the benefit of future generations.

**GEOLOGY AND SOILS**

**Impact GEO-1**

New development and people will be subject to strong seismic ground shaking and other geologic and soil hazards including poor or erosion

<table>
<thead>
<tr>
<th>Mitigation GEO-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the requirements of the California Building Code to reduce the adverse effects on life and property by properly designing and constructing structures to withstand damage from severe seismic shaking.</td>
</tr>
</tbody>
</table>
**CHAPTER I**

**Executive Summary**

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| susceptible soil conditions, landslides, soil liquefaction, unconsolidated granular soils and soil erosion when grading occurs on slopes and ridgelines. | **Mitigation GEO-2**
Enhance the mitigation of potential geologic hazards to new development by adding the requirements for evaluation of seiche and adverse soils conditions to the Geologic Hazards Overlay. |
| **Impact GEO-2**
New development may occur in areas where significant geology and soil conditions exist as indicated on the County’s Geologic Hazard Overlay Maps, exposing this development and people to hazardous conditions. | **Mitigation GEO-3**
Assess and mitigate the potential impacts of adverse soils conditions posed by hydro-collapsible, expandable, corrosive and other adverse soils that may be found in certain locations in the County, such as desert and mountain playas, fault zones and other special geologic features through the application of the provisions of the Geologic Hazard Overlay. |
| **Impact GEO-3**
Significant impacts to topography will occur at locations within the County where grading and filling are allowed as part of a new development in hillside areas. | **Mitigation GEO-4**
Within the County’s Development Code, one overlay district has been established relating specifically to protect County citizens from geological hazards. These areas are designated Geologic Hazard “GH” Overlay District which identifies areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall and liquefaction. |
| **Mitigation GEO-5**
The County Development Code, updated as a program component to the General Plan Update, includes new hillside grading standards at Section 83.08. The purpose and applicability are listed below, refer the Development Code to view the full text of the standards. The application of the prescribed standards will reduce the potential impacts of grading on hillside terrain. |

**HAZARDS AND HAZARDOUS MATERIALS**

<table>
<thead>
<tr>
<th>Impact HAZ-1</th>
<th>Mitigation HAZ-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is the potential that the San Bernardino County General Plan update may create a direct significant hazard to the public or the environment through the transport, use or disposal of hazardous materials; or through the foreseeable release of hazardous materials into the environment.</td>
<td>The County shall promote the proper handling, storage, transportation and disposal of hazardous materials and hazardous wastes through implementing a variety of regulatory, technical oversight, emergency, and waste management services. These programs are effective mechanisms for reducing the potential impact to the public health and safety and the</td>
</tr>
</tbody>
</table>
### Executive Summary

**Impact HAZ-2**  
There is the potential for siting new land uses that may expose sensitive receptors to hazardous emissions.

**Impact HAZ-3**  
The potential exists that a new facility could be constructed in the County that involves the generation of hazardous waste that will require the issuance of a RCRA Permit.

**Impact HAZ-4**  
The potential exists that new land uses may be constructed within the County that will expose occupants in aircraft to safety hazards. Also, those on the ground could be exposed to impacts from airplane crashes.

**Impact HAZ-5**  
New land uses could be developed within the County that would require a response by the County to the accidental release of hazardous materials and wastes.

**Impact HAZ-6**  
Development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas. Even if structures are built with the most current fire-safe building techniques and standards, these structures may be damaged or destroyed during major wildland fire conflagrations. People occupying these structures during a wildland fire will also be subject to injury or death.

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact HAZ-2</td>
<td>The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.</td>
</tr>
<tr>
<td>Impact HAZ-3</td>
<td>The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.</td>
</tr>
<tr>
<td>Impact HAZ-4</td>
<td>The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.</td>
</tr>
<tr>
<td>Impact HAZ-5</td>
<td>The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.</td>
</tr>
<tr>
<td>Impact HAZ-6</td>
<td>The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.</td>
</tr>
<tr>
<td>Impact HAZ-7</td>
<td>The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.</td>
</tr>
<tr>
<td>Impact HAZ-8</td>
<td>The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous</td>
</tr>
<tr>
<td>Impacts</td>
<td>Mitigation Measures</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mitigation HAZ-9</td>
<td>The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.</td>
</tr>
<tr>
<td>Mitigation HAZ-10</td>
<td>The County shall use the County’s Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.</td>
</tr>
<tr>
<td>Mitigation HAZ-11</td>
<td>The County shall ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated, in accordance with all applicable local, state and federal laws, regulations.</td>
</tr>
<tr>
<td>Mitigation HAZ-12</td>
<td>The County shall protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses, in accordance with all applicable local, state and federal laws, regulations and policies.</td>
</tr>
<tr>
<td>Mitigation HAZ-13</td>
<td>The County shall include extensive public participation in the County’s application review process for siting specified hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety, and the environment, in accordance with all applicable local, state and federal laws, regulations and policies.</td>
</tr>
<tr>
<td>Mitigation HAZ-14</td>
<td>The County shall require a conditional use permit/site approval and a Land Use/Zoning Amendment from applicants for specified hazardous waste facilities. The applicant shall meet all provisions of the specified</td>
</tr>
<tr>
<td>Impacts</td>
<td>Mitigation Measures</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>hazardous waste facility overlay district as well as other General Plan and Development Code provisions.</td>
<td></td>
</tr>
</tbody>
</table>

**Mitigation HAZ-15**
The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses (see Table IV-G-3), as recommended in CARB’s Air Quality and Land Use Handbook: A Community Health Perspective.

**Mitigation HAZ-16**
For all proposed development in the County, the County shall require the review of any and all ACLUP within proximity of the development to determine land use compatibility, thereby minimizing any potential hazards to airport operations, people and property.

**Mitigation HAZ-17**
Within the County’s Development Code, one overlay district has been established relating specifically to siting hazardous waste facilities in areas that protect the public health, safety, welfare and the environment. This zone also buffers hazardous waste facilities so that incompatible land uses cannot be permitted in the future. The zone also identifies permitted used, within the overlay zone and outlines the applicable permit review procedures.

**Mitigation HAZ-18**
The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County’s Development Code, Chapter 82.13, shall be strictly enforced. New development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.

**Mitigation HAZ-19**
Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies being developed by the U.S. Geological Survey and other federal agencies and incorporate...
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement feasible advance public notification methods to warn of impending hazardous conditions.</td>
</tr>
</tbody>
</table>

**Mitigation HAZ-20**

The Office of Emergency Service (OES), County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.
# HYDROLOGY AND WATER QUALITY

## Impact HWQ-1
Development under the General Plan may substantially deplete groundwater supplies such that there could be a lowering of the local groundwater table level. New development may also adversely impact area water quality.

## Impact HWQ-2
Development under the General Plan may alter the existing drainage pattern of an area or project site through the alteration of the course of a stream or river that would result in substantial erosion or siltation on or off an area or site.

## Impact HWQ-3
New development under the General Plan may be subject to distinct flooding risks in the Valley, Mountain and Desert Regions of the County. New development may also be subject to seiches in the Mountains and mudflows in the Desert Regions of the County.

## Mitigation HWQ-1
The County Water Masters shall continue to monitor the County’s adjudicated groundwater basins to ensure a balanced hydrological system in terms of withdrawal and replenishment of water from groundwater basins. Since groundwater may be a significant source of potable water supplies in the County, the impacts of growth resulting in water supply impacts are presented in Section P (Utilities and Service Systems) of this EIR.

## Mitigation HWQ-2
The County shall promote conservation of water and maximize the use of existing water resources by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater.

## Mitigation HWQ-3
The County shall require water reclamation systems and the use of reclaimed wastewater and other non-potable water to the maximum extent feasible for:
- Agricultural uses;
- Industrial uses;
- Recreational uses;
- Landscape irrigation; and
- Groundwater recharge projects.

## Mitigation HWQ-4
The County shall apply water conservation and water reuse (reclamation) measures that are consistent with County, state and/or federal policies and regulations on wastewater.

## Mitigation HWQ-5
The County shall require new development to implement feasible water conservation measures recommended by the water agency or purveyor that
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>supplies the development with water.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-6</strong>&lt;br&gt;Drainage courses shall be kept in their natural condition to the greatest extent feasible to retain habitat, and allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-7</strong>&lt;br&gt;The County shall seek to retain all natural drainage courses in accordance with the Flood Control Design Policies and Standards where health and safety are not jeopardized.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-8</strong>&lt;br&gt;The County shall prohibit the conversion of natural watercourses to culverts, storm drains, or other underground structures except where required to protect public health and safety.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-9</strong>&lt;br&gt;The County shall allow no development in designated flood plains, which would alter the alignment or direction or course of any blue-line stream.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-10</strong>&lt;br&gt;When development occurs, the County shall maintain the capacity of the existing natural drainage channels where feasible, and flood-proof structures to allow 100-year storm flows to be conveyed through the development without damage to structures.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation HWQ-11</strong>&lt;br&gt;Where technically feasible as part of its efforts to protect residents from flood hazards, the County shall require naturalistic drainage improvement where modifications to the natural drainage course are necessary. As an example, channel linings that will allow the re-establishment of vegetation</td>
<td></td>
</tr>
</tbody>
</table>
### CHAPTER I

**Executive Summary**

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| within the channel may be considered over impervious linings (such as  | - Mitigation HWQ-12
| concrete). Where revegetation is anticipated, this must be addressed in the channel's hydraulic analysis and the design of downstream culverts.                                                                                                                                                                                                       |
| channel's hydraulic analysis and the design of downstream culverts.     | **Mitigation HWQ-12**
| The County shall establish an economically viable flood control system by utilizing channel designs including combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Where adjacent to development, said drainage shall be covered by an adequate County drainage easement with appropriate building setbacks established there from. |
| The County shall not place streams in underground structures where    | **Mitigation HWQ-13**
| technically feasible, except to serve another public purpose and where  | The County shall not place streams in underground structures where technically feasible, except to serve another public purpose and where burial of the stream is clearly the only means available to safeguard public health and safety. |
| burial of the stream is clearly the only means available to safeguard   | **Mitigation HWQ-14**
| public health and safety.                                              | To mitigate potential impacts related to adverse water quality, the County shall require new high-density developments using septic tank leach field/seepage pit systems for wastewater disposal to include in their project plans, analyses of alternatives wastewater treatment and disposal methods. |
| The County will protect natural surface waters and their sources for    | **Mitigation HWQ-15**
| their biologic, hydrologic and intrinsic values.                       | Within the County’s Development Code, one overlay district has been established relating specifically to provide greater public safety, promoting public health, and minimizing public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas. |
|                                                                        | **Mitigation HWQ-16**
|                                                                        | The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values. |
## Executive Summary

### LAND USE AND PLANNING

| Impact LU-1 | Development under the General Plan could physically divide an established neighborhood. |
| Impact LU-2 | The update to the General Plan could contain redundant policies that could conflict with the delivery of sound guidance for future land development. |
| Impact LU-3 | Development under the General Plan could potentially conflict with existing or proposed Habitat Conservation Plans in the County. |

There are no significant Land Use and Planning impacts identified and therefore no mitigation measures are required.

### MINERAL RESOURCES

| Impact MR-1 | Development of new mines under the General Plan could conflict with adjacent land uses, precluding the availability for future development of significant mineral resources. |
| Impact MR-2 | The siting and permitting of new mineral operations in the County could create surface and groundwater issues as well as noise, dust and truck-traffic in populated areas. |

Mitigation MR-1
The County shall protect the current and future extraction of mineral resources that are important to the County’s economy while minimizing impacts of this use on the public and the environment.

Mitigation MR-2
In areas containing valuable mineral resources, the County shall establish and implement conditions, criteria and standards that are designed to protect the access to, and economic use of, these resources, provided that the mineral extraction does not result in significant adverse environmental effects and that open space uses have been considered for the area once mining operations cease.

Mitigation MR-3
The County shall incorporate the mineral classification or designation information, including the maps, when they are completed by the state.
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining and Geology Board and the Division of Mines and Geology,</td>
<td>The County shall recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. The Infrastructure Map, one of the layers of the General Plan mapping system, will be amended to identify mine sites that have a long-term operational horizon.</td>
</tr>
<tr>
<td>including new and updated information in the updated County General</td>
<td>Mitigation MR-4</td>
</tr>
<tr>
<td>Plan.</td>
<td>The County shall recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. The Infrastructure Map, one of the layers of the General Plan mapping system, will be amended to identify mine sites that have a long-term operational horizon.</td>
</tr>
<tr>
<td>Mitigation MR-5</td>
<td>The County shall implement the state Mineral Resource Zone designations to establish a system that identifies mineral potential and economically viable reserves. These designations are as follows:</td>
</tr>
<tr>
<td>MRZ-1: Adequate information indicates that no significant mineral</td>
<td>MRZ-1: Adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This designation shall be applied where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.</td>
</tr>
<tr>
<td>deposits are present, or where it is judged that little likelihood</td>
<td>MRZ-2: Adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This designation shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.</td>
</tr>
<tr>
<td>exists for their presence. This designation shall be applied where</td>
<td>MRZ-3: Containing deposits whose significance cannot be evaluated from available data.</td>
</tr>
<tr>
<td>well-developed lines of reasoning, based upon economic geologic</td>
<td>MRZ-4: Available information is inadequate for assignment to any other MRZ zone.</td>
</tr>
<tr>
<td>principles and adequate data, demonstrate that the likelihood for</td>
<td></td>
</tr>
</tbody>
</table>
### CHAPTER I

#### EXECUTIVE SUMMARY

**County of San Bernardino Final Program Environmental Impact Report**  
**2007 General Plan Program**

#### Impacts

<table>
<thead>
<tr>
<th></th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SZ Areas:</strong> Containing unique or rare occurrences of rocks, minerals or fossils that are of outstanding scientific significance shall be classified in this zone.</td>
<td></td>
</tr>
<tr>
<td><strong>IRA:</strong> San Bernardino County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.</td>
<td></td>
</tr>
</tbody>
</table>
| **Mitigation MR-6**  
Mining operators/owners will provide buffers between mineral resources (including access routes) and abutting incompatible land uses. New mineral and non-mineral development in these zones shall be designed and reviewed according to the compatibility criteria specified in this policy. |  |
| **Mitigation MR-7**  
The County shall protect existing mining access routes by giving them priority over proposed alterations to the land, or by accommodating the mining operations with as good or better alternate access, provided the alternate access does not adversely impact proposed open space areas or trail alignment. |  |
| **Mitigation MR-8**  
The County shall provide for the monitoring of mining operations for compliance with established operating guidelines, conditions of approval and the reclamation plan. |  |

#### NOISE

**Impact N-1**  
Development under the General Plan potentially could be exposed to high vehicular traffic noise from freeways and arterial roadways to above acceptable levels for residential and other sensitive land uses.

**Impact N-2**  
The development of new industrial and commercial uses may create

**Mitigation N-1**  
The County shall consider areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Table IV-K-1 (see Noise Element Policy N-1.1, and Section 87-0905(b)(1) of the County Code). Consistent with Policy N-1.7, the County shall prevent incompatible land uses in such areas.
### Impacts

stationary noise sources that generate noise levels that are incompatible with adjacent residential or other sensitive land uses.

**Impact N-3**

Development of residential other noise sensitive uses in the vicinity of airports may expose people to incompatible noise levels.

### Mitigation Measures

**Mitigation N-2**

Consistent with Policy N-1.2 and N-2.1, the County shall ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Table IV-K-2. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries. For each application involving such a land use at a location where the Ldn is expected to be in excess of 60 dBA, based either on noise contours for future traffic volumes as presented in the Noise Element or on the project’s location near a freeway, arterial street, or railroad line that may reasonably be expected to generate a similar noise level, the County shall require a project specific noise analysis.

As described in the Noise Element, the acoustical analysis shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
- Include estimated noise levels in terms of the descriptors shown in the Noise Background Report (Appendix I) for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element;
- Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance; and include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the...
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided | **Mitigation N-3**  
When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses. |
| Mitigation N-4  
Implementation of measures N-1 and N-2 above should avoid or reduce potential aircraft noise impacts to a level below significance. The County shall submit all projects involving land use decisions on properties within airport influence areas to the Airport Land Use Commission for review. | **Mitigation N-5**  
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC).                                                                 |
| Mitigation N-6  
The County shall limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers. | **Mitigation N-7**  
Within the County’s Development Code, one overlay district has been established to protect the public from high noise levels. The Noise Hazard “NH” Overlay District has been created to provide greater public safety by establishing land use review procedures and requirements for land uses in areas with identified high noise levels. |
**POPULATION AND HOUSING**

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact PH-1</strong>&lt;br&gt;The update of the San Bernardino County General Plan anticipates additional population and household growth in the County. The policies within the proposed General Plan and the associated Community Plans and the Development are designed to manage this projected growth. With the implementation of the proposed General Plan, the majority of the projected growth will be directed towards developed areas of the County, such as the Community Plan areas and the SOI areas.</td>
<td><strong>Mitigation PH-1</strong>&lt;br&gt;The County shall continue to utilize Planned Development density bonus and density transfer provisions as described in the County Development Code to allow creation of lot sizes less than that normally required by residential land use districts.</td>
</tr>
</tbody>
</table>

<p>| <strong>Impact PH-2</strong>&lt;br&gt;Buildout under the General Plan update is not likely to displace substantial numbers of existing housing and/or people, necessitating the construction of replacement housing elsewhere. The General Plan Update is intended to guide the location and intensity of land uses in San Bernardino County. The land use maps primarily apply to undeveloped land within the County; and does not redesignate lands designated for residential development to other land uses, such as Commercial or Industrial, thus the proposed project is not expected to directly displace existing housing and/or people such that it would lead to the need for the development of replacement housing elsewhere. Redevelopment activities have low to moderate potential to displace existing older housing. However, redevelopment requirements under State law require replacement and additional set aside housing. The Housing Element includes policies that address the factors that could lead to the need for replacement housing. Policies Housing Program 5-a through Housing Program 5-u promote the conservation of the County’s current stock of affordable housing. By limiting the conversion of affordable housing to other uses, these policies reduce the potential for displacement of people and housing. Policies Housing Program 6-a through Housing Program 6-b prevent discrimination in housing, which reduces the potential for displacement of people. Policies Housing Program 7-a through Housing Program 7-b promote the development of all types of housing, including affordable housing, to meet regional housing needs. The development of affordable housing throughout the County would help ensure that replacement housing needs are met. | <strong>Mitigation PH-2</strong>&lt;br&gt;The County shall continue to allow mobile home parks in the Single Residential Land Use District at densities specified in the Development Code and in the Multiple Residential Land Use District subject to design guidelines which will ensure compatibility with the natural environment while minimizing potential adverse environmental impacts. <strong>Mitigation PH-3</strong>&lt;br&gt;The County shall continue the Community Development Block Grant single-family homeowner rehabilitation loan program in order to rehabilitate housing and improve neighborhoods. <strong>Mitigation PH-4</strong>&lt;br&gt;The County shall use and update the County Rehabilitation Guide for inspection of existing renter- and owner-occupied dwelling units to facilitate economical and safe rehabilitation of housing. <strong>Mitigation PH-5</strong>&lt;br&gt;The County shall contract with for-profit and non-profit developers and assist them in acquiring and rehabilitating vacant Housing and Urban Development and VA repossessed properties. These houses will be resold at affordable prices to first-time and other homebuyer families. <strong>Mitigation PH-6</strong>&lt;br&gt;Because the preservation of existing housing stock is important in providing housing opportunities for all income levels, housing and community rehabilitation programs shall be established and implemented. |</p>
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| housing would not be necessary if very low and low-income populations  | Mitigation PH-7  
The County shall preserve units at risk of being lost to lower income households through completion of their federal subsidies and affordability covenants or contracts by developing various kinds of incentives or other programs.                                                                                                                                |
| increase over time.                                                    | Mitigation PH-8  
The County shall preserve historic structures through the use of various federal and state tax incentive and other programs.                                                                                                                                                                                                                     |
|                                                                        | Mitigation PH-9  
The County shall continue to implement the Housing Incentives Program such that it would encourage the phasing of affordable housing in large planned developments when the density bonus incentive has been implemented.                                                                                                                                            |
|                                                                        | Mitigation PH-10  
The County shall identify and use surplus public land to assist in the provision of housing that is affordable to lower income groups.                                                                                                                                                                                                     |
|                                                                        | Mitigation PH-11  
The County shall identify sites for affordable housing in the various planning regions of the County.                                                                                                                                                                                                                                                                 |
|                                                                        | Mitigation PH-12  
The County shall continue to pursue opportunities to acquire and “bank” sites, as necessary, to be used for affordable housing.                                                                                                                                                                                                                                                                 |
|                                                                        | Mitigation PH-13  
The County shall continue to integrate all aspects of housing assistance and development planning within the Consolidated Plan, consistent with the broader County General Plan and Development Code, and Community Plans in order to identify the existing inventory as well as proposed |
## Impacts

locations for affordable housing.

**Mitigation PH-14**  
The County shall continue to allow emergency and transitional shelters in any land use district with the appropriate permits, and concurrently develop the appropriate location and design standards for such uses.

**Mitigation PH-15**  
Because of the various lifestyles and population characteristics of the County's residents, a variety and balance of housing types and densities shall be provided, through the General Plan Update, to require that all new planning area or specific plan studies provide housing types and densities commensurate with demonstrated lifestyles, projected needs, and population characteristics of the individual planning area.

**Mitigation PH-16**  
Because it is desirable to optimize use of and limit adverse impacts on existing infrastructure and natural resources such as open space and air quality, more intensive residential development shall be encouraged in areas close to major transportation corridors where the infrastructure already exists and/or is underutilized, through the following actions:

**Mitigation PH-17**  
The County shall identify areas of the County where urban infill is appropriate, and encourage their development through the use of various incentives.

**Mitigation PH-18**  
In the unincorporated areas of the County, the County shall designate residential land use districts within close proximity (three to five miles) of major transportation corridors. The more intensive residential land uses (RS and RM) shall be designated in urbanized areas, and less intensive residential land uses (RS-1, RL-2.5, etc.) in the more rural areas.
## CHAPTER I

### Executive Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mitigation PH-19</strong>&lt;br&gt;Throughout the County, the County shall continue to encourage mixed-use development through the Planned Development process that includes dense, multiple family residential developments as well as clustered, single family residential development, and other uses which provide convenient shopping and employment opportunities close to major transportation corridors.</td>
<td></td>
</tr>
</tbody>
</table>

### PUBLIC SERVICES

#### Impact PS-1
Development under the General Plan will result in an increase in population and human activity in the area and will result in an increase in the need for law enforcement services.

#### Impact PS-2
Development under the General Plan will result in growth and development in the unincorporated communities of San Bernardino County that will result in an increase in demand for fire protection services.

#### Impact PS-3
Development under the General Plan will result in growth in the unincorporated area of San Bernardino County that will result in an increased use of health care facilities.

#### Impact PS-4
Development under the General Plan will result in future growth within the County and will result in the need for additional library facilities to serve the needs of future County residents.

#### Impact PS-5
Development under the General Plan will result in the population growth in the County that will increase the number of school age children needing to be served by the various school districts in the County.

#### Mitigation PS-1
The County shall provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.

#### Mitigation PS-2
The County shall seek and commit sufficient investigative resources for effective follow-up on criminal offenses.

#### Mitigation PS-3
The County shall assess and update training and equipment needs on a routine basis when possible to ensure policing methods are effectively executed while minimizing unnecessary liability.

#### Mitigation PS-4
The County shall protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.

#### Mitigation PS-5
The County shall create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service.
### Impacts Mitigation Measures

- **Mitigation PS-6**
  - The County shall encourage development in areas that have adequate infrastructure for the provision of fire service that include, but are not limited to, water system infrastructure that is capable of delivering appropriate fire flow and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.

- **Mitigation PS-7**
  - The County shall create Community Facilities District or other long-term financial instruments within proposed developments and areas available for development to provide a fair share funding mechanism to support prorata increases for the provision of long-term fire protection. The Community Facilities Districts should be designed to provide sustained long-term levels of staffing operations, equipment, and facilities. The Community Facilities Districts should also be designed specifically to the impacts of the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.

- **Mitigation PS-8**
  - The County shall ensure that adequate school, library, and day-care facilities are available and appropriately located to meet the needs of its residents.

- **Mitigation PS-9**
  - The County shall provide convenient access to K-12 and higher educational opportunities for all, activities for youth, and programs for residents of all ages.
## Executive Summary

### County of San Bernardino Final Program Environmental Impact Report

#### 2007 General Plan Program

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RECREATION</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Impact REC-1</strong></td>
<td>The County shall support the establishment of &quot;urban open space areas&quot; within urban areas, and seek to develop or retain these areas through cooperation with local cities. Where possible, these areas shall be located along or near regional trail routes.</td>
</tr>
<tr>
<td>The County does not have adequate park space for the projected population called for by the updated General Plan in the Valley Region. The County would need an additional 1,712 acres of parkland to meet the accepted standard.</td>
<td><strong>Mitigation REC –1</strong></td>
</tr>
<tr>
<td><strong>Impact REC-2</strong></td>
<td>The County shall strive to achieve a standard of 14.5 acres of undeveloped lands and/or trails per 1,000 population and 2.5 acres of developed regional parkland per 1,000 populations. &quot;Undeveloped lands&quot; may include areas established to buffer regional parks from encroachment by incompatible uses.</td>
</tr>
<tr>
<td>The 2030 projected unincorporated County population for the Mountain Region is 72,833. The total projected population for incorporated city residents in the Mountain Region is 11,890. This brings the projected total residents of the Mountain Region to 84,723. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Mountain Region would be approximately 213 acres. Currently, there are approximately 1,551 acres of regional and community parks in the Mountain Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.</td>
<td><strong>Mitigation REC –2</strong></td>
</tr>
<tr>
<td><strong>Impact REC-3</strong></td>
<td>When specific projects are reviewed which exhibit natural features worthy of regional park land status, the County shall require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.</td>
</tr>
<tr>
<td>The 2030 projected unincorporated County population for the Desert Region is 148,918. The total projected population for incorporated city residents in the Desert Region is 548,584. This brings the projected total residents of the Desert Region to approximately 698,000. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Desert Region would be approximately 1,745 acres. Currently, there are approximately 5,051 acres of regional and community parks in the Desert Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.</td>
<td><strong>Mitigation REC –3</strong></td>
</tr>
<tr>
<td><strong>Impact REC-4</strong></td>
<td>The County shall ensure that the variety of recreational experiences at Regional Park sites meets the needs of the region.</td>
</tr>
<tr>
<td>The 2030 projected population for the County, as a whole is 2,685,486. Under the County's guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The</td>
<td><strong>Mitigation REC –4</strong></td>
</tr>
<tr>
<td>County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.</td>
<td><strong>Mitigation REC –5</strong></td>
</tr>
<tr>
<td><strong>Impact REC-5</strong></td>
<td>The County shall implement the Quimby Act (Gov. Code Section 66477) through the subdivision process in providing for local opportunities (both passive and active).</td>
</tr>
<tr>
<td>The County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.</td>
<td><strong>Mitigation REC –6</strong></td>
</tr>
<tr>
<td><strong>Impact REC-6</strong></td>
<td>The County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.</td>
</tr>
</tbody>
</table>
### Impacts

County as a whole currently has 9,647 acres of parkland. The County as a whole will meet the County standard.

### Mitigation Measures

Areas in new developments that are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

**Mitigation REC –8**
In addition to parkland to meet the 3 acres per 1,000 local park standard, large-scale housing projects in the Valley Region with 100 or more units shall provide on-site recreational facilities, including pools, tennis courts and turfed play areas and tot-lots.

**Mitigation REC –9**
The County shall classify local parks in three categories: Local, Neighborhood and Community Parks, and establish size and location standards as follows:

- **Local Park:** A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.
- **Neighborhood Park:** A walk-in park, up to 10 acres, with a service radius of a half-mile. Serves a neighborhood and provides a passive recreation location for all age groups.
- **Community Park:** A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius.

**Mitigation REC –10**
The County shall expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems.

**Mitigation REC –11**
The County shall provide a regional trail system, plus rest areas, to provide continuous interconnecting trails that serve major populated areas of the County and existing and proposed recreation facilities through the


<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
</table>
| regional trail system. The purpose of the County regional trails system shall be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system. | **Mitigation REC –12**  
The County shall provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails and the trail route and use descriptions shown in Figures 2-11A through 2-11C of the Circulation Background Report. |
| Mitigation REC –13  
The County shall work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system; and to secure trail access through purchase, easements or by other means. | **Mitigation REC –13**  
The County shall work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system; and to secure trail access through purchase, easements or by other means. |
| Mitigation REC –14  
The County shall utilize public funding mechanisms whenever possible to protect and acquire lands for open space uses. | **Mitigation REC –14**  
The County shall utilize public funding mechanisms whenever possible to protect and acquire lands for open space uses. |
| Mitigation REC –15  
The County shall actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction and operation. | **Mitigation REC –15**  
The County shall actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction and operation. |
| Mitigation REC –16  
The County shall use general funds, user fees, proceeds from concession operations and other sources that may be available to finance open space and trail acquisition, construction and operation. | **Mitigation REC –16**  
The County shall use general funds, user fees, proceeds from concession operations and other sources that may be available to finance open space and trail acquisition, construction and operation. |
| Mitigation REC –17  
The County shall include open space and trail acquisition and development in its Capital Improvement Programs. | **Mitigation REC –17**  
The County shall include open space and trail acquisition and development in its Capital Improvement Programs. |
| Mitigation REC –18                                                                                                                                                                                                                                           | **Mitigation REC –18**  
The County shall include open space and trail acquisition and development in its Capital Improvement Programs. |
## Impacts
The County shall locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.

### Mitigation REC – 19
The County shall use lands already in public ownership or proposed for public acquisition, such as right-of-way for flood control channels, abandoned railroad lines and fire control roads for trails wherever possible, in preference to private property.

### Mitigation REC – 20
The County shall encourage the dedication or offers of dedication of trail easements where appropriate for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.

### Mitigation REC – 21
The County shall monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Resources Overlay. Existing trail easements or alignments shall be mapped in their correct positions; proposed alignments shall be mapped in general locations. The Resources Overlay shall be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.

### Mitigation REC – 22
The County shall use active and abandoned road, utility, and railroad rights-of-way for non-vehicular circulation in all new development when found feasible.

### Mitigation REC – 23
The County shall require proposed development adjacent to trail systems to dedicate land for trailhead access points. Existing right-of-way and surplus public properties should be utilized for these staging areas.
### CHAPTER I  
**Executive Summary**

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>whenever possible.</td>
<td></td>
</tr>
</tbody>
</table>

**Mitigation REC –24**  
The County shall begin acquisition of trail easements or rights-of-way after a trail route plan has been adopted, unless a trail segment is to be acquired through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.

**Mitigation REC –25**  
The County shall develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas.

**Mitigation REC –26**  
To preserve and protect recreational facilities in the County, the County shall utilize public funding mechanisms wherever possible to protect and acquire regional park lands.

**Mitigation REC –27**  
To expand recreational opportunities in the County, the County shall utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas. The County Department of Public Works shall contact the Regional Parks Department or other County open space agency prior to disposing of any surplus lands.

### TRAFFIC AND CIRCULATION

**Impact TR-1**  
The General Plan may result in roadway operations at LOS E or F in the Valley or Mountain Regions, or at LOS D, E, or F in the Desert Region.

**Mitigation TR-1**  
The County shall provide a transportation system, including public transit, that is safe, functional and convenient, that meets the public’s needs and enhances the lifestyles of County residents.

**Impact TR-2**  
Traffic is projected to grown on roadways not under the County’s jurisdiction due to continued population growth in each of the San Bernardino County sub-regions and surrounding areas including the following areas: San Bernardino Valley Planning Area; Mountain

**Mitigation TR-2**  
The County shall strive to achieve Level of Service “D” on all County roadways in the Valley and Mountain Regions and LOS “C” on all County roadways in the Desert region. Through the review of new development
### Impacts

<table>
<thead>
<tr>
<th>Planning Area; Desert Planning Area. Growth in these areas will result in deficiencies in some roadways in these areas.</th>
</tr>
</thead>
</table>
| Impact TR-3  
Traffic is projected to grow on roadways in the counties and surrounding areas adjacent to San Bernardino County due to continued population growth in Riverside, Los Angeles and Orange County. This will result in deficiencies in some roadways in these areas. |
| Impact TR-4  
The land uses permitted by the Land Use Element of the General Plan will generate additional demand for air travel to and from San Bernardino County that will result in additional demand at Ontario International Airport and, to a lesser extent, at the general aviation airports within the County. An increase in demand for air freight services will also result in increased air traffic levels at the Southern California Logistics Airport and San Bernardino International Airport. |
| Impact TR-5  
Development under the General Plan could increase hazards due to a design feature or incompatible uses. |
| Impact TR-6  
Development under the General Plan could result in inadequate emergency access. |
| Impact TR-7  
Development under the General Plan could result in inadequate parking capacity. |
| Impact TR-8  
Implementation of new land uses under the General Plan could conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks etc.) |

### Mitigation Measures

<table>
<thead>
<tr>
<th>proposals, traffic impacts, including cumulative impacts, will be properly addressed and mitigated to maintain these Level of Service standards on the County’s circulation system.</th>
</tr>
</thead>
</table>
| Mitigation TR-3  
In the Valley and Mountain Regions, the County shall approve development proposals only when they are consistent with the County's objective of achieving Level of Service “D” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “D” objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “D” objective. |
| Mitigation TR-4  
In the Desert Region, the County shall approve development proposals only when they are consistent with the County's objective of achieving Level of Service “C” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “C” objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “C” objective. |
| Mitigation TR-5  
The County shall work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries. |
| Mitigation TR-6  
The County shall work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on state highways. |
| Mitigation TR-7  
The County shall have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternate modes of transportation, in order to minimize the |
## Impacts

- adverse impacts of automobile use on the environment.

## Mitigation Measures

### Mitigation TR-7
The County shall promote and encourage land use patterns, such as the development of local retail uses near residential uses, consistent with Smart Growth and New Urbanism Concepts in new development that will reduce the number of automobile trips by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths.

### Mitigation TR-8
The County shall promote and encourage the design and implementation of land uses, development standards and capital improvement programs that maximize the use of public transit facilities and programs, and the availability of local retail uses accessible to local residents by walking or biking to reduce dependence on the automobile.

### Mitigation TR-9
The County shall work with regional agencies (i.e., SCAG, Caltrans, SANBAG) to develop ridesharing programs, facilities and various modes of public transit (i.e., local and rapid bus, Metrolink and high-speed trains).

### Mitigation TR-10
The County shall work with the cities, Omnitrans and other transit agencies to integrate local transit service routes and schedules into a linked and well-coordinated (through schedules) Valley-wide system throughout the Valley area.

### Mitigation TR-11
The County shall extend public transit between residential areas and industrial/urban employment centers, continue and expand transportation services and public transit between Ontario Airport; Orange County Airport; and Los Angeles International Airport; and consider promotion of future high-speed train and Maglev systems for better long-range airport connectivity.
Mitigation TR-12
The County’s comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal (i.e., non-motorized, highway, and transit) system to accommodate the County’s mobility needs and provides the County’s objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County.

Mitigation TR-13
The County’s comprehensive transportation system shall operate at regional, county-wide, community and neighborhood scales providing connectors between communities, and mobility between jobs, residences and recreational opportunities.

Mitigation TR-14
The County shall ensure that applicants, subdividers and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off site mitigation.

Mitigation TR-15
The County shall use current innovative traffic engineering practices to increase roadway capacity and safety such as:

A raised median on Major Arterial highways in urban areas;
Limiting access to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors from intersecting streets; direct access from abutting properties shall be allowed only where no reasonable alternatives exist;
Obtaining additional right-of-way to accommodate right and left turn lanes at major intersections;
Developing special urban interchanges utilizing flyovers in areas requiring high-flow arterial highways;

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mitigation TR-12</strong>&lt;br&gt;The County’s comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal (i.e., non-motorized, highway, and transit) system to accommodate the County’s mobility needs and provides the County’s objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation TR-13</strong>&lt;br&gt;The County’s comprehensive transportation system shall operate at regional, county-wide, community and neighborhood scales providing connectors between communities, and mobility between jobs, residences and recreational opportunities.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation TR-14</strong>&lt;br&gt;The County shall ensure that applicants, subdividers and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off site mitigation.</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation TR-15</strong>&lt;br&gt;The County shall use current innovative traffic engineering practices to increase roadway capacity and safety such as:</td>
</tr>
<tr>
<td></td>
<td>A raised median on Major Arterial highways in urban areas;</td>
</tr>
<tr>
<td></td>
<td>Limiting access to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors from intersecting streets; direct access from abutting properties shall be allowed only where no reasonable alternatives exist;</td>
</tr>
<tr>
<td></td>
<td>Obtaining additional right-of-way to accommodate right and left turn lanes at major intersections;</td>
</tr>
<tr>
<td></td>
<td>Developing special urban interchanges utilizing flyovers in areas requiring high-flow arterial highways;</td>
</tr>
</tbody>
</table>
### Impacts

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing signal synchronization;</td>
</tr>
<tr>
<td>Maximizing the use of Intelligent Transportation Systems;</td>
</tr>
<tr>
<td>Coordination with SANBAG and local cities the development of traffic management centers (TMC) and traffic operation centers (TOCs);</td>
</tr>
<tr>
<td>Establishing of no-parking zones;</td>
</tr>
<tr>
<td>Limiting peak hour turning movements;</td>
</tr>
<tr>
<td>Blocking or dead-ending of existing access roads to main highways;</td>
</tr>
<tr>
<td>Establishing of one way streets;</td>
</tr>
<tr>
<td>Limiting truck traffic on certain roads and at specified hours;</td>
</tr>
<tr>
<td>Requiring all residential development proposals adjacent to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors to be designed so that direct access from the private property to the roadway will not be needed;</td>
</tr>
<tr>
<td>Controlling lot size frontage to limit access;</td>
</tr>
<tr>
<td>Developing minimum separation distances between access points;</td>
</tr>
<tr>
<td>Accommodating exclusive transit facilities within new roads or those planned for improvement; and</td>
</tr>
<tr>
<td>Developing design standards that will establish a minimum distance from intersections to any curb-cut.</td>
</tr>
</tbody>
</table>

### Mitigation TR-16

The County shall limit, where feasible, access along all roads intersecting Major and Secondary Highways for a distance of 600 feet from the centerline of said Highways to the maximum extent possible.

### Mitigation TR-17

The County shall require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Bicycle lanes and sidewalks shall be installed on...
### CHAPTER I

#### Executive Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>existing and future roadways, where appropriate and as funding is available</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation TR-18</strong>&lt;br&gt;The County shall ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation TR-19</strong>&lt;br&gt;The County shall adopt a fee program consistent with the requirements of SANBAG’s Nexus Study and Measure I. The County shall work with SANBAG to allocate Measure I funds to projects in the County on the Nexus Study project list and the Measure I expenditure plan.</td>
<td></td>
</tr>
</tbody>
</table>

#### PUBLIC UTILITY SYSTEMS

<table>
<thead>
<tr>
<th>Impact UT-1</th>
<th>Mitigation UT-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct use water supply sources include groundwater, imported water, surface water and recycled water. In general, the water supply under the Metropolitan Water District’s apportionment of Colorado River has been available in every year since 1939, and can reasonably be expected to be available over the next 20 years. By the year 2050, reclaimed water is expected to surpass surface water and represent the most significant water source for recharge purposes.</td>
<td>The County shall ensure the quality of life by pacing future growth with the availability of public infrastructure.</td>
</tr>
</tbody>
</table>

**Impact UT-2**<br>Both the Crestline – Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power have documented a steady growth in water usage and are involved with programs for both supply and conservation. The two primary challenges for this region are periodic drought and the population growth due to the shift from a higher percentage of part-time residents to full-time residents. The Lake Arrowhead Community Services District currently has a capital improvement program of $7.5 million planned in the next five years for | **Mitigation UT-2**<br>The County shall ensure that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development. If an applicant is required to pay more than a proportional share, reimbursement agreements may be used. |

**Mitigation UT-3**<br>The County shall utilize Fiscal Impact Analysis to determine the County’s ability to provide adequate services and facilities through the imposition of conditions of approval, fees, special taxes, financing mechanisms, etc., on new development. The Fiscal Impact Analysis will provide guidance to County staff and County decision-makers on the project-specific requirements that may be placed on that individual development project. | **Mitigation UT-4**

---

County of San Bernardino  <br>2007 General Plan Program  

Final Program Environmental Impact Report
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>water treatment and supply facilities.</td>
<td>The County shall ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.</td>
</tr>
</tbody>
</table>
| **Impact UT-3**  
An increase in municipal consumption, golf courses and industrial consumption will result in the need for additional amounts of water in the Desert Region. | **Mitigation UT-5**  
The County shall ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods. |
| **Impact UT-4**  
Sewer mainlines in the Valley Region will continually need to be installed and dedicated as the population increases in this Region. | **Mitigation UT-6**  
The County shall equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life. |
| **Impact UT-5**  
Some sewer agencies in the Mountain Region will need to increase their capacity as part-time residents become full-time residents in this area. | **Mitigation UT-7**  
The County shall coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and groundwater pollution. |
| **Impact UT-6**  
Private sewage treatment systems in the Desert Region can pollute groundwater or surface waters with pathogens and nitrates when not properly maintained or operated. | **Mitigation UT-8**  
The County shall apply federal and state water quality standards and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project, for surface and groundwater to safeguard public health. |
| **Impact UT-7**  
Development under the General Plan will result in an increase in the amount of waste requiring disposal at landfills. | **Mitigation UT-9**  
The County shall assist in the development of additional conveyance facilities and use of groundwater basins to store surplus of imported water. |
| **Impact UT-8**  
Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional or extended natural gas providers. | **Mitigation UT-10**  
The County approval of new development will be contingent on the availability of adequate and reliable water supplies and conveyance systems, consistent with coordination between land use planning and water system planning. |
| **Impact UT-9**  
Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional or extended natural gas providers. | **Mitigation UT-11**  
The County shall monitor future development to ensure that sufficient |
### Executive Summary

#### Impact UT-10
Development under the General Plan will result in a rise in population in the County of San Bernardino that will result in the need for additional telecommunication infrastructure.

#### Mitigation UT-12
The County shall ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

#### Mitigation UT-13
The County shall support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate RWQCB and County Department of Environmental Health and Safety.

#### Mitigation UT-14
In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plans or connection to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and treatment facilities.

#### Mitigation UT-15
Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek to direct urban development in areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support septic tank/leach field systems.

#### Mitigation UT-17
The County shall ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within the County, including, agriculture, residential, commercial and industrial wastes, while recognizing the relationship between disposal issues and the conservation of natural resources.

#### Mitigation UT-18
The County shall utilize a variety of feasible processes, including source reduction, transfer, recycling, landfilling, composting and resource

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>extended electricity service providers.</td>
<td>local water supply or alternative imported water supplies can be provided.</td>
</tr>
<tr>
<td>Impact UT-10</td>
<td>Mitigation UT-12</td>
</tr>
<tr>
<td>Development under the General Plan will result in a rise in population</td>
<td>The County shall ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.</td>
</tr>
<tr>
<td>in the County of San Bernardino that will result in the need for</td>
<td>Mitigation UT-13</td>
</tr>
<tr>
<td>additional telecommunication infrastructure.</td>
<td>The County shall support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where</td>
</tr>
<tr>
<td></td>
<td>required by the appropriate RWQCB and County Department of Environmental Health and Safety.</td>
</tr>
<tr>
<td></td>
<td>Mitigation UT-14</td>
</tr>
<tr>
<td></td>
<td>In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plans or connection</td>
</tr>
<tr>
<td></td>
<td>to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and</td>
</tr>
<tr>
<td></td>
<td>treatment facilities.</td>
</tr>
<tr>
<td></td>
<td>Mitigation UT-15</td>
</tr>
<tr>
<td></td>
<td>Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek</td>
</tr>
<tr>
<td></td>
<td>to direct urban development in areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support</td>
</tr>
<tr>
<td></td>
<td>septic tank/leach field systems.</td>
</tr>
<tr>
<td></td>
<td>Mitigation UT-17</td>
</tr>
<tr>
<td></td>
<td>The County shall ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within</td>
</tr>
<tr>
<td></td>
<td>the County, including, agriculture, residential, commercial and industrial wastes, while recognizing the relationship between disposal issues</td>
</tr>
<tr>
<td></td>
<td>and the conservation of natural resources.</td>
</tr>
<tr>
<td></td>
<td>Mitigation UT-18</td>
</tr>
<tr>
<td></td>
<td>The County shall utilize a variety of feasible processes, including source reduction, transfer, recycling, landfilling, composting and resource</td>
</tr>
</tbody>
</table>
Mitigation UT-19
The County shall seek federal and state funds for projects utilizing resource and material recovery processes.

Mitigation UT-20
The County shall continue recycling operations at County landfills; expand recycling operations to other landfills or resource recovery facilities.

Mitigation UT-21
Where feasible, the County shall explore the feasibility and environmental impacts of reopening inactive landfills where there is useful capability remaining.

Mitigation UT-22
The County shall assist the private sector wherever possible in developing methods for the reuse of inert materials (concrete, asphalt and other building wastes) that currently use valuable landfill space.

Mitigation UT-23
The County shall continue to map the precise location of all waste sites (existing, inactive and closed) on the County’s automated mapping system and create a database with information on air, soil and water contamination and the type of wastes disposed of at each site.

Mitigation UT-24
The County shall carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County, and protect the viability of waste disposal sites from encroaching on incompatible land uses.

Mitigation UT-25
The County shall provide efficient and cost-effective utilities that serve...
## Impacts

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>the existing and future needs of people in the unincorporated areas.</td>
</tr>
</tbody>
</table>

**Mitigation UT-26**
The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.

**Mitigation UT-27**
The County shall improve its telecommunications infrastructure and expand access to communications technology and network resources to improve personal convenience, reduce dependency on non-renewable resources, take advantage of the ecological and financial efficiencies of new technologies, maintain the County’s economic competitiveness, and develop a better-informed citizenry.

**Mitigation UT-28**
The County shall work with telecommunications industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.
The following is a list of potential impacts that may require mitigation measures, but those measures cannot reduce impacts to a level below significance, or the mitigation measures or alternatives are infeasible due to specific economic, legal, social, technological or other considerations, as described in Section 21081(a)(3) of the Public Resources Code:

<table>
<thead>
<tr>
<th>Category</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESTHETICS</td>
<td>Impact AES-1, Impact AES-2, Impact AES-3</td>
</tr>
<tr>
<td>AGRICULTURAL RESOURCES</td>
<td>Impact AG-1, Impact AG-2</td>
</tr>
<tr>
<td>AIR QUALITY</td>
<td>Impact AQ-1, Impact AQ-2, Impact AQ-3</td>
</tr>
<tr>
<td>HAZARDS AND HAZARDOUS MATERIALS</td>
<td>Impact HAZ-6</td>
</tr>
<tr>
<td>TRAFFIC AND CIRCULATION</td>
<td>Impact TR-2, Impact TR-3</td>
</tr>
</tbody>
</table>
Table I-3. Summary of Potential Effects Which Have Been Found not to be Significant

Table I-4 summarizes potential environmental effects that were found not to be significant. Therefore, in accordance with Section 15128 of the California Environmental Quality Act (CEQA) guidelines, no mitigation measures are required.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Reason Why Effect Was Not Found Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inundation of new land uses by a tsunami.</td>
<td>The County is located far enough inland from the Pacific Ocean that it is not subject to inundation by an earthquake-generated tsunami.</td>
</tr>
</tbody>
</table>
CHAPTER II.
INTRODUCTION

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
CHAPTER II

Introduction

A. PURPOSE OF THE FINAL ENVIRONMENTAL IMPACT REPORT

This Final Environmental Impact Report (FEIR) provides an analysis of the potential environmental effects associated with a comprehensive update to the County’s General Plan, the 13 areas within the County where Community Plans have been prepared, and the new County of San Bernardino Development Code (Title 8 of the County Code) that replaces the existing Development Code in its entirety.

B. LEAD AGENCY

The County of San Bernardino is the lead agency for the preparation of the FEIR for the update of the County’s General Plan, the 13 Community Plans developed as part of the update of the General Plan, and the new County of San Bernardino Development Code. As defined by Chapter 21067 of the Public Resources Code, “lead agency” means “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment.”

C. INTENT AND USE OF THE FEIR

The FEIR assesses the environmental effects associated with the implementation of the proposed General Plan Update, 13 Community Plans, and the new County Development Code. The five main objectives of this document as established by the California Environmental Quality Act (CEQA) are listed below.

- To disclose to decision-makers and the public the significant environmental affects of proposed project activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

D. ORGANIZATION OF THE FEIR

The FEIR has been formatted as described below:

Chapter I. Executive Summary – This section includes an Introduction that summarizes the information that is included in the FEIR. Also included is a discussion of the purpose of the FEIR, the project description, objectives for the update of the General Plan, 13 Community Plans and new County Development Code, areas of known controversy, summary of project impacts and mitigation measures, a description of project alternatives and other CEQA-related conclusions on growth-inducement, cumulative impacts, and required approvals of the EIR.

Chapter II. Introduction – This section includes a discussion of the purpose of the FEIR, the lead agency for the FEIR, intent and use of the FEIR, organization of the FEIR, and location of FEIR documents.

Chapter III. Project Description – This section describes the project location, project components (i.e., General Plan, Community Plans, and County Development Code), objectives for the components of the project and intended use of the EIR.
Chapter IV. Project Analysis – This section provides a description of the setting, significance criteria, impact analysis, mitigation measures and significant unmitigated impacts for each environmental parameter analyzed in the project FEIR. The FEIR includes an analysis of potential impacts of the project on Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Utilities/Service Systems.

Chapter V. Alternatives to the Proposed Project – This section, prepared in accordance with Section 15126.6 of the CEQA Guidelines, provides a description of the alternatives to the proposed General Plan Update project, including Alternative 1 – No Project Alternative (Existing 1989 General Plan), Alternative 2 – Reduced Intensity Alternative, and Alternative 3 – Intensified Sphere Alternative.

Chapter VI. Cumulative Impacts and Consumption of Non-Renewable Resources – This section describes the cumulative impacts and the consumption of non-renewable resources that would occur should the proposed project be approved.

Chapter VII. Growth-Inducing Impacts – This section provides a discussion on the growth-inducing impacts of the proposed project.

Chapter VIII. Mitigation Monitoring Program – This section provides a discussion on the Mitigation Monitoring Program that is intended to ensure the implementation of all mitigation measures adopted through the preparation of this EIR for the proposed and subsequent projects.

Appendices – The appendices to this document contain supporting documents and other material too detailed and voluminous to be included in the body of the FEIR. The following appendices are found at the end of this FEIR:

- Appendix A: Initial Study/Notice of Preparation and EIR Scoping Process
- Appendix B: Comment letters on the Notice of Preparation
- Appendix D: Traffic Analysis Report/Circulation Background Report
- Appendix E: Land Use Background Report
- Appendix F: Housing Background Report
- Appendix G: Open Space Background Report
- Appendix H: Conservation Background Report
- Appendix I: Noise Background Report
- Appendix J: Safety Background Report
- Appendix K: Economic Development Background Report
- Appendix L: Comments on the Draft EIR/Responses to Comments on the Draft EIR

E. LOCATION OF DOCUMENTS

The project FEIR, the updated General Plan elements, the 13 Community Plans prepared as part of the update to the General Plan, the updated County Development Code, and all other documents used in the preparation of the FEIR are located at the County of San Bernardino Land Use Services Department, Advance Planning Division and the County Clerk of the Board of Supervisors.
CHAPTER II

Introduction

The documents are available online at http://sbcounty.gov/landuseservices/ or requests to review these documents should be addressed to:

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, California 92415-0182
Contact Person: Jim Squire, AICP, Supervising Planner
Phone Number: 909-387-4147

F. PREPARATION PROCESS

This section describes how the development of Alternative Growth Scenarios led to the selection of the updated General Plan, which is the “preferred project” for this Environmental Impact Report. These Alternative Growth Scenarios should not be confused with the Environmental Alternatives presented in Chapter V of this EIR, which were prepared to comply with Section 15126.6 of the CEQA Guidelines. Chapter V of this EIR presents a reasonable range of alternatives that would avoid or substantially lessen the significant impacts of the preferred project, i.e., the 2007 San Bernardino County General Plan.

The state’s guidelines for the preparation of general plans direct cities and counties to include projections of population, housing and employment in the land use element of the plan. For the 2007 General Plan, three alternative growth scenarios were identified. The growth projections underlying these scenarios served several purposes, including:

- Giving the public and decision-makers a general idea about the growth that is expected to occur over the life-span of the plan;
- How future growth compares with either the growth that would have occurred under a previous plan or how growth would occur in the absence of a plan and only in response to market forces; and
- Providing information to help plan for facilities and uses that would be affected by the projected future growth, such as roads, water and sewer systems, schools, parks, and other public services and facilities.

The County’s current General Plan was adopted in 1989. The County and other agencies that rely on the General Plan now consider the growth projections provided in that Plan as out-of-date. In the 16 years since they were prepared, growth rates in the County have exceeded the 1989 projections and, among other consequences, the Plan’s programs to accommodate future growth have been strained by the faster rate of growth that has occurred in the County.

To respond to the state’s guidelines, cities and counties take a two-step approach to prepare growth projections consistent with federal census numbers and regional growth trends. The first step is to prepare a preferred land use plan with a total holding capacity identified for each land use shown in the plan. The second step is to develop goals and policies to guide the implementation of programs to achieve the growth desired for the build-out year consistent with objectives of the city or county. The update of the San Bernardino County General Plan utilized the same two steps, but the steps were taken concurrently, making it easier to understand the ability of the County to continue to grow in the next 25 years. The County staff and the Board of Supervisors believe that the land use policy map of the 1989 General Plan only needed some minor adjustments and corrections to provide for an appropriate mix and distribution of development within the County. However, in order to prepare adequate policy guidance to properly direct the buildout of the land use policy map, substantial emphasis was placed on re-formatting and streamlining the text of the elements, primarily the goals and policies of the General Plan.. The intent of the Board is to make the General Plan more useable while remaining responsive to public needs and
values. The direction of the Board was to prepare a new General Plan that is more policy oriented and less technical and procedural. The Board also indicated that policies would be updated to match contemporary needs, address changes in State law since 1989 and be responsive to future growth trends.

The County’s General Plan program was initiated with the preparation of a Vision Statement, the result of an extensive public participation program. The Board of Supervisors adopted the Vision Statement for the General Plan update in June 2004. Consultants and County staff spent several months preparing technical background reports to provide the necessary information on natural and man-made resources in the County to determine what issues, opportunities and constraints needed to be addressed in the new General Plan and to guide the update and reformating of existing goals and policies. Finally, draft Community Plans have been prepared and have been the subject of considerable review by the communities they address. Throughout the preparation of the Vision Statement, the technical background reports and the draft Community Plans, an underlying assumption that the growth that has occurred in the County shall continue for years and decades to come has not changed. The County has the advantage with an updated General Plan to use the opportunities offered by future growth as an asset for planning new resources and services as well as for expanding economic development opportunities in the County. For that reason, the County directed the updated General Plan to include with the seven state-mandated elements one elective element, an Economic Development Element.

The 2007 General Plan document provides policies to guide and encourage future residential, commercial and industrial development in the County. Although the General Plan is therefore growth inducing, the Plan’s policies are written to respond to the external growth pressures that the County is facing from Southern California and beyond (see Chapter VII). As part of the General Plan Update process, the County commissioned a study by Stanley R. Hoffman Associates (the “Hoffman Report”) to assess regional population projections for applicability to San Bernardino County. The Hoffman Report, with updated growth projections, is presented in Appendix C to this EIR.

Briefly stated, the Hoffman Report concluded that the present General Plan (“1989 General Plan, As Amended”) allowed for a buildout capacity substantially higher (e.g., 3-4 times higher capacity for population and 7-8 times higher capacity for employment) than Regional Growth Forecasts prepared by the Southern California Association of Governments (“SCAG Regional Growth Forecasts”), which in turn were based on recent regional economic forecasts.

In response to the difference in General Plan growth capacities, the proposed 2007 General Plan contains policy directions for a lower, more realistic buildout capacity, closer in magnitude to the SCAG Regional Growth Forecasts. The 2007 General Plan policy document, therefore, significantly reduces potential environmental impacts at the outset, compared to the present General Plan, by adopting a lower and more realistic buildout capacity.

For the purposes of this EIR, therefore, the analysis presented herein discusses environmental impacts in relation to the lower buildout projections of the Regional Growth Forecasts adopted by SCAG and presented in the Hoffman Report. To be clear, the analysis of potential environmental effects related to adoption and implementation of the 2007 General Plan is based on growth projections that form the “generator” of future potential impacts. This Final EIR utilizes an approach that recognizes General Plan policies and Development Code requirements as the mitigation measures to be adopted in the 2007 General Plan to manage that growth.

As directed by the Board of Supervisors, the 1989 land use policy map remains relatively unchanged, although development densities may be adjusted in targeted areas and infrastructure facility development will be more coordinated on a regional basis with local jurisdictions. The type of development will occur
consistent with the land use policy map and will be dependent on the adopted goals and policies as well as economic and market conditions in the region.

Because population and growth projections are not an exact science, three alternative growth scenarios were developed based on population housing and its forecasts from the Hoffman Report. The growth scenarios were developed in concert with the draft goals and policies and the Vision Statement. Since population and growth can be directed through land use policies as they interact with market conditions, alternative growth scenarios were developed based on differing growth assumptions. Each alternative is perhaps best thought of as themes to achieve the adopted Vision Statement. The Vision Statement, like the entire update program, is based on an extensive public participation program sought by the Board of Supervisors. The public participation program included 24 community meetings and extensive public surveys (with more than 1,000 respondents), as well as public meetings of the General Plan Advisory Committee and eventually the County Planning Commission and Board of Supervisors. The three alternative growth scenarios have been developed in response to public input, an expression of community values relating to land uses, growth, transportation and other issues. However, although each alternative places a different emphasis on aspects of the Vision Statement, each alternative scenario is consistent with the Vision Statement’s underlying values.

The three alternative growth scenarios, and a description of the related theme for each scenario, are as follows:

**Scenario 1–Existing General Plan, As Amended**

The County’s current General Plan was adopted in 1989, and has been amended a number of times since then. The 2003 analysis of the General Plan identified that the current Plan needs some technical changes for several reasons, including:

- Most of the projections in the Plan and its elements are out of date; and
- The format and writing style of the current General Plan make it difficult to use by County staff decision-makers and the public.

While the current 1989 General Plan, as amended, is not projected to 2030, the assumption is made that the Southern California Association of Governments (SCAG) Trend Projection represents the local city and County General Plans. The overall San Bernardino County projections have been provided by Meyer Mohaddes Associates at a Traffic Analysis Zone (TAZ) level (this includes both the incorporated and unincorporated areas of the County).

The jobs projection under this trend forecast is 106,961, virtually the same as the 106,997 projected for the Southern California Association of Government’s (SCAG’s) 2004 Regional Transportation Plan (RTP). This job forecast is relatively higher than the 83,420 projection for the current General Plan, or the 90,573 projection under the Sub-Regional Development Collaborative alternative. The major reason for this job difference is SCAG’s relatively higher projection for the Valley area.

Under Scenario 1, the rate of growth will be somewhat tempered by the goals and policies that place an emphasis on public infrastructure to be developed prior to major developments. This will affect the location of growth to those areas of the County that either have infrastructure with sufficient capacity or will be built in “in-fill” locations (often thought of as undeveloped islands). In most respects, however, growth under this alternative will continue the sprawl the County and the state have witnessed for the past 30 or more years.
Scenario 2–Regional Planning Perspective

SCAG and the San Bernardino Associated Governments (SANBAG) are responsible for preparing growth projections for use in the preparation of regional plans, such as the Regional Transportation Plan (RTP). SCAG’s regional growth projections are also used for the preparation of the South Coast Air Quality Management Plan (SCAQMP) prepared by the South Coast Air Quality Management District (SCAQMD). In addition, the projections are used by SCAG to prepare the Regional Housing Needs Assessment used by SCAG to review housing elements prepared by local cities and counties. SCAG’s regional projections are based on SCAG’s objectives relating to encouraging local agencies, such as the 24 cities in the County and the County itself, to plan for future growth that balances housing and employment growth and opportunities.

SCAG recently completed an extensive multi-year program of meetings and workshops at the local level to discuss regional growth with the public and to solicit comments and suggestions from public agencies about where future growth in the region should occur in the coming decades. The regional projections SCAG has recently prepared are based on that public input program - the COMPASS Program. The regional growth projections, used by SCAG and other regional agencies in the preparation of regional plans, would further SCAG’s objectives, if adopted in local plans, to achieve regional goals to reduce the increasing need for long home/work commutes with corresponding reductions in traffic demand, air pollution emitted from vehicles, and conversion of land for new housing and employment developments. The regional growth projections prepared by SCAG also reflect objectives that future growth should be focused on transportation nodes and corridors.

Future growth under Alternative Scenario 2 would occur along transportation corridors (including freeways, rail-transit lines, bus transit routes and similar facilities). This is one of SCAG’s underlying objectives for future regional growth and development. Increasing the density of housing and locating future employment centers near transportation corridors or transit centers may not result in substantially more growth in the County, but would rather redirect the future growth to these corridors and/or transit centers. From a regional perspective, this alternative would contribute to achieving SCAG’s objective to reduce home/work commuting distances, and increase reliance on public transportation (and less reliance on the single-passenger automobile) and associated benefits.

Scenario 3–Sub-Regional Development Collaboration

The County of San Bernardino has a history of collaborating with local cities to manage the development of unincorporated County areas for the mutual benefit of the County and the affected local jurisdictions. Continuing in this tradition, the Sub-Regional Development Collaboration Alternative Scenario facilitates economic development where it can benefit the County on a sub-regional level and looks to guide that development where it creates the greatest benefit for the County as a whole. For example, economic development, such as a major multi-modal complex in the High Desert sub-region, can serve to benefit the jobs-housing balance of that area, create higher wage jobs, and improve the flow of commuter traffic throughout the County. Also, where development may take place initially within unincorporated areas, collaboration would be encouraged so that coordinated infrastructure financing systems and tax sharing arrangements lead to urbanization patterns that are both efficient and provide adequate levels of public services allowing for the smooth integration of these areas into incorporated jurisdictions upon future

Some of the benefits to the County and the sub-region of this alternative include:

- Reduced friction or competition between the County and the cities for the proposed land use(s);
Introduction

- Application of development, design and performance standards that are mutually acceptable to both the County and the city or sub-region;
- Assurance that potential impact of a proposal can be offset by mutually acceptable conditions of approval to both the city and the County; and
- Tax sharing agreement and agreement regarding provision of public services to that area.

The land use policy map prepared for the 1989 land use element of the General Plan designates land for residential, commercial and industrial development. The designated lands have potential build-out capacity beyond that projected in the General Plan; that is, the land use policy map of the 1989 General Plan has a capacity for substantially more growth than anticipated to occur during the span of that land use policy map and General Plan. The General Plan update program is currently at the phase of work where the land use policy map is being updated at specific locations. However, consistent with the initial recommendation from the 2003 General Plan evaluation report and subsequent discussions and direction from the Board of Supervisors, the update of the land use policy map will have relatively few and minor changes to the current land use designations. Therefore, the total capacity of the land use policy map will continue to allow for building at a much greater level than the growth projections under any of the four alternative growth scenarios.

The alternative growth scenarios presented in this narrative do not represent the total holding capacity of the General Plan. Holding capacity is the total amount of development that could be permitted under the land use policy map. On the other hand, each scenario is a projection of the amount of growth or build-out that would occur by 2030 under the direction (goals, policies and theme) of each of the three alternatives.

In regard to the Sub-Regional Collaborative alternative scenario, the level of employment will increase by 7,153 jobs, which is the difference between SCAG's RTP 2004 forecast and the draft General Plan projection based on the 1990 to 2000 trend methodology. Additionally, it has been assumed that the additional housing (4,637 units) in the SCAG projection would also occur in the alternative’s projection as more job growth stimulates additional housing growth. This would, in turn, generate additional population growth (12,380) using the estimated household size of 2.67 from the draft General Plan trend projection. Also, as shown in the table, this results in an increase in the jobs per household ratio from 0.67 to 0.70. This is similar to the SCAG forecast of jobs per household as well for the overall unincorporated area.

It should be noted that some of the basic, or logistics driven, employment growth would also stimulate some local serving retail jobs. Thus, additional neighborhood and community centers may be developed within the unincorporated areas, but the major regional commercial centers are assumed to be in the urbanized or urbanizing areas along the major transportation corridors.

Scenario 3 assumes the adoption of the Community Plans and the same goals and policies as Scenario 1 with the addition of specific goals and policies to support the County to reach agreement with cities to cooperate in the development of specific projects (but, of course, not yet identified projects) in planning areas to benefit both the County and the respective cities. The targeted areas would generally be those areas most feasible for future annexations where economic collaboration can facilitate orderly growth that receives adequate and efficient public facilities and is sensitive to job/housing balance considerations. The benefits would include increased revenue (from property tax, sales tax, utility tax and other fees), improved design of projects to ensure land use and design compatibility, and provision of off-site improvements and infrastructure.
Introduction

Scenario 3 was selected as the growth alternative that best matched the desired buildout conditions reflected in the Vision Statement and would occur as a result of applying the new General Plan Goals and Policies.

G. AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

As initially presented in Section I-B of this EIR, following is a discussion of the areas of concern raised by the public. The County identified the following areas of concern as expressed by County residents at the community meetings, stakeholder interviews and during the visioning program conducted for the General Plan Update. Therefore, the growth forecasts contained in Scenario 3 were chosen for impact evaluation in this EIR.

1. INCOMPATIBLE USES/DEVELOPMENT STANDARDS/CODE ENFORCEMENT

Many of the areas in the County have incompatible uses located next to each other. The transitions between differing land uses (particularly the land use transitions between residential, commercial, and industrial uses) are often sudden, with little or no buffering offered by distance/setbacks, landscaping or design considerations.

During the community meetings in all three planning regions, residents expressed concern regarding lack of code enforcement by the County. In some cases, poorly maintained properties are in violation of the County Code, often combining multiple incompatible uses within their properties.

2. ECONOMIC DEVELOPMENT

The lack of economic development is one of the most important concerns for the County of San Bernardino. At a regional scale, the County has lagged behind adjoining counties in attracting investments and producing meaningful jobs, and/or achieving a balance between where people live and where they work.

Throughout most of the unincorporated Valley communities, there appears to be a lack of economic development activities, particularly a lack of revenue-generating commercial and industrial development within the unincorporated areas. Residents of the Valley communities emphasized the need for job creation during the community meetings, while other stakeholders, in their interviews, reinforced the necessity for bolstering economic development.

Job growth is one of the major concerns in the Mountain areas as well. Many of the residents in this area commute to Valley cities for work. Others work locally, often compromising wages in lieu of commuting time. Home-based businesses and professionals that telecommute are sharing increased levels of employment. Many Mountain communities depend on tourism, although many of tourist-related businesses are not doing well. The Mountain communities do not have many industrially zoned areas and local industrial uses (such as concrete mixing, firewood storage and sales, auto repair, etc.) are needed to support the local population.

Access to jobs is one of the major concerns identified by the Desert residents, both in terms of availability of jobs and road improvements for mobility. The Desert communities do not have many industries or manufacturing operations. Many of the Desert residents commute to other areas for work; therefore, there are opportunities for increased home-based businesses.
CHAPTER II

Introduction

3. **Preservation of Rural Character**
   Residents in all three planning regions of the County expressed concerns regarding rapid urbanization and the erosion of the rural character of their communities. Residents were concerned about the threat of annexation from adjoining incorporated cities. Many unincorporated community residents expressed that they do not want their communities to be annexed by the adjoining cities, but would like to incorporate in the future, when fiscally possible.

4. **Public Transportation**
   the size of the County area and the low density of development in the County have prohibited development of a public transportation network connecting the three planning regions of the County. In addition, there is significant traffic congestion in the Valley Region; lack of road capacity due to topography has contributed to traffic congestion in the Mountain Region. Residents of the Desert communities identified lack of transit system and road improvements as one of their major concerns.

5. **Infrastructure and Community Facilities**
   some parts of unincorporated County territory are not served by sewers, public roads and a reliable water source. Residents in all three of the County’s regional planning areas expressed concerns that the existing infrastructure system is strained due to rapid growth in the County. They are concerned that the infrastructure capacity is inadequate to support projected growth. Also, residents in the Mountain and Desert Planning Areas were concerned about the carrying capacity of the land to handle the percolation from additional septic systems that may be needed to handle increased growth in these areas.

   Mountain community residents expressed concerns regarding emergency access to their communities, while Desert residents in the more rural part of the County cited access to healthcare facilities as one of their concerns.

6. **Public Safety**
   Mountain community residents identified emergency access and safety as two of their primary concerns. Fire protection services are also constrained due to the mountainous topography of the region and inadequate emergency access to communities in this area of the County.

   Fire protection is an issue in the Mountain communities. The danger is especially high due to bark beetle infestation and forest densification that has led to insect and disease caused tree mortality with the corresponding heavy fuel loading.

   A police/sheriff response time to calls was also identified by many residents in all three Planning Regions of the County as an issue of particular concern.
CHAPTER III.
PROJECT DESCRIPTION

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
A. LOCATION AND BOUNDARIES

The County boundaries form the General Plan boundaries for the San Bernardino County General Plan Update (Figure III-1. Regional Location Map). San Bernardino County is located in the southeast portion of California. The County is bordered by Inyo County to the north, the states of Nevada and Arizona to the east, Riverside County and Orange County to the south, and Los Angeles County and Kern County to the west. Interstate (I-) 15 traverses through all three Regions of the County (Valley, Mountain, and Desert) generally in a north-south direction (Figure III-2, Planning Regions Map). The most urbanized portion of the County, the Valley Region, is also interconnected with Los Angeles County to the west by the I-10 and the I-210. Interstate 40 from its intersection with I-15 in Barstow to Interstate 10 provides an intermediate east-west connector between I-10 and I-15. These interstate freeways serve as the regional transportation network.

B. PROJECT CHARACTERISTICS

This section has been prepared to respond to the requirements in Section 15124 of the CEQA Guidelines that state the need for “a general description of the project’s technical, economic, and environmental characteristics, considering the principal engineering proposal if any and supporting public service facilities” to be included in the project description.

1. GENERAL OVERVIEW

San Bernardino County encompasses an area of over 20,000 square miles, of which approximately 78% is under federal and state ownership and, therefore, exempt from land use jurisdiction by the County Board of Supervisors. Most, but not all, of the policy changes proposed by the General Plan Update affect the remaining 22% of the land area within the County that is privately owned or owned by local government agencies.

The San Bernardino County General Plan is part of a comprehensive planning program that includes Countywide and Regional goals and policies along with the preparation of 14 Community Plans and the completely revised Development Code. The current General Plan, which was adopted in July 1989, is being updated since many physical and demographic changes have occurred at the countywide level since then, which present new opportunities and challenges. The General Plan has been updated to reflect these new demographic and economic conditions, altered growth patterns, and current land uses.

The General Plan identifies and proposes the following land use designations to accommodate the range of land uses that meet the needs of the residents and landowners of the County:

| Resource Conservation (RC) | General Commercial |
| Agriculture (AG) | Service Commercial |
| Rural Living (RL) | Community Industrial |
| Single Residential (RS) | Regional Industrial (IR) |
| Multiple Residential (RM) | Institutional (IN) |
| Neighborhood Commercial (CN) | Special Development |
| Office Commercial (CO) | Floodway (FW) |
| Rural Commercial (CR) | Specific Plan (SP) |
| Highway Commercial (CH) | Open Space (OS) |
2. **Jurisdictional Issues**

Although San Bernardino County is the largest County in the contiguous United States (12,867,840 acres), the span of control of the Board of Supervisors over the entire County is quite limited. The environmental analysis of this General Plan Update has been undertaken with full recognition of the limited land use jurisdiction over much of the County's geographic area. A characterization of the issues of land use control in San Bernardino County is presented below; all acreages and percentages in the following discussion are approximated and presented for descriptive purposes only.

a. **Federal and State Agencies Own and Control Most of the County Lands**

First and foremost, of the almost 13 million acres comprising San Bernardino County, approximately 10.5 million acres (78% of the total) are completely outside any governing control of the County Board of Supervisors. This land is referenced as “non-jurisdiction” land or “non-jurisdiction” territory. Of this non-jurisdiction land, approximately 6 million acres are owned by the United States and controlled by the Bureau of Land Management, Department of Interior; and 1.9 million acres are owned by the United States and controlled by various military branches within the United States Department of Defense.

b. **“Non-Jurisdiction” Territory is Fragmented and Scattered throughout the County**

The fact that the vast majority of the County territory is outside the control of the Board of Supervisors is further compounded by the scattered distribution of these “non-jurisdiction” properties. Rather than one singular unified ownership pattern (such as a military base or a National Park), the non-jurisdiction territory is distributed throughout the Mountain and Desert Subareas, interspersed with other parcels owned by private entities, which are subject to the land use jurisdiction of the County. Such fragmentation of property ownership and land use regulations can nevertheless be addressed, through comprehensive land use planning in San Bernardino County.

c. **Incorporated Cities Control Land Use on Much of the Remaining Land**

As stated, 78% of the total land area of the County is outside any control of the County Board of Supervisors. Of the remaining 22% of the County’s total land area, approximately 15% or about 1.9 million acres is entirely under County Jurisdiction and 7% lies within 24 incorporated cities. While the County influences a certain degree of development activity within these cities (primarily County owned administrative buildings, criminal justice facilities and certain associated infrastructure), the City Councils of these 24 cities directly regulate land use within these municipalities.

d. **The General Plan Update provides an opportunity for the Board of Supervisors to exercise leadership in resolving many inter-jurisdictional policies.**

The General Plan program evaluated in this EIR relates primarily to the land area directly under the jurisdiction of the County Board of Supervisors. Of the 12,867,840 total acres comprising San Bernardino County, only 15% of the total land area is regulated by the County Board of Supervisors. This General Plan Update, therefore, can only directly influence a small portion (less than 2 million acres) of the total land area of San Bernardino County. Nevertheless, many of the environmental issues identified in this EIR span all of the above jurisdiction and non-jurisdiction
areas. Policies proposed in the proposed project address areas of commonality between the County and cities regarding their Spheres of Influence and between the County and federal and state agencies.

C. PROJECT OBJECTIVES

Section 15124(b) of the CEQA Guidelines indicates that “a clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid decision makers in preparing findings or a statement of overriding considerations, as necessary.”

The County has the following basic objectives for the comprehensive update of the General Plan:

- Promote economic development to provide jobs to match population growth.
- Promote comprehensive planning approaches to deal with increasingly complex land development and public facilities and services issues.
- Provide transportation and circulation systems that adequately provide for intra-city and regional transportation needs. Alternatives to the drive-along mode, such as mass transit, ride sharing, bicycling, trail systems and telecommuting should be encouraged to reduce traffic congestion and enhance air quality. Also, coordinate the County’s transportation planning efforts with regional transportation planning efforts wherever possible.
- Foster new development in the County that strives for a jobs/housing balance by facilitating business growth, and encouraging the economic revitalization of business centers in the communities within the County. New development opportunities within the County should be focused on the types of businesses that will thrive in the 21st Century.
- Support the growth of the County so that the quality of life is enhanced by ensuring that infrastructure, community amenities and public safety are provided. Significant fiscal burdens on the existing communities within the County shall be avoided by requiring that new development pay its fair share of the costs public infrastructure required to serve new development.

D. PROJECT COMPONENTS

The diagram below graphically portrays a hierarchical structure of policies presented in the 2007 General Plan. Each of the planning area components is discussed further in this section.

1.
**CHAPTER III**  
*Project Description*

**GENERAL PLAN**

The State of California requires each city and county to prepare and adopt a general plan to identify goals, policies and programs to guide future development of that jurisdiction. Each general plan in the state is required to address a variety of issues through the preparation of elements, or chapters organized by topics, relating to the seven state-mandated elements: land use, circulation, housing, safety, noise, open space and conservation. Economic Development, an optional element in the San Bernardino County General Plan, has been included to recognize the importance of economic considerations in future land use decisions.

The General Plan provides a projection of growth in the County through the year 2030. Text, tables and maps in the draft Plan and its elements identify goals and policies that will guide the future development of residential, commercial, industrial, public facilities, transportation facilities and other land uses that are desired by the public and county decision-makers. The goals and policies are intended to provide a basis for achieving the County’s objectives while reducing potential impacts on the environment that may result from development during the 25-year planning horizon of the General Plan.

2. **PLANNING REGIONS OF THE COUNTY**

San Bernardino County is vast, consisting of three distinct geographic regions: the Valley, the Mountains, and the Desert, shown on Figure III-2 Planning Regions Map. The EIR has been prepared keeping in mind these distinctions between the three geographic regions. The three diverse planning regions of the county vary not only by terrain and climate, but also in the issues and opportunities they face. The three planning regions provide an opportunity to formulate custom-tailored solutions for each region and can be further described as follows:

**Valley Planning Region**

The Valley Planning Region is defined as all the area within the county that is south and west of the National Forest boundaries. The San Bernardino Mountains range forms the eastern limit of the Valley Region, along with the Yucaipa and Crafton Hills. The southern limits of the valley extend south from the Santa Ana River to the Jurupa Mountains and from the Chino Basin to the Chino Hills. The Valley Planning Region of the county is approximately 60 miles east of the Pacific Ocean and borders Los Angeles, Orange, and Riverside Counties. It is approximately 50 miles long from west to east and encompasses 500 square miles. It covers only 2.5 percent of the total county land, but holds approximately 75 percent of the county’s population. Most of the valley land area is incorporated. Refer to the introduction to the Background Reports (Appendix E) for more information on the Valley Planning Region.)

Incorporated cities within the Valley Region include the following: Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa.

Unincorporated Communities within the Valley Region include the following: Bloomington, Crafton, Del Rosa, Devore, Mentone, Muscoy, San Antonio Heights, South Montclair, and Verdemont. Unincorporated pockets exist within the cities of Montclair, Chino, Fontana, and San Bernardino.
### Mountain Planning Region

North of the Valley Planning Region is the Mountain Planning Region, consisting of the San Bernardino Mountain Range and the eastern extent of the San Gabriel Mountain Range. Of the 872 square miles within this planning region, approximately 715 square miles are public lands managed by state and federal agencies—principally, the U.S. Forest Service. The region contains forests, meadows, and lakes. The San Gabriel Mountains, which extend from Los Angeles County, form the western end of the Mountain Planning Region. The San Gabriel Mountains comprise about one-third of the Mountain Planning Region, with the San Bernardino Mountains making up the remainder (refer to the introduction to the Background Reports, see Appendix E for more information on the Mountain Planning Region).

The City of Big Bear Lake is the only incorporated area within the Mountain Region.

Unincorporated communities within the Mountain Region include the following: Angeles Oaks, Arrowbear, Arrowhead Woods, Baldwin Lake, Barton Flats, Bear Creek, Big Bear, Blue Cut, Blue Jay, Cedar Glen, Cedarpines Park, Crestline, Erwin Lake, Fawnskin, Forest Falls, Fredalba, Green Valley Lake, Holcomb Valley, Lake Arrowhead, Lake Gregory, Lytle Creek, Mount Baldy, Oak Glen, Rim Forest, Running Springs, Silverwood, Sky Forest, Sugarloaf, Twin Peaks, Valley of Enchantment, and Wrightwood.

### Desert Planning Region

The Desert Planning Region, the largest of the three planning regions, includes a significant portion of the Mojave Desert and contains about 93 percent (18,735 square miles) of the land within San Bernardino County. The Desert Planning Region is defined as including all of the unincorporated area of San Bernardino County lying north and east of the Mountain Planning Region. The Desert Planning Region is an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes (refer to the introduction to the Background Reports, see Appendix E for more information on the Desert Planning Region.).

Following are the incorporated cities and towns in the Desert Region:

Adelanto, Apple Valley, Barstow, Hesperia, Victorville, Needles, Twentynine Palms, and Yucca Valley.


### 3. Community Plans

Community Plans focus on individual, distinct communities within the overall County’s General Plan. As an integral part of the overall program, Community Plans must be consistent with the General Plan. To facilitate consistency, the Community Plans build upon the goals and policies of each element of the General Plan. In addition, policies that are included within the Community Plans are regarded as refinements of the broader General...
Plan goals and policies that have been adapted to meet the specific needs or unique circumstances raised by the individual communities.

The Community Plan provides an opportunity to address unique issues facing the individual communities and to establish priorities to guide future development. Common priorities were established for each of the individual plan areas within the regions that:

- Maintain a mix of land uses;
- Protect the plan area’s natural resources and open spaces; and
- Ensure the availability of adequate services and infrastructure to serve the needs of existing and future residents.

As a result, the land use elements within each of the Community Plans are often the core around which other elements develop, do not propose significant land use changes. Instead, goals and policies guide development in a manner that maintains the existing mix of land uses, preserves the character of the community, and complements existing development. To preserve the existing community character, many of the land use goals and policies in the Community Plan direct the location and concentration of future development areas consistent with the land use map and the scale and arrangement of future development such that it complements the existing community character. The Community Plans also include the same “elements” that are required by the state to be addressed in the County’s General Plan: Circulation and Infrastructure, Open Space, Conservation, Safety and Economic Development elements. Within each of these elements, goals and policies have been developed to further support preservation of the existing character of the Community Plan area.

The following is a brief description of each of the 13 Community Plan areas organized by Planning Region.

**Valley Region**

- Bloomington: The community of Bloomington includes approximately 7 square miles of unincorporated area located just north of the San Bernardino/Riverside County line. The plan area is almost entirely surrounded by incorporated cities. The City of Fontana is adjacent to the west and north, and the City of Rialto is located along the north and east boundaries of Bloomington. The community of Bloomington is located entirely within the adjacent cities’ SOI areas.

- Muscoy: The community of Muscoy includes approximately 3 square miles of unincorporated area directly abutting the City of San Bernardino, and in its SOI. The City of San Bernardino surrounds the plan area on the north, east and south. The plan area is separated from the City of Rialto on the west by a railroad line, the Lytle Creek Wash and the Cajon Creek Wash. Cajon Boulevard runs along the eastern boundary of the plan area. SR-210 borders the community on the south. Railroad lines border the community on both the east and west boundaries.

**Mountain Region**

- Bear Valley: The Community Plan area includes approximately 135 square miles of unincorporated area surrounding the City of Big Bear Lake. The plan area is located in the San Bernardino Mountains and is entirely surrounded by the San Bernardino National Forest. The plan area includes the unincorporated communities of Baldwin
Lake, Big Bear City, Erwin Lake, Fawnskin, Lake Williams, Moonridge and Sugarloaf.

- Crest Forest: The community of Crest Forest includes approximately 18 square miles of unincorporated area located west of Lake Arrowhead and south of Lake Silverwood. The plan area is entirely within the San Bernardino National Forest and includes the communities of Crestline, Cedar Pines Park, Valley of Enchantment, and the Lake Gregory Village area.

- Hilltop: The Hilltop Community Plan area is completely within the San Bernardino National Forest; it lies east of Lake Arrowhead and west of Big Bear Lake. The planning area encompasses approximately 40 square miles, which includes the communities of Running Springs, Arrowbear and Green Valley Lake. Also included are the neighborhoods of Fredalba, Smiley Park, Nob Hill, Seymour Flats, Crab Tree Flats and the Snow Valley ski area.

- Lake Arrowhead: The Plan area is located in the San Bernardino Mountains and is surrounded by the San Bernardino National Forest. The Lake Arrowhead Plan area is bound to the southwest by the Crestline Community Plan and to the southeast by the Hilltop Community Plan. The Lake Arrowhead Community Plan area encompasses approximately 30 square miles and includes the communities of Agua Fria, Arrowhead Villas, Blue Jay, Cedar Glen, Crest Park – Meadowbrook Woods, Deer Lodge Park, Lake Arrowhead, Rimforest, Skyforest and Twin Peaks.

- Lytle Creek: The Lytle Creek planning area is roughly 6 square miles of unincorporated area. It is approximately 15 miles northwest of the City of San Bernardino and 10 miles from the cities of Fontana and Rialto. This small remote community is located in a large southeast-trending canyon on the eastern portion of the San Gabriel Mountains completely within the boundaries of the San Bernardino National Forest. The neighborhoods within the plan area are accessible by a single road off the I-15.

- Oak Glen: The Oak Glen community is located at the foot of the San Bernardino National Forest, 60 miles east of the City of Los Angeles and just east of the City of Yucaipa. Oak Glen Road is the only main access road through the Oak Glen community. The planning area includes approximately 14,213 acres, or 22 square miles of unincorporated County area.

**Desert Region**

- Homestead Valley: The community of Homestead Valley is located in the eastern portion of the Mojave Desert and includes approximately 124 square miles of unincorporated County area. The plan area is located north of the Town of Yucca Valley and west of the U.S. Marine Corps Air Ground Combat Training Center. The plan area includes the communities of Landers, Flamingo Heights, Johnson Valley and Yucca Mesa.

- Joshua Tree: Joshua Tree is nestled against the foothills of the Little San Bernardino Mountains at the southern edge of the Mojave Desert. The plan area covers approximately 94 square miles generally bordered on the north by the Twentynine Palms Marine Corps Base, partially on the east by the City of Twentynine Palms, on the south by the Joshua Tree National Park, on the southwest by the Town of Yucca Valley and on the northwest by the eastern boundary of the Homestead Valley Community Plan area.
• Lucerne Valley: The Lucerne Valley Community Plan Area is located at the southwestern edge of the Mojave Desert and covers an area of approximately 433 square miles. It is located approximately 35 miles south of Barstow, 45 miles northwest of Yucca Valley on State Route (SR-) 247, 15 miles southeast of Apple Valley and is approximately 20 miles north of Big Bear Lake on SR-18. The intersection of SR-18 and SR-247 is a central point for the community, and adjacent to the downtown commercial center.

• Morongo Valley: Morongo Valley is located in the south central portion of San Bernardino County, on the edge of the southern Mojave Desert. The Morongo Valley plan area covers about 44 square miles. The planning area is bordered by the Sawtooth Mountains on the north, the Town of Yucca Valley to the northeast, Joshua Tree National Park to the east, Riverside County on the south, and the San Bernardino Mountain Range on the west.

• Phelan/Pinon Hills: The Community Plan area of Phelan/Pinon Hills includes approximately 134 square miles of unincorporated area located at the transition between the foothills of the San Gabriel Mountains and southwestern portion of the Mojave Desert. The plan area is bordered on the south by the San Bernardino National Forest, Los Angeles County to the west, the Oak Hills Community Plan area and the cities of Adelanto and Victorville to the east, and the unincorporated area of El Mirage to the north. The Community Plan area includes the communities of Phelan and Pinon Hills.

4. DEVELOPMENT CODE

The Development Code implements the policies of the San Bernardino County General Plan by classifying and regulating the uses of land and structures within the County. The purpose of the Development Code is to promote and protect the public health, safety, and general welfare of County residents.

The proposed San Bernardino Development Code (Title 8 of the County Code) would replace the existing County Development Code in its entirety. The proposed Development Code contains the following divisions:

• Development Code Authority and Applicability;
• Land Use Zoning Districts and Allowable Land Uses;
• Countywide Development Standards;
• Standards for Specific Land Uses and Activities;
• Permit Application and Review Procedures;
• Development Code Administration;
• Subdivisions;
• Resource Management and Conservation
• Public Facilities Financing.
• Glossary

5. LAND USE/ZONING DESIGNATION CHANGES

The County of San Bernardino maintains a “One Map” System for the General Plan Land Use map and the Zoning map. While the scope of the General Plan Update, as directed by the
Board of Supervisors, did not include comprehensive revisions to land use designations, certain changes were included in the update program. Focused zoning level examinations were anticipated in the scope of work and were performed on three “hot spot” areas, West Fontana, Mentone and Newberry Springs. These three unincorporated areas in the Valley Region have not had detailed zoning review performed in the past, and the areas have experienced considerable growth coupled with inconsistent land uses since the 1989 General Plan. The Newberry Springs area has maintained a rural atmosphere with small agricultural uses and other home based businesses. The community’s location along the I-40 coupled with National Trails Highway (Old Route 66) extending through the community provide opportunities for business growth appropriate to the area. In addition to the hot spot analyses, other minor changes were made as described below (the specific changes are denoted on the land map set that accompanies this EIR). The project includes the following modifications to the land use/zoning map:

- Made comprehensive changes relative to non-jurisdictional lands and made boundary adjustments to those lands where land ownership had changed;
- Redefined Resource Conservation boundaries abutting non-Resource Conservation areas where deleting designations from non-jurisdictional land created a discrepancy;
- Aligned land use designations to parcel boundaries;
- Removed all obsolete zoning “prefixes” and “suffixes”;
- Revised all residential land use designations into a standardized list of minimum lot sizes for the Agriculture, Rural Living, and Single Family Residential designations;
- Changed all Planned Development (PD) designations to Specific Development (SD) with either a residential or commercial suffix;
- Corrected City Boundary discrepancies and adjusted the maps for all recent annexations;
- Changed land use zoning district designations in certain small unincorporated pockets in the SOI of the Cities of Chino and Montclair to establish a more consistent land use pattern;
- Changed land use zoning district designations in the West Fontana and Mentone areas where “hot spot” analyses were conducted to establish a more consistent land use pattern and to achieve greater consistency with the neighboring cities pre-zoning; and
- Made limited land use changes to specific properties in Pinon Hills, Muscoy, Green Valley Lake, Lucerne Valley, Homestead Valley, Apple Valley, Newberry Springs, Ludlow and Hesperia.

E. INTENDED USES OF THE FEIR

The intended use of this FEIR is to disclose to decision makers and the public, the significant environmental impacts of the San Bernardino County General Plan Update. The lead agency for this project is the County of San Bernardino. At the present time, no Responsible Agencies have been identified which would use this EIR in their subsequent actions to permit or otherwise allow this entire project to be implemented.
Figure III-1. Regional Location Map
Figure III-2. Planning Regions Map

Desert Region

Mountain Region

Valley Region
CHAPTER IV.
PROJECT ANALYSIS

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
CHAPTER IV

INTRODUCTION AND BACKGROUND

Section 15143 of the CEQA Guidelines directs that an EIR “shall focus on the significant effects on the environment. The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence. Effects dismissed in an Initial Study [which was attached to the Notice of Preparation and included in Appendix B] as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the Lead Agency subsequently receives information inconsistent with the finding in the Initial Study”.

The significance of the environmental issues presented in this Chapter should be viewed in the context of the differences between the present General Plan, originally adopted in 1989, and the presently proposed General Plan. Briefly stated, the 1989 General Plan would allow significantly more population and nonresidential uses than would the proposed 2007 General Plan. The various environmental issues presented in this Chapter take into account the fact that ultimate buildout capacities have been significantly reduced through the proposed 2007 General Plan.

As background context for the environmental analysis, an analysis of County buildout capacity was prepared on March 29, 2006 by Stanley R. Hoffman Associates (“Hoffman Report”, see Appendix C). This analysis compared the theoretical buildout capacity of the County’s present General Plan (“1989 General Plan As Amended”: no specific buildout timeframe specified) with the present project (“Proposed 2007 General Plan”; buildout timeframe of 2030 and with regional transportation planning forecasts of the Southern California Association of Governments (“SCAG RTP 2004”; buildout timeframe of 2030).

Key conclusions of the Hoffman Report, particularly those relevant to the environmental analysis presented in this Chapter, are as follows:

- For the overall unincorporated County, assuming no change in political boundaries during the forecast period, the estimated land use build-out capacities from the 1989 General Plan As Amended far exceed the projected 2030 development under either the Proposed 2007 General Plan projections or the SCAG 2004 forecast.

- For population, the current estimated build-out capacities range from about 3 to 4 times greater than either the SCAG RTP 2004 or the Proposed 2007 General Plan projections (1,440,552 persons vs. 436,515 or 427,606, respectively).

- For households, the current estimated build-out capacities range from about 3 to 4 times greater than either the SCAG RTP 2004 or the Proposed 2007 General Plan projections (495,318 housing units vs. 152,477 or 130,209, respectively).

- Employment projections, based on build-out capacities, range from about 7 to 8 times larger than economic projections due to the fact that the County currently permits non-residential building intensities to be so much greater than typical suburban patterns and the traditional growth seen in the County (751,197 jobs vs. 106,997 or 90,465, respectively).

- When the build-out capacities are compared against the projections by the major planning areas, the differences are least pronounced in the Valley area, which is largely built-out. The differences are most pronounced in the Desert area where large expanses of vacant land exist.

- The Mountain area, which is more environmentally constrained, is roughly one-third built-out in terms of population and households, and about 43 percent in terms of employment.

Not all of the environmental issues presented in this Chapter are affected by the above-noted discrepancies. For example, biological resources and cultural resource impacts are more related to the...
total land area disturbed, rather than the population distributed on that land. On the other hand, issues such as traffic and air quality are directly related to population and employment levels of magnitude.

Given the above-noted differences between the present 1989 General Plan as Amended and the proposed 2007 General Plan, following are the environmental issues discussed in this EIR (Sections A through P) that are clearly significant and most likely to occur. With reference to earlier discussions regarding limited jurisdiction of the Board of Supervisors over land area of the County, the mitigation measures presented in this Chapter are within the control and responsibility of the County.

**Regional Concept of the Revised General Plan**

The County of San Bernardino has been developed into three distinct geographical regions: the Valley Planning Region, the Mountain Planning Region and the Desert Planning Region. The three planning regions provide the County an opportunity to formulate solutions to the land use issues tailored to each region. The geographic setting and the land ownership conditions included in each region were previously discussed in Section III (Project Description) of this EIR. The following additional information is provided for each Planning Region.

**Adjoining Counties and States:**

- **Valley Region**
  - The Valley Region is located north of Orange and Riverside Counties, and to the east of Los Angeles County.

- **Mountain Region**
  - The Mountain Region is located north of Riverside County and east of Los Angeles County.

- **Desert Region**
  - The Desert Region is located to the south of Inyo County, to the north of Riverside County, east of Kern and Los Angeles Counties, and to the west of the states of Nevada and Arizona.

**Incorporated Cities and Unincorporated Communities in the County:**

- **Valley Region**
  - The Valley Region includes the following incorporated cities and unincorporated communities:
    - Unincorporated Communities: Bloomington, Crafton, Del Rosa, Devore, Mentone, Muscoy, San Antonio Heights, South Montclair, and Verdemont.
  - Unincorporated pockets exist within the cities of Montclair, Chino, Fontana, and San Bernardino.

- **Mountain Region**
  - The Mountain Region includes the following incorporated cities and unincorporated communities:
    - Incorporated Cities: Big Bear Lake.
    - Unincorporated communities: Angeles Oaks, Arrowbear, Arrowhead Woods, Baldwin Lake, Barton Flats, Bear Creek, Big Bear, Blue Cut, Blue Jay, Cedar Glen, Cedarpines Park, Crestline, Erwin Lake, Fawnskin, Forest Falls, Fredalba, Green Valley Lake, Holcomb Valley, Lake
Arrowhead, Lake Gregory, Lytle Creek, Oak Glen, Rim Forest, Running Springs, Silverwood, Sky Forest, Sugarloaf, Twin Peaks, Valley of Enchantment, and Wrightwood.

c. Desert Region

The Desert Region includes the following incorporated cities and unincorporated communities:


A. AESTHETICS

This section evaluates the potential visual impacts associated with the San Bernardino County General Plan, Community Plans, and Development Code, including assessing the potential for creating new sources of light and glare. This analysis also includes mitigation measures that comply with the County’s limited jurisdiction over territory actually controlled by the County.

1. SETTING

San Bernardino County, with a land area of 20,106 square miles, is the largest County in the continental United States. The County contains vast undeveloped tracts of land that offer significant scenic vistas. This vast County consists of three distinct geographic regions - the Mountains, the Valley, and the Desert. These diverse geographies not only vary by terrain but also in visual character. The three areas, combined, encompass all the unincorporated lands within the County. The planning regions include the spheres of influence of the incorporated cities.

The proposed new General Plan carries forward the Open Space Plan adopted in 1991, which amended the 1989 General Plan. The Open Space Diagram was prepared to provide mapped depiction and text identification of 62 major open space areas throughout the County. These areas contain private and public lands (refer to the Open Space Background Report in Appendix G). There are numerous designated federal, state, and local open space and recreational areas throughout the County that offer scenic vistas and views. These include 28 designated Bureau of Land Management (BLM) Wilderness Areas among other BLM land holdings, which constitute approximately 47% of San Bernardino County’s total acreage. Other key recreational areas that offer scenic vistas and views include two National Parks (2.6%), one National Preserve (10.7%), two National Forests (3.6%), four State Parks (.2%), and eight regional parks (.05%).

Numerous interstate routes, state highways, county roads and roads on federal lands are either designated scenic highways or byways. Table IV-A-1 lists state highways eligible for official designation as a State Scenic Highway. Table IV-A-2 lists the routes that are designated as scenic routes in the County General Plan. The Rim of the World Highway is a Scenic Byway that has been designated by the United States Forest Service (USFS) and includes portions of SR-138, 18 and 38. The BLM has also designated a number of remote desert roadways as Back Country Byway, which is intended to alert people to their scenic quality. There are also a number of other scenic routes designated by the California Department of Transportation (Caltrans) and a number of locally designated scenic routes that are subject to land use and aesthetic controls, including portions of I-15, I-40, and SR-395.

The San Bernardino County General Plan states that a feature or vista can be considered scenic if it provides a vista of undisturbed natural areas, includes a unique or unusual feature that comprises an important or dominant portion of the viewshed, or offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas) (San Bernardino County General Plan [San Bernardino County, Open Space Element, Policy OS 5.1]).

Primary scenic concerns of County residents include the preservation of scenic views within the desert communities and limits for development on ridge tops within the mountain communities. Other localized concerns have been expressed by residents within the Valley.
Region for mountain foothills and areas such as the Crafton Hills. (San Bernardino County General Plan, Conservation Element, Policy CO 11.2)

Vast undeveloped areas and undisturbed scenic vistas within the County provide a significant scenic resource as they contrast against the developed urban areas. Designated federal, state, and local open space and recreational areas offer scenic vistas and views if they are visible and provide a break from the urban landscape.

A substantial amount of federal and state lands and local recreational areas throughout the County function as open space by providing scenic vistas and views. Scenic resources have been threatened with increased urbanization, intrusion of higher density development into rural areas and less scenic developments that were not anticipated by the public and county decision-makers. The proposed update of the County’s General Plan, Community Plans, and Development Code include goals, policies and programs to give more definition to aesthetic and scenic resources adding clarification to distinguish unique and varied policies that add greater certainty to the manner of how the County will preserve these resources. Nonetheless, although the County General Plan, Community Plans, and Development Code, have several goals and policies and development standards relating to aesthetics, the potential impacts from future development as responses to continued population growth will occur.

While scenic vistas are normally associated with daytime viewing, Residents of San Bernardino County consider night sky viewing and nighttime vistas as important aesthetic qualities. Due to the valued night sky conditions of desert and mountain residents, the County of San Bernardino has Ordinance 3900 in place. This ordinance, known as the Night Sky Ordinance, maintains the following:

“The residents of much of the Mountain and Desert Areas of the County currently enjoy a dark night sky unlike the residents of the more populated areas within the County. To preserve this dark night sky, two cities within the County and the County for a portion of the Morongo Basin have adopted ordinances setting outdoor lighting standards. This ordinance is consistent with the cities’ ordinances, the previously adopted County ordinance and the desires of the residents of the Mountain and Desert Areas to provide broader protection of the night sky.” The ordinance outlines specific standards relating to glare and outdoor lighting. Those standards are included in Sections 87.0920 and 87.0921 of the Updated Development Code.

a. Valley Region

The Valley Planning Region consists of all the area within the County that is south and west of the National Forest boundaries along the foothills of the San Gabriel and San Bernardino Mountain ranges. The San Bernardino Mountain range, where it trends southeast, forms the eastern limit of the Valley, along with the Yucaipa and Crafton Hills. The southern limits of the Valley are marked by alluvial highlands of the Laloma, Jurupa Hills and Chino Hills where they extend westerly from the San Gorgonio Pass to their intersection with the Los Angeles Coastal plan region.

The Valley Planning Region of the County is approximately 60 miles east of the Pacific Ocean and borders Los Angeles, Orange and Riverside counties. It is approximately 50 miles long from west to east and encompasses 500 square miles. It covers only 2.5% of the total County land, but holds approximately 75 percent of the County’s population. Elevations within the Valley range from about 500 feet on the
Valley floor to 1,700 feet in Live Oak Canyon, and to about 5,400 feet in the Yucaipa Hills. Most of the Valley lies within the jurisdiction of 15 cities.

The predominant native plant communities within the undeveloped areas of the Valley Planning Region are chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. Vegetation in urbanized areas consists of primarily of introduced exotic landscape species. The visual character of the Valley Region is primarily an urban landscape that spreads out against a backdrop of steeply ascending mountain ranges to the north and east and low lying hills to the south and west.

b. Mountain Region

North of the Valley Planning Region is the Mountain Planning Region, consisting of the San Bernardino and San Gabriel Mountain ranges. Elevations range from 2,000 feet along the foothills to the 11,502-foot summit of Mount San Gorgonio, the highest peak in Southern California. Of the 872 square miles within this planning region, approximately 715 square miles are public lands managed by State and Federal agencies, principally the U.S. Forest Service. The region contains chaparral-covered slopes generally below the 4000-foot elevation and forests, meadows, and lakes.

The San Gabriel Mountains, which extend from Los Angeles County, form the western end of the Mountain Planning Region. The San Gabriel Mountains form about one-third of the Mountain Planning Region, with the San Bernardino Mountains making up the remainder. The San Bernardino Mountains feature four large lakes (Big Bear Lake, Silverwood Lake, Lake Arrowhead, and Lake Gregory), and many smaller lakes. The Mountain Planning Region is the perfect setting for year-round sports and recreational opportunities offering ample scenic opportunities. The differences in elevation and topography are primarily responsible for variations in temperature and precipitation. Of significant importance to the downstream areas of San Bernardino, Riverside and Orange counties are the headwaters of the Santa Ana River, which lie within these mountains. In addition to the Santa Ana River, four other major creeks and rivers, Mill Creek, Lytle Creek, Deep Creek, Mojave River and Whitewater River.

The predominant plant communities in the Mountain Region include chaparral, sage scrub, deciduous woodlands, conifer forests, and wetlands. The Mountain Region sustains many unique plant associations due to the diverse geology and varied microclimates. Unique associations such as the pebble or pavement plains which are limited to approximately thirty locations in and around by Big Bear Lake and Holcomb Valley are found on clay soils and have formed where frost-leave action has pushed cobbles in scattered clay deposits to the surface, creating pebble plain habitat. The orthographic effect of the elevation gradient increases the amount of precipitation that the Mountain Region receives during winter storms. Higher rainfall amounts and cooler temperatures support mountain vegetation at the higher elevations. The visual character of the Mountain Region is defined by a rugged forested landscape consisting of prominent ridgelines and steep canyons interspersed with small isolated communities, valleys and lakes that contain scattered populations.
c. Desert Region

The Desert Planning Region, the largest of the three planning regions, includes a significant portion of the Mojave Desert and contains about 93% (18,735 square miles) of the land area within San Bernardino County. The Desert Planning Region is defined as including the area that extends north to the boundaries with Kern and Inyo Counties and easterly to the state borders of Nevada and Arizona. The Desert Region also extends westerly to the boundary with Los Angeles County. The planning region from a landscape perspective is further sub-divided into the high desert and the low desert.

Due to the persistent winds that blow throughout the year, large portions of the desert surface have been modified into a mosaic of ground surfaces that consists of stones and cobbles known as desert pavement. A major physical resource of the Desert Planning Region is the Mojave River, a critical water source for many of its residents. Among the few rivers that both flow north and do not empty into an ocean, the Mojave River travels north and east away from its watershed in the San Bernardino Mountains. The major part of it’s over 100-mile length is marked by a dry riverbed that only on occasion reveals the water within it. Except in exceedingly wet years, the Mojave River ends its flow just north of the Mojave Narrows in the Helendale area. Significant wet years produce flows that extend to Afton Canyon and ultimately to Soda Dry Lake.

The Desert Region is the largest geographic area within San Bernardino County. The Desert Region includes the greatest diversity of plant communities within the County including at least ten distinct plant communities that support a great diversity of biological resources. These plant communities include white fir woodland, pinion/juniper woodland, desert sage shrub, Joshua tree woodland, Mojave Desert scrub, saltbush scrub, alkali sink, dunes and wetlands. The visual character of this Planning Region is defined by its arid landscape consisting of sparsely vegetated mountain ranges and broad valleys with expansive bajadas and scattered dry lakes. The region provides a scope of extensive open space and expansive vistas.

Existing Regulatory Policies Applying To the Study Area

Currently aesthetic resources within San Bernardino County are regulated under several planning programs. These include the San Bernardino County General Plan, fourteen (14) Community Plans, and the San Bernardino Development Code. In addition San Bernardino County is regulated by Ordinance No. 3900 that regulates glare, outdoor lighting and night sky protection. There are no designated wild and scenic rivers located in San Bernardino County. Finally, Caltrans has regulated State Scenic Highways within the County. Scenic roadways are discussed in further detail in the Criteria of Significance section below under Recognition of BLM and U.S. Forest Service Scenic Resource Policies.

Many of the vistas that have been deemed as “scenic” are located along roadways, especially throughout the Mountain and Desert regions. To ensure the quality and character of these locations are not compromised through obtrusive development, improvements of any kind are subject to additional land use and aesthetic controls outlined under the County’s Scenic Highway Overlay.
These controls include, but are not limited to, the following:

- Review of proposed development along scenic highways to ensure preservation of scenic values for the traveling public and those seeking a recreational driving experience.
- Expanding the established right-of-way of a designated Scenic Corridor to extend 200 feet to either side, measured from the outside edge of the right-of-way.
- Development along these corridors will also be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.
- More restrictive sign ordinance standards regarding visual quality and size.
- Require new development to provide ample recreation and scenic opportunities along Scenic Corridors.
- Restrict development along prominent ridgelines and hilltops.
- Review site plans, specifically architectural design, landscaping and grading, to prevent obstruction of scenic views and to blend with surrounding landscape.
- Prohibit off-site advertising signs (i.e., billboards) within and adjacent to all scenic corridors.

2. **Significance Criteria**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Aesthetics, if the project would cause any of the following effects:

- **Have a substantial adverse effect on a scenic vista.**
- **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.**
- **Substantially degrade the existing visual character or quality of the site and its surroundings.**
- **Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.**

3. **Impact Analysis**

**Impact AES-1**

Several scenic routes within the Valley Region have been deleted, including I-15 south of Devore. Some new scenic routes have also been added in the county including the Coxey Truck Trail. Billboards would be prevented by sign-control overlay; however billboards would be allowed in areas with a highway commercial designation. Potential to damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway have been threatened with more urban, less rural and less scenic developments that were not anticipated by the public and County decision-makers. The proposed update of the County General Plan, Community Plans, and updated Development Code, includes goals, policies and programs to give more definition to aesthetic and scenic...
resources as well as for those scenic routes recognized by the state and county. Nonetheless, although the County General Plan, community plans, and Development Code have several goals and policies relating to aesthetics, the potential impacts may be significant due to increasing growth and development projected to occur during the buildout of the General Plan.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact AES-2
San Bernardino County contains a myriad of scenic resources, which have been recognized by federal, state, and local jurisdictions as worthy of special protection to preserve their aesthetic value. There are numerous designated federal, state, and local open space and recreational areas throughout the County that offer scenic vistas and views. These include 28 designated BLM Wilderness Areas among other BLM land holdings that equate out to approximately 47% of the land in the County. Other key recreational areas that offer scenic vistas and views include three National Parks, Federal Forest Plan Areas, four State parks, and eight local parks.

As the County General Plan, Community Plans, and updated Development Code include goals and policies relating to aesthetics, the potential to substantially degrade the existing visual character or quality of the site and their surroundings may be significant. However, the County does not currently regulate certain private improvements such as landscaping that may block views or detract from vistas and views along scenic highways or routes.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact AES-3
Although the San Bernardino Night Sky Ordinance is in place, and although the County General Plan, Community Plans, and updated Development Code have several goals and policies relating to lighting/glare, the potential to create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area, may be significant.

New land uses in response to the growth anticipated during the planning horizon of this General Plan update may slowly and incrementally change conditions of nighttime (i.e., valley, mountain, or desert) within the County. Continued development will incrementally increase ambient light and glare, and incrementally degrade “dark skies” conditions. However, the amount of changes to nighttime views can be significantly reduced by following the goals, policies and ordinances already in effect within the County General Plan, Community Plans, Development Code and County Night Sky Ordinance. Nonetheless, long-term development even when mitigated to the extent practical will contribute to cumulatively considerable amounts of nighttime light in the County.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.
4. **Mitigation Measures**

**Mitigation AES-1**
Within the Development Code, one overlay district was established relating specifically to preserving aesthetic or scenic areas within the County. These areas are designated under the “SR” or Scenic Resources Overlay District (Chapter 82.22). The intent of the Scenic Resources Overlay District is to provide development standards that will protect, preserve and enhance the aesthetic resources of the County. Design considerations can be incorporated in many instances to allow development to coexist and not substantially interfere with the preservation of unique natural resources, roadside views and scenic corridors. It is also the intent of the Scenic Resources Overlay District to implement state and federal programs and regulations regarding scenic highway routes.

**Mitigation AES-2**
Direct future growth to areas where infrastructure facilities and public services exist or can easily be provided or acquired and where other desired attributes of the land, such as open space, watershed areas and scenic resources, will not be adversely impacted.

**Mitigation AES-3**
The County shall maintain and enhance the visual character of scenic routes in the County.

**Mitigation AES-4**
To improve access to scenic vistas, the County seeks to establish off-street pull-outs at designated view points where appropriate along scenic highways.

**Mitigation AES-5**
The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to have beauty to the County.

Therefore, the County designates the following routes as scenic highways, and applies all applicable policies to development on these routes:

- SR-71 — All of the route in unincorporated County area;
- Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy, in the Mountain Region;
- SR-83 (Euclid Avenue/Mountain Avenue) --- 24th Street northwest to San Antonio Dam;
- Oak Glen Road in the Mountain Region;
- Sand Canyon Road;
- SR-2 from SR-138 southwest to the Los Angeles County line;
- Lone Pine Canyon Road;
- SR-330 from the San Bernardino National Forest Boundary northeast to SR-18;
- Green Valley Lake Road/101 Mile Drive;
- Crest Forest Drive from SR-18 west to Sawpit Canyon Road;
- Playground Drive;
• Devil’s Canyon Road;
• Sawpit Canyon Road/Sawpit Creek Road;
• Lake Gregory Drive;
• San Moritz Drive;
• Dart Canyon Road;
• North Road from Lake Gregory Drive northeast to SR-189;
• Lake Drive from Knapps Cutoff northeast to Dart Canyon Road;
• Grass Valley Road;
• Kuffel Canyon Road;
• Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park;
• Amboy Road from Bullion Mt. Road northeast to Amboy;
• SR-127 from I-15 at Baker northwest to Inyo County line;
• *Kelbaker Road from I-15 southeast to I-40;
• *Kelso-Cima Road from Kelso northeast to Cima;
• *Cima Road from I-15 southeast to Cima;
• *Essex Road from Essex northwest to Mitchell Caverns;
• *Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road;
• *Black Canyon Road;
• *Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation;
• I-15 from the intersection with I-215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side, and all incorporated areas;
• SR-38 within the Redlands and Yucaipa SOIs; from the Yucaipa SOI northeast to Big Bear Dam;
• SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County line;

* Designated by the BLM as a part of their Back Country Byway Program, a component of the National Scenic Byway System
• SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI;
• Coxey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive, with some of this truck trail located on privately owned land;
• Rim of the World Drive from Green Valley Lake Road to SR-38;
• SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line;
• Baldwin Lake Road from SR-18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road;
• National Trails Highway from Oro Grande northeast to Lenwood;
• I-40 from Newberry Springs northeast to Needles, excepting the Highway Commercial designation at the Hector Road Interchange and the Crucero Road Interchange;
• Burns Canyon
• Piper Canyon
• Lanfair/Ivanpah Road;
• Pioneer Town Road from Pipes Canyon Road to the Town of Yucca Valley; and
• SR-247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.

Mitigation AES-6
The County shall provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.

Mitigation AES-7
Areas in new developments which are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its build-able area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

Mitigation AES-8
Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.

Mitigation AES-9
The County shall preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.
Mitigation AES-10
The County shall protect the scenic and open space qualities of cinder cones and lava flows. Permit extractive uses of cinder resources only when the scenic values can be adequately maintained.

Mitigation AES-11
Features meeting the following criteria shall be considered for designation as scenic resources:

- A roadway, vista point, or area that provides a vista of undisturbed natural areas;
- Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and
- Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Mitigation AES-12
The County shall define the Scenic Corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail or path. Development along scenic corridors shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

Mitigation AES-13
The County shall require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.

Mitigation AES-14
The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County shall continue the review undertaken as part of this General Plan Update of the Land Use Zoning Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

Mitigation AES-15
The County shall design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat and the preservation of the scenic values of the County’s streams and creeks.

Mitigation AES-16
The County shall utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply and water recharge.
Mitigation Measure AES-17
The following additional Development Code sections would also help to preserve County aesthetics:

**CHAPTER 82.23 – SIGN CONTROL (SC) OVERLAY DISTRICT**

82.23.020 – Location Requirements

The SC overlay district shall be applied where it is determined that the location of large freestanding signs may be detrimental to the character of the neighborhood.

**CHAPTER 83.10 – Glare and Outdoor Lighting**

83.10.030 – Glare and Outdoor Lighting – Valley Region

(a) **Light trespass prohibited.** Commercial or industrial lighting shall be fully shielded to preclude light pollution or light trespass on any of the following:

(1) An abutting residential land use zoning district;

(2) A residential parcel; or

(3) Public right-of-way.

83.10.040 – Glare and Outdoor Lighting – Mountain and Desert Regions (Night Sky Ordinance)

(a) **Residential, commercial and industrial land use zoning districts.** The following standards shall apply to all structures and freestanding outdoor light fixtures in residential, commercial and industrial land use zoning districts.

**Chapter 83.12 – Hillside Grading Standards**

83.12.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(b) **Ensure that development in the hillside areas is designed to fit the existing landform.**

(c) **Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.**

(e) **Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., land form, scenic quality, slopes, and vegetation).**

5. **SIGNIFICANT UNMITIGATED IMPACTS**

The updates of the County General Plan, Community Plans, and Development Code are meant to be used as a roadmap or guidelines to development that is consistent with the General Plan Vision. Nonetheless, significant unmitigable irreversible aesthetic impacts are
probable with this project. With any development comes change to the natural and/or
developed environment. Changes to the visual character of an area, changes to scenic vistas
and/or views from/to scenic roadways, changes including additional lighting and or glare are
inevitable, and cannot be mitigated to a level below significance.
### Table IV-A-1. Eligible State Scenic Routes in San Bernardino County

<table>
<thead>
<tr>
<th>Route</th>
<th>District</th>
<th>Location (From/To)</th>
<th>Post Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-10</td>
<td>8</td>
<td>SR-38 near of Redlands to Riverside County Line</td>
<td>30.9 – 29.7</td>
</tr>
<tr>
<td>SR-18</td>
<td>8</td>
<td>SR-138 near Mt. Anderson to SR-247 near Lucerne Valley</td>
<td>R17.7 – 73.8</td>
</tr>
<tr>
<td>SR-30</td>
<td>8</td>
<td>SR-330 near Highland to I-10 near Redlands</td>
<td>T29.5 – 33.3</td>
</tr>
<tr>
<td>SR-38</td>
<td>8</td>
<td>I-10 near Redlands to SR-18 near Fawnskin</td>
<td>0.0 – 49.5</td>
</tr>
<tr>
<td>SR-58</td>
<td>6/8</td>
<td>SR-14 near Mojave to I-15 near Barstow</td>
<td>112.0 – R4.5</td>
</tr>
<tr>
<td>SR-127</td>
<td>8/9</td>
<td>I-15 near Baker to Nevada State Line</td>
<td>L0.0 – 49.4</td>
</tr>
<tr>
<td>SR-138</td>
<td>8</td>
<td>SR-2 near Wrightwood to SR-18 near Mt. Anderson</td>
<td>6.6 – R37.9</td>
</tr>
<tr>
<td>SR-142</td>
<td>8</td>
<td>Orange County Line to Peyton Drive</td>
<td>0.0 – 4.4</td>
</tr>
<tr>
<td>SR-247</td>
<td>8</td>
<td>SR-62 near Yucca Valley to I-15 near Barstow</td>
<td>0.0 – 78.1</td>
</tr>
</tbody>
</table>

Source: Caltrans Scenic Highways Program
## Table IV-A-2. County Designated Scenic Routes

<table>
<thead>
<tr>
<th>WEST VALLEY REGION</th>
<th>EAST VALLEY REGION</th>
<th>MOUNTAIN REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-11 – All unincorporated frontage.</td>
<td>Cedar Avenue from Bloomington Avenue south to Riverside County line.</td>
<td>San Gabriel Mountains.</td>
</tr>
<tr>
<td>SR-83 - All unincorporated frontage south of Riverside Drive.</td>
<td>Nevada Street within the Redlands SOI.</td>
<td>Lone Pine Canyon Road.</td>
</tr>
<tr>
<td>Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy.</td>
<td>Alabama Street within the Redlands SOI.</td>
<td>SR-2 from SR-138 southwest to Los Angeles County line.</td>
</tr>
<tr>
<td>SR-83 - Curled Avenue/Mountain Avenue from 24th Street northwest to San Antonio Dam.</td>
<td>Tennessee Freeway (SR-30) within the Redlands SOI.</td>
<td>SR-330 from the San Bernardino National Forest Boundary northeast to SR-18.</td>
</tr>
<tr>
<td>Wilson Avenue (proposed).</td>
<td>I-10 from the City of Redlands southeast to the City of Yucaipa.</td>
<td>Green Valley Lake Road/101 Mile Drive.</td>
</tr>
<tr>
<td>Day Creek Blvd. (proposed).</td>
<td>San Bernardino Avenue within the Redlands SOI.</td>
<td>Crest Forest Drive from SR-18 west to Sawpit Canyon Road.</td>
</tr>
<tr>
<td></td>
<td>Mentone Blvd. within the Redlands SOI.</td>
<td>Playground Drive.</td>
</tr>
<tr>
<td></td>
<td>Colton Avenue within the Redlands SOI.</td>
<td>Devil’s Canyon Road.</td>
</tr>
<tr>
<td></td>
<td>Citrus Avenue within the Redlands SOI.</td>
<td>Sawpit Canyon Road/Sawpit Creek Road</td>
</tr>
<tr>
<td></td>
<td>Highland Avenue within the Redlands SOI.</td>
<td>Lake Gregory Drive</td>
</tr>
<tr>
<td></td>
<td>I-10 from the City of Redlands southeast to the City of Yucaipa.</td>
<td>San Moritz Drive</td>
</tr>
<tr>
<td></td>
<td>Fifth Avenue within the Redlands SOI.</td>
<td>Dart Canyon Road</td>
</tr>
<tr>
<td></td>
<td>Crafton Avenue within the Redlands SOI.</td>
<td></td>
</tr>
</tbody>
</table>
## Table IV-A-2. County Designated Scenic Routes

<table>
<thead>
<tr>
<th>County Designated Scenic Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Road from Lake Gregory Drive northeast to SR-189</td>
</tr>
<tr>
<td>Grass Valley Road</td>
</tr>
<tr>
<td>Kuffel Canyon Road</td>
</tr>
<tr>
<td>North Road from Lake Gregory Drive northeast to SR-189.</td>
</tr>
<tr>
<td>Lake Drive from Knapps Cutoff northeast to Dart Canyon Road.</td>
</tr>
<tr>
<td><strong>DESERТ REGION</strong></td>
</tr>
<tr>
<td>Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park.</td>
</tr>
<tr>
<td>Amboy Road from Bullion Mountain Road northeast to Amboy.</td>
</tr>
<tr>
<td>SR-127 from I-15 at Baker northwest to Inyo County line.</td>
</tr>
<tr>
<td>*Essex Road from Essex northwest to Mitchell Caverns.</td>
</tr>
<tr>
<td>Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation.</td>
</tr>
<tr>
<td>Highway 395 to Highway 58</td>
</tr>
<tr>
<td><strong>MULTIPLE PLANNING REGIONS</strong></td>
</tr>
<tr>
<td>I-15 Devore (junction with I-215) to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East Yermo Road Overcrossing on the south side only and from First Street to the East Yermo Road Overcrossing on the north side, and all incorporated areas.</td>
</tr>
<tr>
<td>SR-38 from Greenspot Road to Big Bear Dam.</td>
</tr>
<tr>
<td>SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County.</td>
</tr>
<tr>
<td>SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI.</td>
</tr>
<tr>
<td>Cokey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive.</td>
</tr>
<tr>
<td>Rim of the World Drive from Green Valley Lake Road to SR-38.</td>
</tr>
<tr>
<td>SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line.</td>
</tr>
<tr>
<td>Baldwin Lake Road from SR-18 southeast to Pioneertown Road; continuing east on Pioneertown Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road.</td>
</tr>
<tr>
<td>National Trails Highway westerly from Oro Grande northeast to Lenwood easterly from Ft. Cady to I-15.</td>
</tr>
<tr>
<td>I-40 from Ludlow northeast to Needles.</td>
</tr>
<tr>
<td>Lanfair/Ivanpah Road.</td>
</tr>
<tr>
<td>Pioneertown Road from Pipes Canyon Road to the Town of Yucca Valley.</td>
</tr>
<tr>
<td>SR-247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.</td>
</tr>
<tr>
<td>SR-62 (Twenty nine Palms Highway) from Riverside County line northeast to town of Yucca Valley; from the town of Yucca Valley east to Twentynine Palms; from Twentynine Palms southeast to Riverside County line; from Riverside County line northeast to state line.</td>
</tr>
</tbody>
</table>
B. AGRICULTURAL RESOURCES

1. SETTING

Agriculture has historically been an important part of the County of San Bernardino’s economy. The County consistently ranks in the top 15 agricultural-producing counties in California (State of California Employment Development Department, 2002). The value of agricultural production in the year 2002 for the County totaled $631,550,100, a decrease of nearly $72 million from the previous year (County of San Bernardino Department of Agriculture/Weights, and Measures, 2002). The decrease in value is attributable to the lower-economic output of the dairy industry, due to the low value of milk in 2002. The top agricultural products by sales value are listed in Table IV-B-1.

<table>
<thead>
<tr>
<th>Product</th>
<th>Value</th>
<th>% of Total</th>
<th>2001 Rank*</th>
<th>2002 Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>$371.4 million</td>
<td>58.8%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cattle and Calves (meat)</td>
<td>$47.4 million</td>
<td>7.5%</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Replacement Heifers</td>
<td>$45.2 million</td>
<td>7.2%</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Eggs</td>
<td>$33.3 million</td>
<td>5.3%</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Trees/Shrubs</td>
<td>$22 million</td>
<td>3.5%</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Oranges</td>
<td>$17.4 million</td>
<td>2.8%</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Alfalfa, All</td>
<td>$11.2 million</td>
<td>1.8%</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Indoor Decoratives</td>
<td>$9.9 million</td>
<td>1.6%</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Bok Choi</td>
<td>$7.6 million</td>
<td>1.2%</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Chickens (meat)</td>
<td>$7.4 million</td>
<td>1.2%</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$573,087,200</strong></td>
<td><strong>90.7%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*of Counties within California  
Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002

The agricultural industry in San Bernardino County is dominated by the dairy industry and the related industries of calf production and forage crops. Combined, the direct monetary contribution of the dairy industry in the County is over $480 million dollars, or 76% of the total agricultural production in the County (County of San Bernardino Department of Agriculture/Weights, and Measures, 2002).

The County’s agricultural diversity also includes numerous fruit orchards in the east San Bernardino Valley area and substantial nursery and vegetable production. Field crop value in the desert declined due to a significant reduction in alfalfa acreage and poor range conditions due to a lack of rainfall in 2002.

Williamson Act/California Land Conservation Act of 1965

The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the “Williamson Act”, enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value.
Local governments receive an annual subvention of foregone property tax revenues from the state via the Open Space Subvention Act of 1971.

**California Farmland Mapping and Monitoring Program**

The State Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time. FMMP is a nonregulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. Creation of the FMMP was supported by the Legislature and a broad coalition of building, business, government, and conservation interests.

**Prime Farmland**

Prime farmland is rural land with the best combination of physical and soil characteristics for the production of crops. To qualify for this classification, farmland must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use. Approximately 25,665 acres of prime farmland were inventoried in the County in 2000, a decrease from the 29,975 acres inventoried in 1998 (refer to Table IV-B-2). According to Table IV-B-2, there was an increase in the total of grazing lands due to land conversions that occurred from 1998 through 2000. The conversion of land was primarily due to land left idle for three updated cycles and urban boundary adjustments on the Prado Dam Quadrangle.

### Table IV-B-2. Total Acreages of Agricultural Land by Category

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>1998</th>
<th>2000</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Farmland</td>
<td>29,975</td>
<td>25,665</td>
<td>-4,310</td>
</tr>
<tr>
<td>Farmland of Statewide Importance</td>
<td>12,026</td>
<td>10,616</td>
<td>-1,410</td>
</tr>
<tr>
<td>Unique Farmlands</td>
<td>3,888</td>
<td>3,644</td>
<td>-244</td>
</tr>
<tr>
<td>Farmland of Local Importance</td>
<td>5,036</td>
<td>4,816</td>
<td>-220</td>
</tr>
<tr>
<td><strong>Important Farmland Subtotal</strong></td>
<td><strong>50,925</strong></td>
<td><strong>44,741</strong></td>
<td><strong>-6,184</strong></td>
</tr>
<tr>
<td>Grazing Land</td>
<td>954,225</td>
<td>957,214</td>
<td>2,989</td>
</tr>
<tr>
<td><strong>Agricultural Land Subtotal</strong></td>
<td><strong>1,005,150</strong></td>
<td><strong>1,001,955</strong></td>
<td><strong>-3,195</strong></td>
</tr>
</tbody>
</table>


**Farmland of Statewide Importance**

The state of California designated 10,616 acres as Statewide Important Farmland Soils in San Bernardino County in 2000, down from the 12,026 designated acres in 1998. Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and soil characteristics for the production of crops. It must have been used for the
production of irrigated crops at some point during the two update cycles prior to the mapping date.

Unique Farmland

Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance. This land has been used for the production of specific high economic value crops at some point during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Approximately 3,644 acres of Unique Farmland were inventoried in the County in 2000, a decrease from the 3,888 acres inventoried in 1998 (Table IV-B-2).

Farmland of Local Importance

Farmland of Local Importance is land of importance to the local economy, as defined by each County’s local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category rests with the Board of Supervisors. Approximately 4,816 acres of Farmland of Local Importance were inventoried in 2000 within the County (Table IV-B-2).

a) Valley Region

The Valley Region contains considerable agricultural development, predominantly in the vicinity of the cities of Chino and Ontario in the west end of the valley, and in the cities of Highland and Redlands in the east end of the valley. There are approximately 19,706 acres of agricultural land located within the valley. Table IV-B-3 provides a breakdown of acreages by crop type and total agricultural value.

Table IV-B-3. Product Type by Acreage for the Valley Region

<table>
<thead>
<tr>
<th></th>
<th>Fruits and Nuts</th>
<th>Vegetables</th>
<th>Field, Nursery and Miscellaneous</th>
<th>Livestock &amp; Poultry (value only)</th>
<th>Total Acreage</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>West End North¹</td>
<td>253</td>
<td>6</td>
<td>36</td>
<td>$264,700</td>
<td>295</td>
<td>$4,849,900</td>
</tr>
<tr>
<td>West End South²</td>
<td>144</td>
<td>3,806</td>
<td>15,461</td>
<td>$442,364,000</td>
<td>19,411</td>
<td>$487,560,400</td>
</tr>
<tr>
<td>Central³</td>
<td>89</td>
<td>1,487</td>
<td>202</td>
<td>$16,509,200</td>
<td>1,778</td>
<td>$32,257,400</td>
</tr>
<tr>
<td>East End⁴</td>
<td>5,681</td>
<td>30</td>
<td>19,110</td>
<td>$12,803,000</td>
<td>24,821</td>
<td>$40,319,400</td>
</tr>
<tr>
<td>Total</td>
<td>6,167</td>
<td>5,329</td>
<td>34,809</td>
<td>$471,940,900.00</td>
<td>46,305</td>
<td>$564,987,100</td>
</tr>
</tbody>
</table>

Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002.
1/ West end north - area north of Mission Blvd and west of I-15
2/ West end south - area south of Mission Blvd near the cities of Ontario and Chino
3/ Central – area east of I-15 to SR-30, south of San Bernardino Mountains
4/ East end – area east of SR-30 and south of the San Bernardino Mountains

Continued urban expansion primarily in the Valley Region, where the bulk of the County population currently resides, is resulting in conversion of agricultural uses
due to economic pressure. The Chino Dairy Preserve is a case-in-point for conversion to urban development. In the last five years over 12,000 acres of dairy lands have been annexed to municipalities in the Valley Region. The City of Ontario has annexed approximately 8,000 acres and the City of Chino has annexed approximate 4,000 acres of unincorporated dairy lands for the purpose of developing master planned communities. Much of the existing urban development in the valley is located in areas formerly utilized for agricultural purposes (e.g., extensive citrus groves).

Prime Farmland
The Valley Region contains a number of soils that meet the criteria for valuable agricultural soil groups described above. The greatest concentrations of these soils are in the vicinity of the cities of Chino and Ontario, and in the east valley area north of Loma Linda and Redlands.

b) Mountain Region

There are no agricultural resources in the Mountain Region with exception of the Oak Glen area. Much of the Mountain Region is not amenable to agricultural development. Little information is available regarding current agricultural development in the mountains, although it is assumed that existing agricultural activities are limited primarily to range and pasture uses (County of San Bernardino, 1998). The community of Oak Glen remains the exception to the Mountain Region where apple orchards and related agribusiness activities maintain the agricultural heritage of the area.

Prime Farmland
Most areas of the Mountain Region are expected to exhibit generally shallow, coarse soils with excessive drainage, and steep slopes. Possible exceptions to this include more level terrain in the vicinity of major storage reservoirs.

c) Desert Region

Agricultural development in the Desert Region is limited primarily to areas bordering the Mojave River as far north as the community of Harvard-Newberry Springs. Historic alfalfa production occurs on a limited basis in areas that previously had sufficient groundwater for irrigation, such as Lucerne Valley and Harper Dry Lake. Table IV-B-4 provides a breakdown of acreages by crop type and total agricultural value.

Prime Farmland
Information on the occurrence of Important Farmlands in the Desert Region is limited to the areas near Lenwood, Yermo, and Newberry Springs and Lucerne Valley. Large areas of grazing land are also located in the southwest areas of the Desert Region.

<table>
<thead>
<tr>
<th>Table IV-B-4. Product Type by Acreage for the Desert Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruits</th>
<th>Vegetables</th>
<th>Field, Nursery</th>
<th>Livestock &amp;</th>
<th>Total</th>
<th>Total Value</th>
</tr>
</thead>
</table>

County of San Bernardino
2007 General Plan Program

Final Program Environmental Impact Report
### 2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Agriculture Resources, if the project would cause any of the following effects:

- **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.**
- **Conflict with existing zoning for agricultural use, or a Williamson Act contract.**
- **Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.**

### 3. IMPACT ANALYSIS

**Impact AG-1**

Agricultural use within the County continues to decline due to the effects of urban expansion and economic considerations. Most agricultural development is located in areas with relatively level terrain and stable soil conditions. For similar reasons, these types of areas are also the most desirable (and economically valuable) for urban development. As urban expansion encroaches into agricultural areas, remaining agricultural developments are often surrounded by urban activities. This situation exacerbates the further conversion of agricultural land due to the presence of urban services extensions (sewer, water, etc.), the associated increases in potential land values for urban uses (which often exceed the agricultural dollar value), and the increased incidence of land use incompatibility. In addition, a number of agricultural areas within the County have been converted to other uses due to declining viability, decreasing air quality, and increasing water costs. As farmers relocate, agricultural uses often change to more specialized and high unit value crops that can be grown in less desirable (from the standpoint of urban development) terrain. The net result of the above situation is that the amount of vacant land that can be converted to most agricultural uses is steadily diminishing.

*Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.*

**Impact AG-2**

The conversion of the Chino Dairy Preserve is exacerbated by rapid urban/suburban growth. Rising land values are only one of the many incentives to convert the remaining dairy farms in combination with operational compliance with water quality regulations. Both the dairy

---

**Table: Poultry Acreage**

<table>
<thead>
<tr>
<th></th>
<th>Acreage</th>
<th>Miscellaneous Acreage</th>
<th>Value (value only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Desert</td>
<td>1,295</td>
<td>104</td>
<td>$25,459,400</td>
</tr>
<tr>
<td>South Desert</td>
<td>118</td>
<td>65</td>
<td>$20,681,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,413</td>
<td>169</td>
<td>$46,141,200.00</td>
</tr>
</tbody>
</table>

Source: County of San Bernardino Department of Agriculture/Weights, and Measures, 2002.

1/ North desert – the area north of Victorville, and includes the areas east along I-40 and National Trails Highway
farms and new development are impacted by increased traffic congestion and diminished air quality and water quality. Air and water quality regulations coupled with the adverse impact of conflicting development activities also place additional pressure on the remaining preserves to relocate to other parts of the State or out of state. Water impacts include the leaching of chemicals such as nitrates into groundwater, as well as runoff from construction and operational activities associated with continued urbanization. Regional air quality is diminished from the combined release of pollutants from urban activities and dairy farm activities such as nitrogen oxides, hydrocarbons and methane gases. The presence of urban uses and the infrastructure to support urban development will encourage more urban expansion now and in the future.

*Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.*

4. **Mitigation Measures**

Following are the new General Plan Policies, which serve to mitigate impacts to agriculture:

**Mitigation AG-1**
The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

**Mitigation AG-2**
Highly alkaline soils present special problems for all plant species and should generally be avoided. Desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.

**Mitigation AG-3**
The County shall allow the development of areas of prime agriculture lands, as designated in this Plan’s Land Use Policy Map supporting commercially viable and valuable agriculture to urban intensity only after the supply of non-productive areas have been exhausted.

**Mitigation AG-4**
Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the Resource Overlay Maps, will be considered as an integral portion of the Conservation Element when reviewing development proposals.

**Mitigation AG-5**
The County shall utilize the provisions of the Williamson Act to further the preservation of commercially viable agricultural open space and designate preserves on the Resource Overlay Maps.

**Mitigation AG-6**
The County shall support property and estate tax relief measures that assess long-term agriculture at farm-use value.

**Mitigation AG-7**
The County shall encourage agricultural use of commercially productive agricultural lands; and discourage city SOI extensions into areas containing commercially productive agricultural lands.
5. **SIGNIFICANT UNMITIGATED IMPACTS**

   In spite of the Mitigation Measures adopted above, the loss of productive agricultural land cannot be mitigated to a level below significance.
C. AIR QUALITY

1. SETTING

Regional Climate

The topography and climate of Southern California combine to make the South Coast Air Basin (SCAB), an area with a high potential for air pollution, which constrains efforts to achieve clean air. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean’s surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone, and this region experiences more days of sunlight than many other major urban areas in the nation. (2003 Air Quality Management Plan, South Coast Air Quality Management District, August 2003, page 1-3.)

The climate in the Mojave Desert Air Basin (MDAB) is arid with perennially and seasonal windy conditions. The cool moist coastal air from the South Coast Air Basin is blocked by the San Gabriel and San Bernardino mountain ranges. The area is characterized by hot, dry summers and mild winters with annual rainfall averaging two to five inches per year. Meteorology tends to be influenced by a moderately intense anticyclonic circulation except during storm activity in the winter. During the winter there are an average 20-30 winter storms. In the summer, the MDAB is usually influenced by a Pacific Subtropical High cell that remains for long periods off the coast of California. The prevailing winds are out of the west and south, resulting in a general west to east flow across the MDAB. Prevailing winds are a major contributor to air quality conditions in the Desert Region. (MDAQMD List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health and Safety Code Section 39614(d), June 2005, page 2)

Ambient Air Quality Standards

Health-based air quality standards have been established by California and the federal government for the following pollutants: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in size (PM₁₀), particulate matter less than 2.5 microns in size (PM₂.₅), lead, oxides of sulfur (SOₓ), visibility-reducing particles, hydrogen sulfide, and vinyl chloride. These standards were established to protect sensitive receptors from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. The State and Federal Ambient Air Quality Standards (NAAQS) for each of these pollutants and their effects on health are summarized in Table IV-C-1.

Federal Clean Air Act

The 1970 Clean Air Act (CAA) authorized the establishment of the NAAQS, and set deadlines for their attainment. The federal CAA made major changes in deadlines for attaining NAAQS and in the actions required of areas of the nation that exceeded these standards. In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was an overhaul of the planning provisions for those areas not currently meeting NAAQS. The CAA identifies specific emission reduction goals, requires
both a demonstration of reasonable further progress and an attainment demonstration, and
incorporates more stringent sanctions for failure to attain or to meet interim milestones.

California Clean Air Act

The 1988 California Clean Air Act (CCAA) requires that all air districts in the state endeavor
to achieve and maintain health-based California Ambient Air Quality Standards (CAAQS) for
\( \text{O}_3 \), \( \text{CO} \), \( \text{SO}_x \), and \( \text{NO}_x \) by the earliest practical date. The CCAA specifies that districts focus
particular attention on reducing emissions from mobile and area-wide sources, and gives
districts new authority to regulate indirect sources. Each district must achieve a 5% annual
reduction (averaged over consecutive three-year periods) in district-wide emissions of each
non-attainment pollutant or its precursors. The CCAA requires that each air quality
management district demonstrate the overall effectiveness of its air quality program in
achieving emission reductions.

Air Quality Planning and Pollution Control

The County of San Bernardino is located within the jurisdiction of two air quality
management districts: the South Coast Air Quality Management District (SCAQMD) and the
Mojave Desert Air Quality Management District (MDAQMD). Both of these agencies are
responsible for developing and enforcing air pollution control rules and regulations, thereby
affecting the future general planning and development in the County. Figure IV-C-1 shows
the pertinent counties within the jurisdiction of these two air districts.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD has jurisdiction over Orange County, the non-desert portions of Los Angeles,
Riverside and San Bernardino counties, the Riverside County portions of the Salton Sea Air
Basin (SSAB), and Mojave Desert Air Basin (MDAB). The South Coast Air Basin (Basin) is
a subregion of the SCAQMD’s jurisdiction.

Attainment Status – The South Coast Air Basin is formally designated as being in attainment
for all federal and state ambient air quality standards for \( \text{SO}_x \), \( \text{NO}_x \) and lead. The Basin has
met the criteria for redesignation, but has not been formally redesignated as in attainment for
\( \text{CO} \) as of the writing of this document. The federal and state ambient air quality standards for
\( \text{PM}_{10} \) are exceeded in the Basin, and as a result do not meet the criteria for attainment.

Mojave Desert Air Quality Management District

The MDAQMD has jurisdiction over the desert portion of San Bernardino County. A portion
of the Mojave Desert Air Basin is a subregion of the MDAQMD.

Attainment Status – The U.S. Environmental Protection Agency (EPA) designated a portion
of the southwestern desert part of San Bernardino County as non-attainment and classified it
as Severe-17 for ozone as part of the Southeast Desert Modified Air Quality Management
Area (SDMAQMA). Severe-17 classification requires attainment of the one-hour ozone
NAAQS by the end of 2007, 17 years after the adoption of the CAA Amendments in 1990.

The entire MDAB has been designated by the California Air Resources Board (CARB) as
non-attainment of the ozone CAAQS. The entire MDAQMD is located within the MDAB.
The MDAB includes a portion of Kern County, Los Angeles County, Riverside County and
San Bernardino County. The SDMAQMA covers the Victor Valley/Barstow region in San Bernardino County (Mojave Desert), the Coachella Valley/San Jacinto region in Riverside County (Coachella), and the Antelope Valley region in Los Angeles County (Antelope Valley). The portion of the MDAQMD designated as a federal non-attainment area will be in attainment of the NAAQS for ozone by the required year, 2007. The entire MDAQMD will show significant progress towards attainment of the ozone CAAQS by that year.

Statewide Emissions Inventory

Table IV-C-2 represents a summary of the emissions inventory statewide for the year 2004 by major source category. The emissions are presented on an annual average in tons per day.

Emissions Inventory by Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The state is currently divided into 15 air basins. The County of San Bernardino is located within two air basins, the SCAB and the MDAB.

South Coast Air Basin

Table IV-C-3 represents the 2003 estimated annual average emissions in the SCAB by major source category in tons per day.

Mojave Desert Air Basin

Table IV-C-4 represents the 2004 estimated annual average emissions in the MDAB by major source category in tons per day.

### 2. Significance Criteria

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Air Quality, if the project would cause any of the following effects:

- **Conflict with or obstruct implementation of the applicable air quality plan.**
- **Violate any air quality standard or contribute substantially to an existing or projected air quality violation.**
- **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**
- **Expose sensitive receptors to substantial pollutant concentrations.**
- **Create objectionable odors affecting a substantial number of people.**
3. Impact Analysis

Impact AQ-1
New residential, commercial and industrial development will occur as a result of the update of the 2007 General Plan resulting in the creation of more air pollutants that will impact the existing poor air quality in the county. New residential development will also expose more county residents to the County’s air pollution.

Air quality within a region is impacted by the amount of air pollution generated from stationary, mobile, area, and natural sources located within that region. Examples of stationary sources are factories, industrial facilities, and power plants. Mobile sources include cars, trucks, airplanes, and off-road vehicles including trains, construction equipment, and recreational vehicles. Area-wide sources are small emission sources such as dry cleaners, restaurants, aerosol consumer products, residential water heaters, and automotive shops located in a general vicinity of each other. Natural sources include forest fires, pollens, and windblown dust. In addition, air pollution is transported from adjacent air basins during certain meteorological conditions and contributes to air pollution problems for neighboring basins. For example, O₃ pollutants originating within the SCAB region are transported over the San Gabriel and San Bernardino Mountains into San Bernardino County and similarly, air pollution from the San Joaquin Air Basin is transported through the Tehachapi Mountains into San Bernardino County. Hence, Air Quality Management District or Air Pollution Control District governing the areas of origin of transported air pollutants are required to include sufficient emission control measures in their attainment plans for ozone to mitigate the impact of pollution sources within their jurisdictions on O₃ concentrations in downwind areas.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact AQ-2
The growth allowed by the update of the General Plan will either create emissions of NOx, hydrocarbons, pesticides and PM10 or new residents will be exposed to these pollutants. This would be particularly significant to sensitive populations in the county (e.g., those with respiratory illnesses and the older population).

The air pollutants of greatest concern in San Bernardino County are O₃ and PM₁₀ because of the current non-attainment status with the Ambient Air Quality Standards (AAQS). O₃ is not emitted directly, but is formed in the atmosphere through complex chemical reactions between nitrogen oxides and hydrocarbons in the presence of sunlight. These are considered as ozone precursors. Hydrocarbon is a general term to describe compounds comprised of hydrogen and carbon atoms. Hydrocarbons are classified by how photochemically reactive they are: relatively reactive or relatively non-reactive. Relatively reactive hydrocarbons, also known as ROG, are VOCs that react photochemically and contribute to the formation of O₃, as well as PM₁₀ and PM₂.₅, and are the primary pollutants of concern. Motor vehicle emissions and evaporation of various VOCs (i.e., solvents, fuels, etc.) are major contributors to regional O₃ problems. Pesticide use, industrial process operations, and non-highway mobile sources (i.e., off-road vehicle use and aircraft operations) are other contributors to regional O₃ problems. PM₁₀ emissions come from a broad range of sources, with on-road mobile sources (i.e., re-entrained road dust, direct emissions, and secondary emission effects), and natural windblown dust generated from occasional moderate to high-wind episodes over
a large region that encompasses multi-district and interstates (i.e., local and distant transport of PM$_{10}$) being the most prominent.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

**Impact AQ-3**

Growth facilitated by the update to the County’s General Plan will result in the need to develop new roads within the county to allow for the movement of goods within the county that will result in exposing the county’s population to diesel fumes that are known to be harmful to people.

Diesel exhaust is a growing concern in the South Coast Air Basin and throughout California. The CARB in 1998 identified diesel engine particulate matter as a toxic air contaminant. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they penetrate deeply into the lungs. Diesel engine particulate matter has been identified as a human carcinogen. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

### 4. Mitigation Measures

**Mitigation AQ-1**

Because development during construction would be subjected to wind hazards (due to increased dust, the removal of wind breaks, and other factors), the County shall require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:

- Grading restrictions and/or controls on the basis of soil types, topography or season;
- Landscaping methods, plant varieties, and scheduling to maximize successful revegetation; and
- Dust-control measures during grading, heavy truck travel, and other dust generating activities.

**Mitigation AQ-2**

The County shall establish incentives and/or regulations to eliminate work trips including such actions as:

- Implementing staggered, flexible and compressed work schedules in public agencies; and
- Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage.
Mitigation AQ-3
The County shall locate and design new development in a manner that will minimize direct and indirect emissions of air contaminants through such means as:

- Promoting mixed-use development to reduce the length and frequency of vehicle trips;
- Providing for increased intensity of development along existing and proposed transit corridors; and
- Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

Mitigation AQ-4
The County shall provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

Mitigation AQ-5
The County shall replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-effective and meet the vehicle use needs.

Mitigation AQ-6
The County shall manage the County’s transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet.

Mitigation AQ-7
The County shall establish programs for priority or free parking on County streets or in County parking lots for alternative fuel vehicles.

Mitigation AQ-8
The County shall require the use of building materials and coatings that minimize air pollution consistent with the requirements of the AQMD.

Mitigation AQ-9
The County shall provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

5. **Significant Unmitigated Impacts**

In spite of the Mitigation Measures adopted above, the 2007 General Plan’s impacts to Air Quality cannot be mitigated to a level below significance.

The San Bernardino General Plan contains objectives and policies to moderate effects on air quality, but also calls for an increase in densities on certain parcels, mixed land uses, and a refocus on existing neighborhoods. These policies work to reduce dependence on the private automobile and to reduce vehicle miles traveled. Although these measures will result in positive air quality effects, they will not offset effects caused by increased population.

All future development in the County of San Bernardino will undergo a specific CEQA analysis which will evaluate both operational and construction emissions, as well as potential cumulative impacts. These project-specific documents, and analyses, will develop mitigation
measures, where feasible, which will assist the county and state meet air quality attainment goals.
### Table IV-C-1. State and Federal Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>AIR POLLUTANT</th>
<th>STATE STANDARD</th>
<th>FEDERAL PRIMARY STANDARD</th>
<th>MOST RELEVANT EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CONCENTRATION, AVERAGING TIME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>&gt;20 ppm, 1-hour average &gt;9.0 ppm, 8-hour average</td>
<td>&gt;35 ppm, 1-hour average ≥9.0 ppm, 8-hour average</td>
<td>(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and, (d) Possible increased risk to fetuses.</td>
</tr>
</tbody>
</table>
| O₃            | >0.09 ppm, 1-hour average >0.070 ppm, 8-hour average | >0.08 ppm, 8-hour average | (a) Short-term exposures:
1) Pulmonary function decrements and localized lung edema in humans and animals; and,
2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals;
(b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans;
(c) Vegetation damage; and
(d) Property damage. |
| NO₂           | >0.25 ppm, 1-hour average | >0.053 ppm, AAM | (a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups;
(b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and
(c) Contribution to atmospheric discoloration. |
| SO₂           | >0.25 ppm, 1-hour average >0.04 ppm, 24-hour average | >0.030 ppm, AAM >0.14 ppm, 24-hour average | (a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. |
### Chapter IV

**Project Analysis**

<table>
<thead>
<tr>
<th></th>
<th><strong>STATE STANDARD</strong></th>
<th><strong>FEDERAL PRIMARY STANDARD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM$_{10}$</td>
<td>$&gt;20 \ \mu g/m^3$, AAM $&gt;50 \ \mu g/m^3$, 24-hour average</td>
<td>$&gt;50 \ \mu g/m^3$, AAM $&gt;150 \ \mu g/m^3$, 24-hour average</td>
</tr>
<tr>
<td></td>
<td>(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; and (b) Excess seasonal declines in pulmonary function, especially in children.</td>
<td></td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>$&gt;12 \ \mu g/m^3$, AAM</td>
<td>$&gt;15 \ \mu g/m^3$, AAM $&gt;65 \ \mu g/m^3$, 24-hour average</td>
</tr>
<tr>
<td></td>
<td>(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and, (c) Decreased lung functions and premature death.</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>1.5 $\mu g/m^3$, 30-day average</td>
<td>1.5 $\mu g/m^3$, calendar quarterly average</td>
</tr>
<tr>
<td></td>
<td>(a) Increased body burden; and, (b) Impairment of blood formation and nerve conduction.</td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>25 $\mu g/m^3$, 24-hour average</td>
<td>No federal standards</td>
</tr>
<tr>
<td></td>
<td>(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.</td>
<td></td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>In sufficient amount to give an extinction coefficient 0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average</td>
<td>No federal standards</td>
</tr>
<tr>
<td></td>
<td>Nepelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70%.</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>0.03 ppm, 1-hour average</td>
<td>No federal standards</td>
</tr>
<tr>
<td></td>
<td>Odor annoyance.</td>
<td></td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>0.010 ppm, 24-hour average</td>
<td>No federal standards</td>
</tr>
<tr>
<td></td>
<td>Known carcinogen.</td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**

- ppm = parts per million parts of air, by volume
- AAM = Annual Arithmetic Mean
- $\mu g/m^3 = $ micrograms per cubic meter
Table IV-C-2. 2004 Statewide Emissions Inventory

<table>
<thead>
<tr>
<th>Source Category</th>
<th>ROG</th>
<th>CO</th>
<th>NOx</th>
<th>SOx</th>
<th>PM$_{10}$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stationary Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel combustion</td>
<td>45</td>
<td>341</td>
<td>395</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>22</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cleaning and surface coatings</td>
<td>222</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Petroleum Production and Marketing</td>
<td>155</td>
<td>10</td>
<td>11</td>
<td>62</td>
<td>2</td>
</tr>
<tr>
<td>Industrial Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>61</td>
<td>97</td>
<td>31</td>
<td>87</td>
</tr>
<tr>
<td><strong>Area-wide Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solvent Evaporation</td>
<td>449</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous Processes</td>
<td>258</td>
<td>2138</td>
<td>93</td>
<td>5</td>
<td>1835</td>
</tr>
<tr>
<td><strong>Mobile Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Road Motor Vehicles</td>
<td>824</td>
<td>8172</td>
<td>1589</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>Other Mobile Sources</td>
<td>476</td>
<td>3087</td>
<td>938</td>
<td>62</td>
<td>70</td>
</tr>
<tr>
<td><strong>Total Emissions Statewide – All Sources</strong></td>
<td>2512</td>
<td>13802</td>
<td>3126</td>
<td>213</td>
<td>2086</td>
</tr>
</tbody>
</table>

## Table IV-C-3. 2003 South Coast Air Basin Emissions Inventory

<table>
<thead>
<tr>
<th>Source Category</th>
<th>ROG</th>
<th>CO</th>
<th>NO$_x$</th>
<th>SO$_x$</th>
<th>PM$_{10}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel combustion</td>
<td>22.8</td>
<td>61.4</td>
<td>55.9</td>
<td>9</td>
<td>7.7</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>4.7</td>
<td>1</td>
<td>1.8</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Cleaning and surface coatings</td>
<td>68.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Petroleum Production and Marketing</td>
<td>34.9</td>
<td>6.4</td>
<td>3.9</td>
<td>12</td>
<td>1.2</td>
</tr>
<tr>
<td>Industrial Processes</td>
<td>20.1</td>
<td>4.1</td>
<td>10</td>
<td>3.7</td>
<td>6.1</td>
</tr>
<tr>
<td>Area-wide Sources</td>
<td>173.8</td>
<td>156.1</td>
<td>31.8</td>
<td>0.4</td>
<td>235.1</td>
</tr>
<tr>
<td>Solvent Evaporation</td>
<td>150.2</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous Processes</td>
<td>23.5</td>
<td>156.1</td>
<td>31.8</td>
<td>0.4</td>
<td>235</td>
</tr>
<tr>
<td>Mobile Sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Road Motor Vehicles</td>
<td>318.1</td>
<td>3160</td>
<td>641.8</td>
<td>4.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Other Mobile Sources</td>
<td>161.5</td>
<td>1057.9</td>
<td>299.5</td>
<td>33.2</td>
<td>21</td>
</tr>
<tr>
<td>Total Emissions Statewide – All Sources</td>
<td>1608.5</td>
<td>5765.8</td>
<td>2079.9</td>
<td>105.21</td>
<td>327.46</td>
</tr>
</tbody>
</table>

### Table IV-C-4. 2004 Mojave Desert Air Basin Emissions Inventory

<table>
<thead>
<tr>
<th>Source Category</th>
<th>ROG</th>
<th>CO</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>SO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stationary Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel combustion</td>
<td>2.5</td>
<td>18.4</td>
<td>66.8</td>
<td>1.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>0.4</td>
<td>0.1</td>
<td>0.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cleaning and surface coatings</td>
<td>8.6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Petroleum Production and Marketing</td>
<td>2.8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Industrial Processes</td>
<td>2.0</td>
<td>16.4</td>
<td>51.8</td>
<td>5.5</td>
<td>15.9</td>
</tr>
<tr>
<td><strong>Area-wide Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solvent Evaporation</td>
<td>11.6</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous Processes</td>
<td>3.5</td>
<td>20.9</td>
<td>1.8</td>
<td>0</td>
<td>133.7</td>
</tr>
<tr>
<td><strong>Mobile Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Road Motor Vehicles</td>
<td>23.2</td>
<td>278.4</td>
<td>42.1</td>
<td>0.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Other Mobile Sources</td>
<td>18.3</td>
<td>96.4</td>
<td>66.3</td>
<td>4.6</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Total Emissions Statewide – All Sources</strong></td>
<td>72.9</td>
<td>430.5</td>
<td>229</td>
<td>12.1</td>
<td>165</td>
</tr>
</tbody>
</table>

Source: CARB website, [www.arb.ca.gov](http://www.arb.ca.gov).
Figure IV-C-1. Air Districts
D. BIOLOGICAL RESOURCES

1. SETTING

The San Bernardino County has been divided into three sub-regions for planning purposes. The three sub-regions include the Valley Region, Mountain Region, and Desert Region. These regions have distinctly different climates and geography which in turn produce differing biological environments. The following assessment of existing conditions, impacts and mitigation for impacts to biological resources are assessed separately for each of the three sub-regions.

a) Valley Region

The elevation of the Valley Region of San Bernardino County generally ranges from 500 to 1,700 feet above sea level. The Yucaipa Hills, however, includes land with elevation of 5,400 feet. Soils include predominantly alluvial deposits with areas of dune sand. This Region is urbanized with few existing natural open space areas. The predominant vegetation communities within the undeveloped areas of the valley are chaparral, coastal sage scrub, deciduous woodlands, grasslands, and wetlands. Vegetation in urbanized areas consists primarily of introduced landscape species. Table IV-D-1 shows native vegetation types associated with the various plant communities in the Valley Region. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Valley Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

<table>
<thead>
<tr>
<th>Plant Communities</th>
<th>Vegetation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrub</td>
<td></td>
</tr>
<tr>
<td>Chaparral</td>
<td>Chamise chaparral</td>
</tr>
<tr>
<td></td>
<td>Semi-desert chaparral</td>
</tr>
<tr>
<td></td>
<td>Mixed montane chaparral</td>
</tr>
<tr>
<td></td>
<td>Ceanothus chaparral</td>
</tr>
<tr>
<td></td>
<td>Scrub oak chaparral</td>
</tr>
<tr>
<td>Sage scrub</td>
<td>Riversidean alluvial fan sage scrub</td>
</tr>
<tr>
<td></td>
<td>Riversidean Sage Scrub</td>
</tr>
<tr>
<td>Woodlands</td>
<td></td>
</tr>
<tr>
<td>Riparian forest</td>
<td>Walnut woodland</td>
</tr>
<tr>
<td></td>
<td>Willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>Cottonwood – willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>White alder riparian forest</td>
</tr>
<tr>
<td>Cismontane woodland</td>
<td>Black oak woodland</td>
</tr>
<tr>
<td></td>
<td>Interior live oak woodland</td>
</tr>
<tr>
<td></td>
<td>Coast live oak woodland</td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
</tr>
<tr>
<td>Meadow and seep</td>
<td>Freshwater seep</td>
</tr>
<tr>
<td>Marsh and swamp</td>
<td>Freshwater marsh</td>
</tr>
<tr>
<td>Riparian forest</td>
<td>Cottonwood – Willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>Willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>White alder riparian forest</td>
</tr>
<tr>
<td>Riparian scrub</td>
<td>Mule fat scrub</td>
</tr>
<tr>
<td></td>
<td>Southern willow scrub</td>
</tr>
</tbody>
</table>
The most sensitive vegetation types found within the study area are wetlands, including riparian woodland, riparian scrub, and freshwater marsh. Wetlands are considered a valuable but declining resource both locally and statewide. Therefore, the few wetland areas remaining in the County should be preserved in conservation areas. The largest and most well known example of riparian woodland in the Valley Region of the County is within Federal and state protected areas. Species associated with willow woodlands and mature riparian woodland communities, such as at Prado Basin, include the southwestern willow flycatcher, least Bell’s vireo, and western yellow-billed cuckoo.

The dominant aquatic feature within the Valley Region is the Santa Ana River watershed. The upstream reaches are located within San Bernardino County. Key riverine resources within the area are Day Creek, Etiwanda Creek, Sevaine Creek, Lytle Creek, Cajon Wash, San Timoteo Wash, and Mill Creek. The Santa Ana Watershed Planning Authority (2002) identifies several of these riverine resources as “Essential Resource Conservation Areas” within the County. Invasive species such as Giant Reed (Arundo donax) and tamarisk (Tamarix sp.) are a problem for native flora and fauna in the drainages.

Other areas are important biologically because they support flora or fauna that are limited in their distribution or require or tolerate unusual conditions that occur there. For example, the alluvial sage scrub habitat in the Santa Ana River, Lytle Creek, and Cajon washes has adapted to frequent flooding and therefore supports a unique diversity of plant species. Another sensitive plant community is the Riversidean alluvial fan sage scrub found on the alluvial fans at the base foothills of the San Bernardino Mountains which has adapted to episodic flood. This habitat supports several sensitive species including San Bernardino kangaroo rat, San Diego horned lizard, Los Angeles pocket mouse, and California bedstraw.

The following preserves are found within the Valley Region:

- North Etiwanda Preserve, Vulcan Materials Delhi Sands Mitigation Bank encompasses 700-pus acres of primarily alluvial fan sage scrub habitat that also contains a water marsh. This area was acquired by SANBAG in approximately 1997 as mitigation for the I-210 Freeway extension. It was later assigned to San Bernardino County for management in conjunction with the California Department of Fish and Game and a several member advisory committee.

- Vulcan Materials Alluvial Fan Sage Scrub Mitigation Bank. Vulcan Materials has put together a 1,378-acre habitat conservation management area along a six-mile stretch of Cajon Creek. Enclosed within this sage and scrub community are 24 sensitive species, including numerous wildflowers and the coastal California gnatcatcher and the endangered San Bernardino kangaroo rat.

- Chino Hills State Park. Chino Hills State Park is an open-space area in the hills of Santa Ana Canyon near Riverside, is a critical link in the Puente-Chino Hills biological corridor. It encompasses stands of oaks, sycamores and rolling, Riversidean sage scrub, and grassy hills that stretch nearly 31 miles, from the Santa Ana Mountains to the Whittier Hills. The Riversidean sage scrub community supports a sensitive bird species, the coastal California gnatcatcher.
• Prado Basin Mitigation Area. An agreement in 1995 between OCWD, the U.S. Army Corps of Engineers (Corps), and the U.S. Fish and Wildlife Service, resulted in the water conservation level behind Prado Dam to be raised, nearly doubling the amount of valuable water that can be stored behind the Dam. The agreement between the agencies was the culmination of years of cooperative efforts to enhance the water conservation and environmental values of Prado Basin, breeding grounds of the endangered least Bell's vireo. The Orange County Water District owns 2,150 acres behind Prado Dam in Riverside County, California. Within OCWD property and adjacent lands are nearly 465 acres of constructed wetlands, which have effectively demonstrated the ability to reduce nitrogen levels in Santa Ana River water.

• Santa Ana Wooly Star and Slender-horned Spine Flower mitigation lands in the upper Santa Ana Wash. The 760 acre Wooly Star preserve was established by the US Army Corps of Engineers along the Santa Ana River Wash as mitigation for the Seven Oaks Dam project.

b) Mountain Region

The Mountain Region of San Bernardino County lies in the southwestern portion of the County and contains the San Bernardino Mountains and the eastern end of the San Gabriel Mountains. Both are elements of the Transverse Mountain Range of southern California. The San Bernardino Mountains cover approximately 652,000 acres of which more than 248,000 acres are above 6,000 feet in elevation (U.S. Department of Agriculture [USDA], 1999). Elevations within the Mountain Region range from 2,000 feet in the foothills to 11,502 feet at the summit of Mount San Gorgonio. Soils vary within the Mountain Region and are geologically active with faults and uplifting. Most of the Region contains shallow soils consisting primarily of decomposed granite and sandy loam.

The major Mountain vegetation communities include shrubs, woodlands, wetlands (including woodlands, scrub, marsh, and meadows), and the relic pavement plains. The County coordinates with the federal and state management plans in this Region as most of the Mountain Region is under the jurisdiction of federal or state agencies. Approximately 61% of the Mountain Region is managed by the USFS, while the BLM manages 10%; the state owns 1% and 4% is Native American tribal land. Table IV-D-2 shows vegetation types associated with the various communities in the Mountain Region. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Mountain Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

The California Department of Fish and Game (CDFG) recognizes 14 Areas of Special Biological Importance (ASBIs) within the Mountain Region of the County. Among the ASBIs are identified key areas that support herds of both resident and seasonally migratory mule deer (Odocoileus hemionus). These areas satisfy the year-round life requirements of resident deer herds and occur southwest of Luna Mountain, at Cleghorn Mountain, and east of Harrison Mountain. Good deer fawning areas, generally located near wet meadows and riparian thickets, occur from Manzanita Flat to Plunge Creek in the Alder Creek area and near Keller Meadows and the forks of Plunge Creek, east of Harrison Mountain. Deer winter ranges occur
north of Barton Flats and summer ranges occur northwest of Delamar Mountain. Nelson bighorn sheep (*Ovis canadensis nelsoni*) habitat occurs throughout much of the Cucamonga Wilderness area and the North Slope of the San Bernardino Mountains, easterly of Deep Creek.

Table IV-D-2. Native Vegetation Types and Plant Communities within the Mountain Region

<table>
<thead>
<tr>
<th>Plant Communities</th>
<th>Vegetation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
</tr>
<tr>
<td>Chaparral</td>
<td>Chamise chaparral</td>
</tr>
<tr>
<td></td>
<td>Semi-desert chaparral</td>
</tr>
<tr>
<td></td>
<td>Mixed montane chaparral</td>
</tr>
<tr>
<td></td>
<td>Ceanothus chaparral</td>
</tr>
<tr>
<td></td>
<td>Scrub oak chaparral</td>
</tr>
<tr>
<td>Sage scrub</td>
<td>Riversidean alluvial fan sage scrub</td>
</tr>
<tr>
<td></td>
<td>Riversidean sage scrub</td>
</tr>
<tr>
<td><strong>Woodlands</strong></td>
<td></td>
</tr>
<tr>
<td>Riparian forest</td>
<td>Sycamore – Oak riparian forest</td>
</tr>
<tr>
<td>Cismontane woodland</td>
<td>Black oak woodland</td>
</tr>
<tr>
<td></td>
<td>Interior live oak woodland</td>
</tr>
<tr>
<td></td>
<td>Coast live oak woodland</td>
</tr>
<tr>
<td><strong>Conifer woodland</strong></td>
<td></td>
</tr>
<tr>
<td>Interior closed-cone coniferous forest</td>
<td>Knobcone pine forest</td>
</tr>
<tr>
<td>Lower montane coniferous forest</td>
<td>Coulter pine forest</td>
</tr>
<tr>
<td></td>
<td>Ponderosa pine forest</td>
</tr>
<tr>
<td>Upper montane coniferous forest</td>
<td>Jeffrey pine forest</td>
</tr>
<tr>
<td></td>
<td>Jeffrey pine – fir forest</td>
</tr>
<tr>
<td></td>
<td>White fir forest</td>
</tr>
<tr>
<td>Subalpine coniferous forest</td>
<td>Lodgepole pine forest</td>
</tr>
<tr>
<td><strong>Wetlands</strong></td>
<td></td>
</tr>
<tr>
<td>Meadow and seep</td>
<td>Montane meadow</td>
</tr>
<tr>
<td></td>
<td>Freshwater seep</td>
</tr>
<tr>
<td>Marsh and swamp</td>
<td>Freshwater marsh</td>
</tr>
<tr>
<td>Riparian forest</td>
<td>Coast live oak riparian forest</td>
</tr>
<tr>
<td></td>
<td>Willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>Cottonwood – willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>White alder riparian forest</td>
</tr>
<tr>
<td>Riparian scrub</td>
<td>Mule fat scrub</td>
</tr>
<tr>
<td></td>
<td>Southern willow scrub</td>
</tr>
<tr>
<td><strong>Pebble or pavement plain</strong></td>
<td></td>
</tr>
<tr>
<td>Pavement plain community</td>
<td>Pavement plain</td>
</tr>
<tr>
<td></td>
<td>Pebble plain</td>
</tr>
</tbody>
</table>
However, the best habitat occurs within the San Gorgonio Mountain area. The CDFG also recognizes principal wintering area for waterfowl migrating along the Pacific Flyway. Within the Mountain Region, waterfowl have been observed at Baldwin Lake and Big Bear Lake. The lake areas also provide wintering habitat for the bald eagle, and both Lake Arrowhead and Lake Big Bear are therefore recognized by the CDFG as ASBIs.

Also within the Mountain Region, the USFS manages both the Cucamonga Wilderness Area (8,580 acres) and the San Gorgonio Wilderness Area (56,749 acres). The latter is the largest established wilderness area in southern California and one of the most publicly used within the nation (USDA 1999). Aside from ASBIs, the CDFG has an established ecological preserve at Baldwin Lake that totals 125 acres, and the Nature Conservancy has four preserves in the Mountain Region — Baldwin Lake Preserve, Castle Glen Bald Eagle Sanctuary, the Sugarloaf Biota Bank, and the Big Bear Valley Preserve. In addition to these designated acreages, other areas also recognized for the value of their resources, occur within the mountains and remain important areas to be preserved. These include alkali wet meadow, pebble plains, limestone substrate, and wetlands.

The Mountain Region of the County includes the headwater, upper reaches of the Santa Ana River watershed. Examples of intact, riverine resources are the South Fork of the Santa Ana River, a permanently flooded riverine wetland, and Vivian Creek, a permanently flooded montane wetland (Ferren et al., 1996). Deep Creek and Bear Creek are CDFG-designated wild trout streams, and contain high quality riparian resources. A broad overview of biological resources found within this Region is provided in Stephenson and Calcarone (1999) and Faber et al. (1989). Low-elevation riparian resources include cottonwood-willow, sycamore/coast live oak, and white alder communities. Locally rare riparian resources include the aspen groves in the San Bernardino Mountains. Invasive plant species are a problem in this area as well, and include giant reed (Arundo donax) and tamarisk (Tamarix sp.). Wildfires have occurred over the last 10 years that currently, and will continue to, affect riparian resources in this Region. Recent major fires include the Willows Fire (1999) around Deep Creek and the recent fires, Grand Prix and Old Fires that burned almost the entire south facing slopes of the San Bernardino Mountains and the easterly portion of the San Gabriel Mountains (2003).

c) Desert Region

Encompassing the great majority of San Bernardino County, approximately 93% of the County land area, the Desert Region includes a great diversity of biological resources in one of the most fragile ecosystems in the Country. The Desert Region includes land at elevations ranging from near sea level to desert valleys between 1000 and 4000 feet and mountain ranges exceeding 8,000 feet above sea level. Soils are predominantly sandy gravel with high runoff coefficients and fast percolation. The mountain ranges support exposed bedrock, mineral deposits in granite rock. Unique soil types include major dune formation, desert pavement, and dry alkaline lake beds. The entire Region is crossed by expansive alluvial wash deposits. The dominant habitat is Desert Scrub, but discrete areas of other habitat types also occur within this Region. Table IV-D-3 shows vegetation types associated with the various communities in the Desert Region. The general reference to the desert within the County can be divided into three main deserts including the Mojave, Great Basin, and
Colorado and are differentiated by the respective biomes, rainfall patterns and elevations. The Conservation Background Report (Appendix H) lists the state and federal sensitive or protected plant and animal species that have the potential to occur in the Desert Region. Many of these species may also range, occupy overlapping habitat, or migrate to the other planning Regions of the County as indicated.

Table IV-D-3. Native Vegetation Types and Plant Communities within the Desert Region

<table>
<thead>
<tr>
<th>Plant Communities</th>
<th>Vegetation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
</tr>
<tr>
<td>Sage scrub</td>
<td>Sage scrub</td>
</tr>
<tr>
<td></td>
<td>Riversidean sage scrub</td>
</tr>
<tr>
<td></td>
<td>Riversidean alluvial fan sage scrub</td>
</tr>
<tr>
<td>Mojave Desert scrub</td>
<td>Mojave creosote bush scrub</td>
</tr>
<tr>
<td></td>
<td>Mojave mixed scrub</td>
</tr>
<tr>
<td></td>
<td>Blackbush scrub</td>
</tr>
<tr>
<td>Saltbush scrub</td>
<td>Chenopod scrub</td>
</tr>
<tr>
<td></td>
<td>Saltbush scrub</td>
</tr>
<tr>
<td></td>
<td>Sink scrub</td>
</tr>
<tr>
<td></td>
<td>Shadscale scrub</td>
</tr>
<tr>
<td><strong>Woodlands</strong></td>
<td></td>
</tr>
<tr>
<td>White Fir woodland</td>
<td></td>
</tr>
<tr>
<td>Pinyon and juniper woodland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mojavean and juniper woodland</td>
</tr>
<tr>
<td></td>
<td>Mojavean pinyon woodland</td>
</tr>
<tr>
<td></td>
<td>Mojavean juniper woodland and scrub</td>
</tr>
<tr>
<td>Joshua tree woodland</td>
<td></td>
</tr>
<tr>
<td><strong>Wetlands</strong></td>
<td></td>
</tr>
<tr>
<td>Meadow and seep</td>
<td>Freshwater seep</td>
</tr>
<tr>
<td>Marsh and swamp</td>
<td>Freshwater marsh</td>
</tr>
<tr>
<td>Riparian forest</td>
<td>Willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>Cottonwood – willow riparian forest</td>
</tr>
<tr>
<td></td>
<td>White alder riparian forest</td>
</tr>
<tr>
<td>Riparian scrub</td>
<td>Mule fat scrub</td>
</tr>
<tr>
<td></td>
<td>Southern willow scrub</td>
</tr>
<tr>
<td>Riparian woodland</td>
<td>Desert fan palm oasis woodland</td>
</tr>
<tr>
<td></td>
<td>Southern riparian woodland</td>
</tr>
<tr>
<td><strong>Alkali Sink</strong></td>
<td></td>
</tr>
<tr>
<td>Alkali meadows and seeps</td>
<td>Alkali playa</td>
</tr>
<tr>
<td></td>
<td>Alkali playa</td>
</tr>
<tr>
<td><strong>Sand Dune</strong></td>
<td></td>
</tr>
<tr>
<td>Desert dunes</td>
<td>Stabilized/partially stabilized dunes</td>
</tr>
<tr>
<td></td>
<td>Sand fields</td>
</tr>
</tbody>
</table>
Most of the San Bernardino County Desert Region includes land managed by the BLM and other federal agencies including the National Park Service for the Mojave National Preserve and Joshua Tree National Park, as well as the U.S. military for Ft. Irwin and other bases. The BLM, National Park Service, and CDFG recognize ASBI, Critical Habitat, and Desert Wildlife Management Areas (DWMA) within the Region. The management of these areas is under the jurisdiction of the respective federal agencies.

The National Park Service (NPS) controls two sites within the Desert Region of the San Bernardino County. These include:

- **Joshua Tree National Park.** In 1994 the Desert Protection Act designated 825,000 acres as a National Park. Two deserts, two large ecosystems whose characteristics are determined primarily by elevation, come together at Joshua Tree National Park. Below 3,000 feet, the Colorado Desert encompasses the eastern part of the park and features natural gardens of creosote bush, ocotillo, and cholla cactus. The higher, moister, and slightly cooler Mojave Desert is the special habitat of the Joshua tree. In addition to Joshua tree forests, the western part of the park also includes some of the most interesting geologic displays found in California’s deserts. Five fan palm oases also dot the park, indicating those few areas where water occurs naturally.

- **Mojave National Preserve.** The Desert Protection Act created the 1.4 million acre Mojave National Preserve in the heart of the Mojave Desert. This act transferred the lands known as the East Mojave National Scenic Area from the Bureau of Land Management to the National Park Service. The desert in the Mojave National Preserve ranges in elevation from less than 1000 feet to almost 8000 feet. Wildlife is abundant and over 300 different species of animals including desert bighorn sheep, mule deer, coyotes and desert tortoises roam the area. Desert plants are especially adapted to living in this arid climate. Many have small leaves with waxy coverings to minimize moisture loss, while cacti store large volumes of water. Other plants, such as the creosote, have developed extensive or deep root systems that enable them to gather the precious water. Common plants include yucca, creosote and the Joshua tree.

- **The BLM has designated locations within three desert biomes as Area of Critical Environmental Concern (ACEC) and Special Areas.** By designating areas as ACEC the BLM can develop special management programs for specific resources. These management programs are site-specific and include patrolling, fencing, and signage implemented by the BLM. The programs also recommend actions that the BLM does not have direct authority to implement. There are 11 designated biological ACECs in the Desert Region of San Bernardino County. These include:
  - Dark Mountain;
  - Amargosa River;
  - Salt Creek;
  - Cronese Lake;
  - Fort Soda;
  - Upper Johnson Valley;
  - Soggy Dry Lake;
  - North Harper Dry Lake;
  - South Harper Dry Lake;
  - Afton Canyon; and
  - Big Morongo Canyon.
Other areas that possess rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance may be designated as a Special Area. The goals of the Special Areas are to formally recognize significant natural areas on BLM lands, allow uses within the Special Areas compatible with the protection and enhancement of natural resources, and monitor the quality of the natural resources in relationship to allowed uses. The three Special Areas designated within the Desert Region are the Kelso Dunes, designated as a National Natural Landmark; The Granite Mountains, a Research Natural Area; and the East Mojave, designated as a National Scenic Area.

The CDFG recognizes numerous ASBIs within the Desert Region of San Bernardino County that support various important biological resources. These include, but are not limited to, areas of deer, bighorn sheep, and desert tortoise habitat. The Nature Conservancy also recognizes areas for protection and has designated the Morongo Valley area as the Big Morongo Canyon Preserve.

The Desert Region supports a high number of sensitive plant species presented in the Conservation background report. Other sensitive wildlife occurring within the Desert Region includes locally sensitive populations of several species, burrowing owl, and Mojave ground squirrel.

San Bernardino County contains a large area in which Desert Southwest Playas are expected to occur. The following is a list of wetlands and riparian habitats found in the Desert Region:

- Alkali Seeps, Springs and Meadows;
- Wetland and Riparian Plant Communities;
- Wetland and Riparian Wildlife;
- Mojave River – Wild and Scenic River Eligibility; and
- Invasive Plant Species.

More details on biological resources within the County are provided in the Conservation Background Report prepared as part of the General Plan Update Program.

The Open Space Plan Diagram that is incorporated in the Open Space Background Report identifies recognized wildlife corridors in the County.

2. **SIGNIFICANCE CRITERIA**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Biological Resources, if the project would cause any of the following effects:

- *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.*
- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.*
• Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

• Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

• Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

• Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3. IMPACT ANALYSIS

Impact BIO-1
The General Plan implementation will have the potential to adversely affect, directly and indirectly, candidate, sensitive, or special-status plant and animal species that may occur within the Valley Region of San Bernardino County. Planned development of existing incorporated and unincorporated areas support species that are federal or state protected, or candidate for protection, including the Delhi Sands flower-loving fly and San Bernardino kangaroo rat. Conversion of vacant land (designated for development) that affects Riversidian sage scrub, Delhi sand, alluvial fan sage scrub or other remnant habitat supporting native species may directly affect occupied habitat. Consequently, this development of vacant land may cause the take or harm of individual species as listed by the federal and/or state agencies, or cause indirect affect through the loss of foraging and breeding habitat. Development will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Additional indirect effects to species outside of the County may result from the relocation of agricultural or industrial facilities to other areas.

Within the Mountain Region, the majority of the land is under jurisdiction of the USFS where the federal lands serve as primary refuge for most sensitive montane species. However, a few species, such as the southern rubber boa and many of the pebble plain species have considerable habitat on land that is privately owned and subject to the land use jurisdiction of the County. The General Plan policy areas identified in the Open Space Diagram that will be retained in the Update will help minimize adverse effects to most wildlife and plant species and associated native habitats that occur on private land and adjoining federal or state lands. However, development on private lands that contain suitable or occupied habitat will continue to be impacted as buildout of the General Plan occurs.

Within the Desert Region of the County, planned development of existing incorporated and unincorporated areas support species that are federal or state protected or candidate for protection including the desert tortoise and Mojave ground squirrel. Additional conversion of open space that affects desert scrub, alkali scrub, desert pavement or other habitat supporting native species may directly affect occupied habitat, cause, take or harm of individual species as defined by federal and state agencies, or cause indirect effect through the loss of foraging and breeding habitat. Development called for by the proposed update of the General Plan will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Development of lands around existing desert communities will adversely affect native resident and
migratory species. Growth inducing actions will require additional water be taken from other areas possibly outside of the County, development of additional roads and expansion of existing roads, additional landfill, and a significant increase to the area affected by the community. Increases in population are expected to result in additional effects to the buffer habitat between the urban and open space. Consequential to the development, additional direct and indirect impacts to protected species may result from increased populations of domestic and resulting feral populations of dogs and cats.

*Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.*

**Impact BIO-2**

The General Plan implementation within the Valley Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities as identified by state and federal agencies. Most of the watershed within the Valley Region has been channelized or previously disturbed through agricultural practices, flood control effort, and introduction of non-native vegetation. Further degradation including the installation of concrete bed and banks would directly affect remnant riparian habitat within this County planning area. Additionally, loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The Valley Region supports critical habitat as identified by the U. S. Fish and Wildlife Service (USFWS) for San Bernardino kangaroo rat, least Bell’s vireo, and southwestern willow flycatcher. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access.

General Plan implementation within the Mountain Region will have the potential to adversely affect directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. While the majority of the land within the Mountain Region is under jurisdiction of the USFS, several specified habitats occur on private land that is subject to the County General Plan. The General Plan Update retains a number of policies that apply at the interface between federal or state lands. These policies will minimize the adverse effects on riparian and other sensitive habitats. Loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The General Plan will continue to implement state and federal protections to minimize adverse effects to water quality that would affect downstream riparian and other sensitive habitat. Several wildlife corridors and special policy areas are recognized on the Open Space Diagram. These areas require special review for impacts to biological resources on a project-by-project basis.

General Plan implementation within the Desert Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities as identified by state and federal agencies. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access. Additional regional growth may affect riparian habitat that is a very limited resource in the Desert Region. Continued water withdrawals along the Mojave River and other locations will contribute to continued loss of riparian resources. Land grading and development, along with infrastructure extension, will adversely affect limited desert riparian habitat. Because of the environmental conditions that create the desert habitats, impacts have a more significant consequence and recovery from temporary effects and take substantially longer than in areas receiving more rainfall.
Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact BIO-3
The General Plan implementation within the Valley Region will have the potential to adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The development of the Valley Region will also affect native habitat downstream of the project limits. Loss of sediment or excess deposition of upland material will affect downstream wetlands, estuary, and ocean habitats. Natural sediment deposition, flood control management, and downstream affects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

General Plan implementation within the Mountain Region will not adversely affect directly federal protected wetlands as defined by Section 404 of the Clean Water Act. Indirect effects to downstream wetlands and other natural habitats may occur from loss of sediment, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

General Plan implementation within the Desert Region will not adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The Desert Region supports primarily isolated wetlands and is not within the jurisdiction of agencies regulating compliance with the Clean Water Act. However, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It has not been determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits. Development may adversely affect other water resources within the Desert Region. The General Plan includes policy to require preparation of a biological assessment of a parcel prior to alteration to determine permitting requirements and impact assessment for these resources. This should identify water resources and relevant measures to minimize adverse affects to less than significant.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact BIO-4
The General Plan implementation within the Valley Region may affect, but is not likely to adversely affect, movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The Valley Region has been affected by land use conversion during the past century. Much of the land has been altered by agriculture activity and residential and commercial development. The existing open space, Santa Ana River, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The foothill Region provides winter refuge for species that move seasonally between the foothill valley area and mountains. The preservation of open space within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Development of aquatic or riparian areas may indirectly affect migratory species. Existing
parks and open space will be conserved, which is expected to offset effects to less than significant for this environmental threshold.

General Plan implementation within the Mountain Region may adversely affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The existing open space, USFS property, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The Mountain Region provides winter refuge for resident and migratory species. Additionally, the Mountain Region provides refuge to wildlife that temporarily relocate due to natural and man-made wild fires that are part of the natural burn cycle of the chaparral and forest habitats. Low density development to buffer and maintain compatibility with natural habitat within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Additionally, the wildlife corridors identified on the Open Space Diagram will receive evaluation and mitigation under the requirements of the Biological Resource Overlay District.

General Plan implementation within the Desert Region may adversely affect movement of native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife fawning, and landbanking sites. The preservation of open space within one-mile of National Forest boundaries (Policy CO1.2) will provide only minimal range movement preservation. Desert species spatially range within their habitat based on periodic rain cycles. The establishment and protection provided by National Monuments and parks provide protection for desert habitat, but does not provide protection of the entire Desert Region. Development of the Victorville area, expansion of exiting freeways, state routes, and County roads, and increased population will adversely affect the ability of wildlife to move through the Region. Habitat fragmentation is expected to occur as a result of planned development within the Desert Region. The buffer areas around the developments will add significant effect to native habitat and species. Use of limited resources and introduction or propagation of predatory species will further affect desert species.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-5
The General Plan implementation within the Valley Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policy or ordinance. The General Plan implementation relies on the development of Habitat Conservation Plans and Mitigation Sites that the County may participate in to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4).

General Plan implementation within the Mountain and Desert Regions will not adversely affect or conflict with local policies or ordinances protecting biological resources such as native plant protection policy or ordinance. The General Plan implementation relies on the County's Plant Protection Ordinance as contained in the Resource Management and conservation division of the County Development Code to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4)

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.
Impact BIO-6

The General Plan implementation within the Valley Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). San Bernardino County has participated in the following three local conservation plans: (1) City of Rialto HCP for the Delhi sands flower loving fly; (2) Upper Santa Ana Wash Land Management and Conservation Plan; and (3) Glen Helen Specific Plan Natural Resource Management Plan. The General Plan does not include any specific Habitat Conservation Plan policies, or ordinances for any wildlife or plant species or habitat.

General Plan implementation within the Mountain Region will not conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. No formal HCPs exist in the Mountain Region although the County is party to the Carbonate Habitat Management Strategy (CHMS). The CHMS is intended to provide for conservation of the federally listed carbonate endemic plants, while providing for continued mining of calcium carbonate minerals on the North Slope of the San Bernardino Mountains.

General Plan implementation within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. San Bernardino County participates in Regional Conservation Programs. Natural Community Conservation Plans and Habitat Conservation Plans are rapidly becoming the preferred regulatory replacement for project-by-project environmental review and permitting. The programs are essentially streamlined endangered species take permitting processes, but they do allow for a landscape-scale, ecosystem perspective to conservation planning. Specifically, San Bernardino County is participating in the West Mojave Plan and intends to proceed with obtaining a local government Habitat Conservation Plan to obtain Section 10a and 2081 permits. The West Mojave Plan consists of two components: a Federal component that will amend the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan that will cover development on private lands. The BLM and 27 other federal and state agencies, cities and counties (including San Bernardino County) are planning to address the management of the desert tortoise and a number of other special status plants and animals found within the 9.4 million acre West Mojave Planning Area in the proposed West Mojave HCP.

Continued urban expansion primarily in the Valley Region, where the bulk of the County population currently resides, is resulting in conversion of agricultural uses due to economic pressure. The Chino Dairy Preserve is a case-in-point for conversion to urban development. In the last five years over 12,000 acres of dairy lands have been annexed to municipalities in the Valley Region. The City of Ontario has annexed approximately 8,000 acres and the City of Chino has annexed approximately 4,000 acres of unincorporated dairy lands for the purpose
of developing master planned communities. Much of the existing urban development in the valley is located in areas formerly utilized for agricultural purposes (e.g., extensive citrus groves).

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact BIO-7**

The General Plan implementation will have the potential to effect but will not adversely affect directly or indirectly, candidate, sensitive or special status plant and animal species that may occur within the Mountain Region of San Bernardino County. The majority of the land within the Mountain Region is under jurisdiction of the USFS. The General Plan policy areas identified in the Open Space Diagram that will be retained in the Update will help minimize adverse effects to most wildlife and plant species and associated native habitats that occur on federal or state lands. However, development on private lands that contain suitable or occupied habitat will continue to be impacted as buildout of the General Plan occurs.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact BIO-8**

The General Plan implementation within the Mountain Region will have the potential to adversely effect directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. While the majority of the land within the Mountain Region is under jurisdiction of the USFS, several specified habitats occur on private land that is subject to the County General Plan. The General Plan Update retains a number of policies at the interface between federal or state lands will provide minimum adverse effects on riparian and other sensitive habitats. Loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The General Plan will continue to implement state and federal protections to minimize adverse effects to water quality that would affect downstream riparian and other sensitive habitat. Several wildlife corridors and special policy areas are recognized on the Open Space Diagram. These areas require special review for impacts to biological resources on a project-by-project basis.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

**Impact BIO-9**

The General Plan implementation within the Mountain Region will not adversely affect directly federal protected wetlands as defined by Section 404 of the Clean Water Act. Indirect effects to downstream wetlands and other natural habitats may occur from loss of sediment, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.
Impact BIO-10
The General Plan implementation within the Mountain Region may adversely affect movement of any native resident or migratory fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites. The existing open space, USFS property, and existing reservoirs provide wildlife nursery sites and foraging and resting opportunities to migratory species. The Mountain Region provides winter refuge for resident and migratory species. Additionally, the Mountain Region provides refuge to wildlife that temporarily relocate due to natural and man-made wild fires that are part of the natural burn cycle of the chaparral and forest habitats. Low density development to buffer and maintain compatibility with natural habitat within one-mile of National Forest boundaries (Policy CO1.2) will provide seasonal range movement areas for resident species. Additionally, the wildlife corridors identified on the Open Space Diagram will receive evaluation and mitigation under the requirements of the Biological Resource Overlay District.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-11
The General Plan implementation within the Mountain Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policy or ordinance. The General Plan implementation relies on the County's Plant Protection Ordinance as contained in the Resource Management and conservation division of the County Development Code to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4).

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-12
The General Plan implementation within the Mountain Region will not conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local Regional or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. No formal HCPs exist in the Mountain Region although the County is party to the Carbonate Habitat Management Strategy (CHMS). The CHMS is intended to provide for conservation of the federally listed carbonate endemic plants while providing for continued mining of calcium carbonate minerals on the North Slope of the San Bernardino Mountains.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-13
The General Plan implementation will have the potential to adversely affect, directly and indirectly, candidate, sensitive or special status plant and animal species that may occur within the Desert Region of San Bernardino County. Planned development of existing incorporated and unincorporated areas support species that are federal or state protected or candidate for protection including the desert tortoise and Mojave ground squirrel. Additional conversion of open space that affects desert scrub, alkali scrub, desert pavement or other...
habitat supporting native species may directly affect occupied habitat, cause, take or harm of individual species as defined by federal and state agencies, or cause indirect effect through the loss of foraging and breeding habitat. Development called for by the proposed update of the General Plan will directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources that resident or migratory species may use. Development of lands around existing desert communities will adversely affect native resident and migratory species. Growth inducing actions will require additional water be taken from other areas possibly outside of the County, development of additional roads and expansion of existing roads, additional landfill, and a significant increase to the area affected by the community. Increases in population are expected to result in additional effects to the buffer habitat between the urban and open space. Consequential to the development, additional direct and indirect impacts to protected species may result from increased populations of domestic and resulting feral populations of dogs and cats.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact BIO-14
The General Plan implementation within the Desert Region will have the potential to adversely affect directly and indirectly riparian habitat or other sensitive natural communities as identified by state and federal agencies. These habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer habitat and public use and access. Additional Regional growth may affect riparian habitat that is a very limited resource in the Desert Region. Because of the environmental conditions that create the desert habitats, impacts have a more significant consequence and recovery from temporary effects and take substantially longer than in areas receiving more rainfall.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact BIO-15
The General Plan implementation within the Desert Region will not adversely affect directly and indirectly federal protected wetlands as defined by Section 404 of the Clean Water Act. The Desert Region supports primarily isolated wetlands and is not within the jurisdiction of agencies regulating compliance with the Clean Water Act. However, natural sediment deposition, flood control management, and downstream effects are Regional issues that are not within the scope of the General Plan. It has not been determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits. Development may adversely affect other water resources within the Desert Region. The General Plan includes policy to require preparation of a biological assessment of a parcel prior to alteration to determine permitting requirements and impact assessment for these resources. This should identify water resources and relevant measures to minimize adverse affects to less than significant.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-16
The General Plan implementation within the Desert Region may adversely affect movement of native resident or migratory fish or wildlife species or established wildlife corridors or
impede the use of native wildlife fawning, and landbanking sites. The preservation of open space within one-mile of National Forest boundaries (Policy CO1.2) will provide only minimal range movement preservation. Desert species spatially range within their habitat based on periodic rain cycles. The establishment and protection provided by National Monuments and parks provide protection for desert habitat, but does not provide protection of the entire Desert Region. Development of the Victorville area, expansion of exiting freeways, state routes, and County roads, and increased population will adversely affect the ability of wildlife to move through the Region. Habitat fragmentation is expected to occur as a result of planned development within the Desert Region. The buffer areas around the developments will add significant effect to native habitat and species. Use of limited resources and introduction or propagation of predatory species will further affect desert species.

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact BIO-17
The General Plan implementation within the Desert Region will not adversely affect or conflict with local policies or ordinances protecting biological resources such as tree preservation policy or ordinance. The General Plan implementation relies on the development of Habitat Conservation Plans and Mitigation Sites by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact BIO-18
The General Plan implementation within the Desert Region will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development (Policies CO 2.1, 2.2, 2.3, and 2.4). The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat. San Bernardino County participates in Regional Conservation Programs. Natural Community Conservation Plans and Habitat Conservation Plans are rapidly becoming the preferred regulatory replacement for project-by-project environmental review and permitting. The programs are essentially streamlined endangered species take permitting processes, but they do allow for a landscape-scale, ecosystem perspective to conservation planning. Specifically, San Bernardino County is participating in the West Mojave Plan and intends to proceed with obtaining a local government Habitat Conservation Plan to obtain Section 10a and 2081 permits. The West Mojave Plan consists of two components: a Federal component that will amend the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan that will cover development on private lands. The BLM and 27 other federal and state agencies, cities and counties (including San Bernardino County) are planning to address the management of the desert tortoise and a number of other special status plants and animals found within the 9.4 million acre West Mojave Planning Area in the proposed West Mojave HCP.
This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following mitigation measures are added to the proposed project to reduce the project effects on biological resources.

**Mitigation BIO-1**

The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay as discussed in Mitigation Measures BIO-3 and BIO-13 below. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon. This measure will be added to the General Plan as a Program under Policy CO 1.1.

**Mitigation BIO-2**

The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with ACOE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation. This mitigation will be added to the General Plan as a Program under Goal CO 1.

**Mitigation BIO-3**

The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. A component of the Overlay will maintain a database of completed Biological Opinions that will contribute to assessments of cumulative impacts from previously approved projects. Development of an update database that integrates CNDDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and other sources. This update will be added to the General Plan as a Program under Policy CO 2.2.

**Mitigation BIO-4**

The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats. This mitigation will be added to the General Plan as a Program under Goal CO 1.
Mitigation BIO -5
The County shall not permit land conversion until adequate mitigation is provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant. This measure will be added to the General Plan as program to implement Policy CO 2.4.

Mitigation BIO -6
The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries). This measure will be added to the General Plan as a program to implement Policy CO 2.3.

Mitigation BIO -7
The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays. This measure will be added to the General Plan as a program to implement policy CO 2.2.

Mitigation BIO -8
The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing. This measure will be added to the General Plan as a program to implement Policy CO 2.4.

Mitigation BIO -9
The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents. This measure will be added to the General Plan as a program to implement Policy CO 2.1.

Mitigation BIO -10
All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline
mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report.

The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.

**Mitigation BIO -11**
In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County’s role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. This measure shall be added to the General Plan as a program to implement Policy CO 2.1.

**Mitigation BIO -12**
Within the County’s Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated “BR” or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.

82.13.020 – Location Requirements
The BR overlay district shall be applied to areas that have been identified by a county, state or federal agency as habitat for species of unique, rare, threatened or endangered plants or animals or their habitats as listed in the General Plan. The overlay applies to policy areas identified on the Open Space Overlay.

82.13.030 – Application Requirements
When a land use is proposed, or an existing land use is increased by more than 25 percent of disturbed area within a BR overlay district, the land use application shall include a biotic resources report prepared as follows, except where the Director finds that prior environmental studies approved by the County have determined that the site does not contain viable habitat.

Report content. The biotic resources report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development, and shall also identify mitigation measures designed to reduce or eliminate impacts to the identified resources, and shall be submitted along with the application for the proposed development.

Report preparation. The biotic resources report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist, or other professional “life scientist”

82.13.040 – Development Standards
The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.
Mitigation BIO-13
The County shall consider whether projects may lead to a significant environmental impact as a result of the conversion of oak woodlands consistent with new provisions added to the County Development Code Subsection 88.01.050(e)(4). Upon determination of a significant effect, the County shall employ one or more of the following measures: preservation, replacement or restoration, in-lieu mitigation fee, or other mitigation measures.

**Preservation.** Preserve existing oak woodlands by recording conservation easements in favor of the County or an approved organization or agency.

**Replacement or restoration.** Replace or restore former oak woodlands. The review authority may require the planting and maintenance of replacement trees, including replacing dead or diseased trees. The replacement ratio and tree sizes shall be based on the recommendation of an Oak Reforestation Plan prepared by a registered professional forester. The requirement to maintain trees in compliance with this paragraph shall terminate seven years after the trees are planted.

**In-lieu mitigation fee.** Contribute in-lieu mitigation fee to the Oak Woodlands Conservation Fund, established under Fish and Game Code Section 1363 for the purpose of purchasing oak woodlands conservation easements. A project applicant who contributes funds in compliance with this Subsection shall not receive or use a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project. The in-lieu fee for replacement trees shall be calculated based upon their equivalent value as established by the International Society of Arboriculture’s (ISA) current edition of Guide to Establishing Values for Trees and Shrubs, etc.

**Other mitigation measures.** Perform other mitigation measures as may be required by the review authority (e.g., inch-for-inch off-site replacement planting; transfer of development rights, enrollment of project with offset provider for carbon credits in greenhouse gas emission registry, carbon reduction, and carbon trading system; etc.).

5. **Significant Unmitigated Impacts**

The expected increase in population addressed in the General Plan will cause a significant unmitigated irreversible impact to biological resources. The increase in population will require the loss of resources and habitat that currently support native plants, animals, and habitat within the County and in areas that provide the County with resources such as electricity, water, and fuel.
E. CULTURAL AND PALEONTOLOGICAL RESOURCES

1. SETTING

Cultural Resources

The material or physical remains of past human activity are referred to as “cultural resources.” Cultural resources include both archaeological and historical resources. Archaeological resources, in turn, may be either prehistoric or historic. These resources can encompass a wide range of physical objects, sites, structures, and even landscapes that are the direct result of intentional or inadvertent human actions. Cultural resources can contribute to our understanding of past human activities, including Native American history, local and regional European, African and Asian settlement in North America, urban development, historic engineering activities, cross-cultural influences, and human adaptations to the environment. Cultural resources, like many natural resources found on our planet, are non-renewable. Unquestionably, once they have been destroyed, by whatever means, a fragment of our collective history permanently disappears.

Prehistoric, the period before European arrival in the New World, archaeological sites may include the remains of villages and campsites, food processing locations, areas for exploiting local floral and faunal resources, lithic resource procurement and stone tool production locations, and burial and cremation areas. They may also consist of trails, rock art and ground figures (geoglyphs), isolated artifacts, and sacred locations. Historic archaeological resources, on the other hand, derive from various periods after initial European contact, during which written European histories, to varying extents, occurred. Resources from this period include refuse deposits such as can and bottle dumps, filled-in privy pits and cisterns, melted adobe walls and foundations, collapsed structures and associated features, and roads and trails. They may be related to mission activities, travel and exploration, early settlement, homestead activities, cattle herding, lumbering, and mining, among other themes. In San Bernardino County, historic archaeological resources date from the earliest Spanish mission activities (Ca. 1770) to the mid 20th Century (AD. 1950). This class of resources, often related to a historic archaeological resource, includes structures of any type that are 50 years or more in age. This resource category often referred to as the “built environment,” comprises houses or other structures, irrigation works, bridges, dams, and other ‘built’ historic engineering features.

As the largest County in the lower 48 states, San Bernardino County comprises three main ecological zones: valley, mountain, and desert. These differing zones are responsible for the many unique prehistoric and historic cultures that have developed over the past approximate 10,000 years of human occupation within the County. Californian archaeologists have generally divided the prehistoric occupation of southern California into three broad categories:

- The Paleo-Indian Period: the earliest inhabitants within the County and dating from approximately 10,000 years before present to 8,000 before present. Within this tradition, there may have developed two sub-cultures: Pluvial Lake, where interior lake eco-systems were exploited (this area is now the Mojave Desert), and Coastal, where people relied extensively on the littoral ecozone;

- The Archaic Period: is distinguished by a dramatic change in the climate (also defined as the division between Pleistocene to Holocene geologic periods) where the
western pluvial lakes dried, possibly resulted in an increased population along the littoral zone from approximately 8,000 years before present to 4000 years before present; and

- The Late Prehistoric: is characterized by semi-nomadism, the development of small village complexes and the early advent of agriculture from approximately 4,000 years before present to European contact (18th century).

Protohistoric, the period just before European contact, information on the occupants of San Bernardino County is largely based on ethnographic writings of Spanish missionaries, who sought to establish groupings of people more for their own purposes of converting Native Americans to Catholicism. Trending from the Pacific Ocean to the Colorado River, these Native American groups comprise the Gabrieleno, Luiseno, Kitanemuk, Cahuilla, Serrano, Vanume, Kawaiisu, Panamint Shoshone, Southern Paiute, Mojave, and Haichidhoma. This information. The ethnographic inhabitants of San Bernardino County were Numic- and Takic-speaking populations. Exceptions are the Mojave and Haichidhoma people along the Colorado River who are Yuman-speaking.

The historic period in San Bernardino County began with the Spanish occupation and construction of the Mission San Gabriel Arcangel, located northeast of present day Los Angeles. The Mexican Period (A.D. 1821 to 1848), the period marked by the Mexican-American independence from Spain, follows the Spanish Period. In 1846, the United States declared war on Mexico. After two years, Mexico signed the Treaty of Guadalupe Hidalgo thereby relinquishing the area that would become the modern southwestern states of Texas, New Mexico, Arizona, and California. The American Period began in 1848 and continues to the present.

Each of these cultural periods has produced rich material inventories and complex social organizations that have left behind important and non-replaceable cultural resources. These resources are represented in the cultural resources files stored at the San Bernardino Archaeological Information Center (AIC), the California Historical Resources System for the County of San Bernardino. Currently, the AIC has information on more than 12,000 prehistoric and historic archaeological sites and 4,700 isolates (archaeological sites with three or fewer artifacts). Approximately 5,000 historic buildings or structures in the County are eligible or already listed in the California Register of Historical Resources. There are an additional 40 California Historical Landmarks located within the County and 53 properties listed in the National Register of Historic Places.

In addition to the traditional cultural resources associated with archaeological sites and historic buildings and structures, traditional cultural properties (TCPs) must also be taken into consideration. TCPs are “a traditional cultural property…that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.” Typically, TCPs are associated with the Native American community because of their spiritual relationship with landscapes. However, because TCPs are viewed as sacrosanct, many tribal elders and community leaders tend to not release the location of these properties.

The AIC has 4,566 cultural resources technical reports on file and has mapped only 4,000 of these surveys and another 1,000 surveys are pending review. Based on these surveys, approximately only 25% of the County has been surveyed for cultural resources; however, many of these surveys were conducted prior to current professional standards established for
cultural resources surveys and thus need to be re-surveyed (Robin Laska, AIC, personal communication December 15, 2005). The figures for known sites and previous surveys are constantly changing as new data and results from technical studies arrive, and as California Register of Historical Resources and National Register of Historic Places paperwork is processed. The preponderance of both prehistoric and historic sites throughout the County, and the vast areas that have yet to be systematically surveyed for cultural resources, indicate that an equal amount of cultural resources, as yet unidentified, are present. Given the rapid development within the County, numerous cultural resource sites will be impacted by development.

**Paleontological Resources**

Paleontological resources are the evidence of ancient life forms that through time, the remains of these ancient life forms become fossils. A process in which the remains (usually bone) is mineralized. Paleontological resource consists of fossils and trace fossils (outlines or imprints of ancient life forms) preserved in sedimentary rock units, particularly fine-to-medium-grained marine, lake, and stream deposits such as limestone, siltstone, sandstone, or shale, and in ancient soils (paleosols). They are also found in coarse-grained sediments such as conglomerates or coarse alluvium. Though it is rare for fossils to occur in igneous or metamorphic rock units, these occurrences are known to occur in San Bernardino County.

Fossils may occur throughout a sedimentary unit, and in fact are more likely to be preserved in the subsurface, where they have not been damaged or destroyed by previous ground disturbance, amateur collecting, or natural causes such as erosion. In contrast, cultural resources are often recognized by surface evidence of their presence. A field survey for paleontologic resources can indicate that sediments likely to contain fossils are present, even if fossils are not observed on the surface. However, excavation is often the only way in which fossils are discovered.

San Bernardino County has more than 3,000 paleontological localities recorded in the Regional Paleontologic Locality Inventory at the San Bernardino County Museum. Many of these known localities occur on private land, which is subject to development. Others occur on federal lands and their resources are protected by federal agencies such as the BLM and the USFS. Table 1 provides an overview of the paleontological history of San Bernardino County as well as types of fossils exhibited within the county.

2. **Significance Criteria**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Cultural Resource, if the project would cause any of the following effects:

- *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.*
- *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.*
- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*
- *Disturb any human remains, including those interred outside of formal cemeteries.*
3. IMPACT ANALYSIS

Impact CR – 1
Future projects to be developed in the County may take place in an area with a Cultural Resources Overlay Designation or in an area that has not been disturbed by prior development activities. Therefore, it is possible that a future development may disturb known and unknown archaeological sites, historic buildings or structures, or paleontological resources. The development review process will need to address impacts to these resources.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation CR-1
The County shall identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

Mitigation CR-2
The County shall require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped cultural resource overlay area.

Mitigation CR-3
Mitigation of impacts to important cultural resources shall follow the standards established in Section 15064.5 of the California Environmental Quality Act Guidelines, as amended to date. For historic resources this includes the Secretary of Interior Standards for the Treatment of Historic Properties with Guidelines for Previously Rehabilitating, Restoring and Reconstructing Historic Buildings according to CEQA Section 15126.4 (b)(1).

Mitigation CR-4
The County shall require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County’s application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.

Mitigation CR-5
The County shall comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

Mitigation CR-6
Site record forms and reports of surveys, test excavations, and data recovery programs shall be filed with the Archaeological Information Center at the San Bernardino County Museum, and shall be reviewed and approved in consultation with that office. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed shall be required prior to project grading and/or building permits; and Final reports shall be submitted and approved prior to project occupancy permits.

Mitigation CR-7
Any artifacts collected or recovered as a result of cultural resource investigations shall be catalogued per San Bernardino County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be...
CHAPTER IV

Project Analysis

preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.

Mitigation CR-8
When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured shall be developed and approved prior to conditional approval.

Mitigation CR-9
In areas of potential but unknown sensitivity, field surveys prior to grading shall be required to establish the need for paleontologic monitoring.

Mitigation CR-10
Projects requiring grading plans that are located in areas of known fossil occurrences or demonstrated in a field survey to have fossils present, shall have all rough grading (cuts greater than three feet) monitored by trained paleontologic crews working under the direction of a qualified professional, in order that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

Mitigation CR-11
All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of the San Bernardino County Museum for their scientific information potential to be preserved.

Mitigation CR-12
A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved prior to granting of building permits, and a final report shall be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

Mitigation CR-13
Consistent with Senate Bill 18, as well as possible mitigation measures identified through the CEQA process, the County shall work and consult with local tribes to identify, protect and preserve TCPs. TCPs include man-made sites and resources, as well as natural landscapes, which contribute to the cultural significance of areas.

Mitigation CR-14
The County shall protect confidential information concerning Native American cultural resources with internal procedures, such as keeping confidential archaeological reports away from public view or discussion in public meetings. Information provided by tribes to the County shall be considered confidential or sacred.

Mitigation CR-15
The County shall work in good faith with the local tribes, developers/applicants and other parties should the local affected tribe request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe’s request for artifacts. Artifacts not desired by the local tribe shall
be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts shall be donated to the local tribe.

Mitigation CR-16
The County shall work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites with the “gated community.” If a site is identified within a gated community project, and preferable preserved as open space, the development shall be conditioned by the County allow future access to Native Americans to view and/or visit that site.

Mitigation CR-17
Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions shall be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:

- The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders shall be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.
- The concerns of the Native American community shall be fully considered in the planning process.
- If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to the state Health and Safety Code.
- In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting U.S. Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.
- If Native American cultural resources are discovered, the County shall contact the local Tribe. If requested by the Tribe, the County shall, in good faith, consult on the discovery and its disposition with the Tribe.

Mitigation CR-18
Within the County’s Development Code, two overlay districts have been established relating specifically to preserving cultural resources within the County. These areas are designated Cultural Resources Preservation “CP” Overlay District and Paleontological Resources “PR” Overlay District.

The intent of the “CP” District is to identify and preserve important archeological and historic resources. The intent of the “PR District is to identify and preserve significant paleontological resources since they are unique and non-renewable, thus promoting County identity and conserving scientific amenities for the benefit of future generations. These Districts work as described below.
82.14.020 – CP Overlay District Location Requirements

The CP overlay district may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories:

(a) California Archaeological Inventory;
(b) California Historic Resources Inventory;
(c) California Historical Landmarks;
(d) California Points of Historic Interest; and/or
(e) National Register of Historic Places.

82.14.030 – Application Requirements

The application for a project proposed within the CP overlay district shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures. The measures may include:

(a) Site recordation:
(b) Mapping and surface collection of artifacts, with appropriate analysis and curation;
(c) Excavation of sub-surface deposits when present, along with appropriate analysis and artifact curation; and/or
(d) Preservation in an open space easement and/or dedication to an appropriate institution with provision for any necessary maintenance and protection.

82.14.040 – Development Standards

(a) The proposed project shall incorporate all measures recommended in the report required by Section 82.14.030 (Application Requirements).
(b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.

82.21.020 – PR Overlay District Location Requirements

The Paleontologic Resources (PR) Overlay District may be applied to those areas where paleontologic resources are known to occur or are likely to be present. Specific identification of known fossil occurrences or potential paleontologic sensitivity is indicated by listing in the locality files of one or more of the following institutions:

(a) San Bernardino County Museum;
(b) University of California; and
(c) Los Angeles County Museum.
82.21.030 – Development Standards

When a land use is proposed within a PR overlay district, the following criteria shall be used to evaluate the project's compliance with the intent of the overlay.

(a) Field survey before grading. In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.

(b) Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence within the overlay district, or that has been demonstrated to have fossils present in a field survey, shall have all mass grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

(c) Disposition of specimens. All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of an institution with appropriate staff and facilities for their scientific information potential to be preserved.

(d) Report of findings. A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

(e) Mitigation financial limits. In no event shall the County require the applicant to pay more for mitigation as required by Subsections B., C., and D., above within the site of the project than the following amounts:

1. One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;
2. Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and
3. If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:
   (A) $200 per unit for any of the next 99 units;
   (B) $150 per unit for any of the next 400 units; and
   (C) $100 per unit for units in excess of 500.
5. **SIGNIFICANT UNMITIGATED IMPACTS**

There are no impacts to cultural and paleontological resources that can not be mitigated to below a level of significance. Although there are thousands of cultural and paleontological resources within the County, potentially significant impacts to undiscovered specific resources through the actions proposed in this FEIR may occur. However, through implementation of the mitigation measures cited above and imposed through the regulations of the County Development Code, all impacts to the important cultural and paleontological resources from future development are capable being mitigated to below a level of significance.
Table IV-E-1. Paleontological History of San Bernardino County

<table>
<thead>
<tr>
<th>ERA</th>
<th>Traits</th>
<th>San Bernardino County Fossil Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precambrian Era (4.6 billion to 550 million years ago)</td>
<td>Single-celled organisms</td>
<td>San Bernardino County in the Beck Springs Formation. These unique 1.3 billion year old life forms are the world’s oldest known mitosing cells.</td>
</tr>
<tr>
<td>Paleozoic Era (550 to 245 million years ago):</td>
<td>Invertebrates</td>
<td>San Bernardino County Trilobites, a class of arthropods, occur in shales in the Marble Mountains and in the limestones of the Providence Mountains. Limestones at Clark Mountain and in the Victorville and Oro Grande areas contain abundant remains of invertebrate corals, brachiopods, and gastropods.</td>
</tr>
<tr>
<td>Mesozoic Era (245 to 65 million years ago)</td>
<td>Dinosaurs</td>
<td>The only known tracks of dinosaurs in California are found in San Bernardino County. They are approximately 180 million years old. Cajon Pass contains the fossil remains of mosasaurs and elasmosaurs, giant marine reptiles that lived during the Cretaceous Period at the end of the Mesozoic Era.</td>
</tr>
<tr>
<td>Cenozoic Era (65 million years to Present):</td>
<td>Mammals</td>
<td>Many vertebrate fossils are known from the Cenozoic Era in San Bernardino County. They are particularly important in that they give information about the timing of faults, which relate directly to today’s landforms</td>
</tr>
<tr>
<td>Tertiary Period (65 to 2 million years)</td>
<td></td>
<td>The Cady Mountains in San Bernardino County contain the earliest Tertiary vertebrate fossils known in the Mojave Desert, at 26 million years old.</td>
</tr>
<tr>
<td>Oligocene (34 million years to 24 million years)</td>
<td></td>
<td>This is the type locality of the Barstovian Land Mammal Age from 17 to 13 million years old. This formation extends to the Yermo (Toomey) Hills and east toward Baker, and fossils are found throughout exposures of the Barstow Formation. These animals include extinct camels, three-toed horses, primitive elephants called “gompotheres”, giant bear-dogs, and very important small vertebrate fossils including rodents, which allow precise dating of the rock units.</td>
</tr>
<tr>
<td>Miocene (24 million years to 5 million years)</td>
<td></td>
<td>Plio-Pleistocene fossils, including extinct elephants and rodents, which allow the dating of activity along the San Jacinto fault and the San Andreas fault at the start of the early Pleistocene.</td>
</tr>
</tbody>
</table>
F. GEOLOGY AND SOILS

1. SETTING

San Bernardino County has very diverse geology, topography and physiography that affect the suitability of a site for various types of existing and potential future land uses. The Safety Background Report (2005) describes the geologic setting and seismic and non-seismic geologic hazards within the County that can impact land use. There are three primary physiographic regions in the County as used throughout this FEIR. The Valley Region consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana Valley and Chino Hills. The Mountain Region includes the eastern San Gabriel Mountains and San Bernardino Mountains. The Desert Region is the area east and north of the Mountain Region and includes mountains and valleys within the Mojave Desert, Basin and Range and a portion of the Lower Colorado physiographic provinces. A general discussion of the types of geologic and seismic hazards present within the County is presented below and the reader is referred to Section 7 Safety Background Report (2005), proposed as part of this project, for additional details and maps showing the areas susceptible to potentially significant geologic and seismic hazards. Mountain areas of the Desert region may be susceptible to landslides, particularly associated with large earthquakes. Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur. Fragile desert pavements and biological crusts also occur in currently undisturbed portions of the Desert region. Currently, agricultural use of soils in the Desert region is generally limited by available water, and some areas have highly alkaline soils and playas that are unsuitable for agricultural use. Fallow or abandoned agricultural fields often lead to unstable surfaces that are subject to wind erosion that can lead to fugitive dust or even small dune formations that cause other indirect effects such as property damage and over-covering of native vegetation.

Soils are surficial geologic materials that form as a result of weathering, erosion and depositional processes at the ground surface and shallow subsurface, and are also a function of the slope of the ground surface and nature and type of underlying geologic materials (e.g., alluvial sand, volcanic rock, etc.). The type of soils that are suitable for agriculture, urban development, and native habitats are described and shown on maps in the Section 6 of the Conservation Background Report (2005). The primary focus of the County’s General Plan is to identify, protect and preserve soils suitable for agriculture. Other goals are to minimize land uses which cause wind and water erosion of soils that can impact surface water and air quality. Soil properties are also important for septic systems or other alternative wastewater disposal systems in areas without sanitary sewers.

There are at least 46 active or potentially active faults within or near the County with the potential to create a magnitude earthquake of 3.7 or greater up to approximately magnitude 7.5-8.0 (Table 7-1 in Safety Background Report). There is also an extensive history of large, damaging earthquakes occurring within the County ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). Paleoseismic studies of several major faults within the County have identified average recurrence intervals for large earthquakes on individual faults or fault segments that range from approximately 105 years on the San Andreas Fault near Wrightwood to several thousand years or more on faults in the Eastern Mojave Desert. In addition to strong ground shaking from earthquakes on faults located within the County, large earthquakes on faults near the County boundaries also have and will impact property within the County. Many of
the other potential geologic hazards in the County are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, seismically induced landslides, and the potential for seiches to occur within lakes and reservoirs. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by more remote earthquakes up to several tens of kilometers from a site. Earthquake hazards are greatest in the western portion of the County, but occur throughout all three regions.

Landslides and mudflow hazards exist throughout the County, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other causes. The potential for landslide hazards to impact life and/or property is greatest in the Mountain Region and Chino Hills in the Valley Region of the County. Other less-common non-seismic geologic hazards include volcanic hazards and expansive or collapsible soils.

High wind conditions and stormwater runoff can cause significant soil erosion. Aside from natural wind and water erosion in the County, disturbing desert pavement or topsoil by grading or use of off-road vehicles, and increased stormwater runoff volumes and intensity associated with paved surfaces and areas with less vegetation due to development also cause increased susceptibility of soil to erosion. Areas denuded of vegetation by fires are also highly susceptible to significant increased erosion during subsequent rainstorms until sufficient vegetation is re-established. Debris flows are a type of post-wildfire event that has come to be referred to as mudflows due to the heavy sediment load that is typically carried down steep slopes in defined channels. The flows may originate from mass wasting due to landslides and accumulated soil and rock from in-channel sediment and from extensive bank erosion as the flow moves down gradient. These flows typically accumulate debris in the form of rock, boulders, logs and so on that are carried by the energy of the flow. They are part of the commonly referred to fire/flood cycle that occurs in the mountain foothills in southern California. These events are triggered by heavy rainfall during the winter months following intensive wildfires in late summer and fall that denude the hillsides of vegetation leading to rapid water runoff.

**a) Valley Region**

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and the Cucamonga faults and close proximity to other major faults make the Valley Region of the County have the greatest risk for potential geological hazards.

Artesian groundwater conditions exist along the San Jacinto fault in the Bunker Hill Water Basin where ground water pools up behind the fault and rises towards the surface. These high ground water levels create increased potential for soil liquefaction to occur during an earthquake. Other problems caused by artesian ground water conditions include flooded basements, buckling streets, and damage to concrete-lined flood control channels.

Soils most suitable for agriculture are present in the Valley Region but these soils are also suitable for urban development.
b) Mountain Region

Like the Valley Region, earthquakes are the major geologic hazard for the Mountain Region. Major faults in or directly adjacent to the Mountain Region are the San Andreas, the San Jacinto, the North Frontal, and the Cucamonga faults. Both the San Andreas and San Jacinto faults have generated large (magnitude 6 or greater) earthquakes historically. The Mountain Region has the greatest potential for landslides such as the one that affected homes in the Rimforest community in 1992 as well as water erosion due to the steep slopes and higher precipitation than the Valley or Desert regions. Rock falls are also well known hazards in the Forest Falls area.

c) Desert Region

Prominent active faults in the Desert region include the San Andreas, the Garlock, the Buillon-Lavic Lake Kickapoo (source of the 1999 Hector Mine magnitude 7.1 earthquake), and the Camp Rock-Emerson-Johnson Valley-Landers faults (source of the 1992 Landers magnitude 7.3 earthquake). In addition to strong ground shaking the 1993 and 1999 earthquakes caused significant surface fault rupture. There are several other faults with similar characteristics that could generate similar earthquakes to the 1993 and 1999 events.

Mountainous areas of the Desert region may be susceptible to landslides, particularly associated with large earthquakes. Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur. Currently, agricultural use of soils in the Desert region is generally limited by available water, and some areas have highly alkaline soils and playas that are unsuitable for agricultural uses.

2. Significance Criteria

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Geology and Soils, if the project would cause any of the following effects:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault zoning Map issued by the state Geologist for the area or based on other substantial evidence of a known fault.
  - Strong seismic ground shaking.
  - Seismic-related ground failure, including liquefaction.
  - Landslides.
- Result in substantial soil erosion or loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
CHAPTER IV  

Project Analysis

- Be located on expansive soil, as defined in Table 18 1-B of the California Building Code (2001), creating substantial risks to life or property.

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

3. Impact Analysis

Impact GEO-1
Virtually the entire County is potentially subject to some level of strong seismic ground shaking with potential levels being greatest in the western portion of the County and at sites in close proximity to a known earthquake (i.e., active) or potentially active fault. The presence or absence of other potential hazards and presence of poor or erosion susceptible soil conditions would be assessed on a site-specific basis. Potential hazards associated with landslides (both seismic and non-seismic) are limited to sites situated on and near the crest and base of slopes. Liquefaction susceptible sites are limited to areas of the County underlain by loose, unconsolidated granular soils and shallow groundwater (typically 50 feet or less below ground surface). Grading on slopes and ridgelines results in impacts to the topography and increase the likelihood of erosion.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact GEO-2
For some sites, the existing County Hazard Overlay Maps and General Plan are sufficient to assess whether significant impacts associated with geology or soil conditions are likely or whether additional site-specific study and investigation is warranted. The General Plan Update addresses these issues with current goals and policies. In the proposed project, the Update maps, policies and development requirements, are consistent with newer data, standards of practice, and state regulations.

This impact can be mitigated to a level below significance through the adoption of certain measures presented in Section 4, below.

Impact GEO-3
The goals, policies, and programs minimize topographic alteration; however, significant impacts to the topography will occur at locations where grading and filling are allowed as part of a development within the provisions of the General Plan. These would be most significant on hillsides.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. Mitigation Measures

The following mitigation measures will help reduce soil and geology impacts created by the proposed project.


**Mitigation GEO-1**
Use the requirements of the California Building Code to reduce the adverse effects on life and property by properly designing and constructing structures to withstand damage from severe seismic shaking.

**Mitigation GEO-2**
Enhance the mitigation of potential geologic hazards to new development by adding the requirements for evaluation of seiche and adverse soils conditions to the Geologic Hazards Overlay.

**Mitigation GEO-3**
Assess and mitigate the potential impacts of adverse soils conditions posed by hydro-collapsible, expandable, corrosive and other adverse soils that may be found in certain locations in the County, such as desert and mountain playas, fault zones and other special geologic features through the application of the provisions of the Geologic Hazard Overlay.

**Mitigation GEO-4**
Within the County’s Development Code, one overlay district has been established relating specifically to protect County citizens from geological hazards. These areas are designated Geologic Hazard “GH” Overlay District which identifies areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall and liquefaction. This District operates as follows below.

82.17.010 - Purpose

*The Geologic Hazard (GH) overlay established by Sections 82.01.020 (Land Use Plan and Districts) and 82.01.030 (Overlays) is created to provide greater public safety by establishing investigation requirements for areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall, liquefaction, seiche, and adverse soil conditions.*

82.17.020 - Location Requirements

*The GH overlay district shall be designated:*

A. *In areas that are adjacent to active earthquake fault traces. In these cases, the overlay district shall adopt the boundaries of the Alquist-Priolo Earthquake Fault Zoning Act;*

B. *In areas where landslides, debris flows, rockfall or other slope instabilities occur; and*

C. *In areas where liquefaction of the soil or seiche is associated with earthquake activity.*

D. *In areas of adverse soil conditions, such as hydrocollapsible, expansive, corrosive, etc.*

82.17.030 - Geology Reports

*A detailed geologic study prepared by a California Professional Geologist shall be submitted with all land use applications and development permits proposed within the GH overlay district that would lead to the construction of roads or structures or the subdivision of land.*
A. Report contents.

1. Areas of faulting. In areas of the GH overlay district where faulting is a concern, the geologic report shall confirm the presence or absence of active faults and, if applicable, shall establish appropriate construction setbacks from active faulting.

2. Areas of slope stability. In areas of the GH overlay district where slope stability is a concern, the geologic report shall evaluate landslides and other slope instabilities that could affect the project and, if applicable, shall include recommendations for mitigation.

3. Areas of liquefaction. In areas of the Geologic Hazard Overlay District where liquefaction is a concern, the geologic report shall evaluate the potential for liquefaction based upon anticipated ground shaking, historic groundwater levels and character of the alluvial materials. If the investigation determines that a potential for liquefaction exists, a geotechnical investigation may be required.

B. Exemptions from report requirements. Exemptions to the requirement for a geologic study include:

1. One single-family wood or steel frame dwelling not exceeding two stories unless the proposed dwelling falls within the boundaries of any mapped landslide as shown on the Geologic Hazard Overlay maps.

2. Single-family wood frame or steel dwellings located within a subdivision of land for which a geologic report was prepared and approved;

3. A non-habitable structure that is accessory to a residential use that is not physically connected to the principal structure; and

4. Alterations or additions to any structure where the value or area does not exceed 50 fifty percent of the structure.

Mitigation GEO-5

The County Development Code, updated as a program component to the General Plan Update, includes new hillside grading standards at Section 83.08. The purpose and
applicability are listed below, refer the Development Code to view the full text of the standards. The application of the prescribed standards will reduce the potential impacts of grading on hillside terrain.

83.08.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(a) Facilitate appropriate hillside development through standards and guidelines for hillside areas.

(b) Ensure that development in the hillside areas is designed to fit the existing landform.

(c) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(d) Provide a safe means of ingress and egress for pedestrian and vehicular traffic to and within hillside areas.

(e) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., land form, scenic quality, slopes, and vegetation).

(f) Encourage the planning, design, and development of sites that provide maximum safety with respect to fire hazards, exposure to geological hazards, drainage, erosion and siltation, and materials of construction; provide the best use of natural terrain; and to discourage development that will create or increase fire, flood, slide, or other safety hazards to public health, welfare, and safety.

83.08.020 – Applicability

(a) Slope gradient of 15 percent or greater. The standards contained in this Chapter apply to all uses and structures within areas having a natural slope gradient of 15 percent or greater over the area and requiring a Grading Permit. For the purpose of this Chapter, slope shall be computed as set forth in Section 83.08.040(c) for the area being graded before grading is commenced, as determined from a topographic map having a scale of not less than one inch equals 100 feet and a contour interval of not more than five feet.

(b) Site conditions requiring Hillside Grading Review. If any one of the following thresholds applies on a particular site meeting the criteria set forth in subsection (a) above, a full analysis and compliance with this Chapter shall be required and a Hillside Grading Review shall be conducted in compliance with Section 83.08.030 (Hillside Grading Review):

   (1) The volume of proposed grading is more than 500 cubic yards.

   (2) If the proposed cut or fill slopes greater than 15 feet in height will be visible and exposed to permanent public view or will be adjacent to designated open space or public lands.

   (3) The width of proposed cut or fill slopes is greater than 75 feet.

   (4) The area of proposed disturbance is more than 50 percent of the site area, or the proposed disturbed area exceeds 10,000 square feet, whichever is less.

5. **SIGNIFICANT UNMITIGATED IMPACTS**

   There are none.
G. HAZARDS AND HAZARDOUS MATERIALS

1. SETTING

Hazards

Aviation Activities

The San Bernardino County Department of Airports provides for the management, maintenance, and operation of six County-owned airports (i.e., Apple Valley, Chino, Barstow-Daggett, Needles, Twentynine Palms, and Baker). The department also assists the County’s private and municipal airport operators in the planning, interpretation, and implementation of the Federal Aviation Administration (FAA) general aviation requirements.

Rather than establish an Airport Land Use Commission, the San Bernardino County Board of Supervisors designated the County Planning Department as the agency with the responsibility for airport land use review and the Airport Mediation Board as the dispute mediator. Each airport within the County must prepare land use standards and incorporate them into an Airport Comprehensive Land Use Plan (ACLUP), which would be adopted by the County of San Bernardino and approved by the State Division of Aeronautics.

The following 15 public use airports (see Table IV-G-1) within San Bernardino County have ACLUP documents which may be viewed at the following website: http://www.co.san-bernardino.ca.us/landuseservices/ACLUPs/Default.asp.

<table>
<thead>
<tr>
<th>Public Use Airports in San Bernardino County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Valley</td>
</tr>
<tr>
<td>Baker</td>
</tr>
<tr>
<td>Barstow-Daggett</td>
</tr>
<tr>
<td>Big Bear City</td>
</tr>
<tr>
<td>Cable</td>
</tr>
<tr>
<td>Chino</td>
</tr>
<tr>
<td>Hesperia</td>
</tr>
<tr>
<td>Hi-Desert</td>
</tr>
<tr>
<td>Needles</td>
</tr>
<tr>
<td>Redlands</td>
</tr>
<tr>
<td>Rialto</td>
</tr>
<tr>
<td>Sun Hill Ranch</td>
</tr>
<tr>
<td>Southern California Logistics</td>
</tr>
<tr>
<td>Twentynine Palms</td>
</tr>
<tr>
<td>Yucca Valley</td>
</tr>
</tbody>
</table>

There are four military bases located within San Bernardino County, including a portion of Edwards Air Force Base, Twentynine Palms Marine Corps Air Ground Combat Training Center, Fort Irwin, and a portion of the China Lake Naval Weapons Center. Of these, only Twentynine Palms and Fort Irwin (Bicycle Lake Army Airfield/National Guard) have airfields within the County.

Wildland Fires

There are two distinct components of the fire issue: wildland fires and urban fires. Wildland fires can be naturally caused (e.g., by lightning) or caused by man. Urban fires are almost exclusively a man-made hazard. The urban-wildland interface forms a third, less distinct
component, where the natural and urban components merge. Wildland fires are also known as brush or forest fires. Although wildfires often start in remote areas, wildland fires are capable of causing extensive damage due to extensive urban interface.

The San Bernardino County Fire Department provides the administration and support for 32 fire districts, and serves over 16,000 square miles of unincorporated area and five cities (i.e., Adelanto, Fontana, Grand Terrace, Needles and Yucca Valley). The San Bernardino County Fire Department has 63 fire stations, and provides services through four divisions: Mountain Division, North Desert Division, South Desert Division and Valley Division. The San Bernardino County Fire Department is a full service, regional fire and emergency medical service agency; however, the department has numerous automatic and mutual aid agreements with local, state and federal jurisdictions for use and assignment of resources in the event of major emergencies.

In addition to the San Bernardino County Fire Department stations, there are nearly 50 fire stations including USFS and California Department of Forestry and Fire Protection stations within the County of San Bernardino and within city jurisdictions.

The California Fire Plan is a comprehensive plan for wildland fire protection in the state. The Plan is a cooperative effort between the State Board of Forestry and the California Department of Forestry and Fire Protection.

The basic principles of the Fire Plan are to:

- Involve the Community;
- Assess Community Risk; and
- Develop Solutions and Implement Projects.

As an integral part of the California Fire Plan, prefire management focuses on taking action before fires occur. Projects are designed and implemented to reduce the frequency, severity, and size of wildfires, and associated losses and costs:

- Fuel breaks to stop wildfires;
- Wildfire Protection Zones to buffer communities;
- Forest stewardship for healthy forests;
- Prescribed fire to reduce fire fuels;
- Defensible space for homes and firefighters; and
- Fire safe landscaping.

Hazardous Materials

Definition

A hazardous material is defined as “any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.” Thus, the term hazardous material is a broad term for all substances that may be hazardous, specifically including hazardous substances and hazardous waste. Substances
that are flammable, corrosive, reactive, oxidizers, radioactive, combustible, or toxic are considered hazardous.

Key Regulatory Agencies and their Authority

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) administer the requirements of the Clean Water Act (reducing direct pollutant discharges into waterways adversely affecting water quality).

The Department of Toxic Substances Control administers the Resource Conservation and Recovery Act (RCRA) program (defines hazardous waste, enforces requirements on treatment, storage and disposal facilities, and oversees a cradle-to-grave tracking system).

The Hazardous Substances Highway Spill Containment Act gives the California Highway Patrol (CHP) the authority to respond to spills of hazardous materials on the state’s highway system.

The San Bernardino County Fire Department – Hazardous Materials Division is the local agency responsible for the enforcement of a variety of hazardous materials management requirements. They are the state designated Certified Unified Program Agency (CUPA) for the County of San Bernardino (excluding the City of Victorville). The purpose of the CUPA program is to provide a comprehensive approach to reduce the overlapping and sometimes conflicting requirements of different governmental agencies. The CUPA provides consolidation and consistency in reporting requirements, permit formats, inspection criteria, enforcement standards, and fees for various hazardous materials programs. The CUPA is required by state law to maintain a list of facilities within the County that are known to use, store, and/or generate hazardous materials/wastes. Facilities that handle hazardous materials or generate hazardous waste must obtain a permit from the CUPA. The San Bernardino County Fire Department manages six hazardous material and hazardous waste programs:

- California Accidental Release Program.
- Underground Storage Tanks (USTs).
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasure (SPCC).
- Hazardous Waste Generation and Onsite Treatment.

Hazardous Materials – Facility Siting

According to “EnviroFacts” a U.S. EPA database, Table IV-G-2 below, presents a summary of the known hazardous waste facilities in the County of San Bernardino.
### Table IV-G-2. Known Hazardous Waste Activities in San Bernardino

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities that produce and release air pollutants</td>
<td>206</td>
</tr>
<tr>
<td>Facilities that reported toxic releases</td>
<td>249</td>
</tr>
<tr>
<td>Facilities that have reported hazardous waste activities</td>
<td>2398</td>
</tr>
<tr>
<td>Large quantity generators</td>
<td>291</td>
</tr>
<tr>
<td>Small quantity generators</td>
<td>1780</td>
</tr>
<tr>
<td>Transporters</td>
<td>162</td>
</tr>
<tr>
<td>Treatment, Storage and Disposal Facilities</td>
<td>22</td>
</tr>
<tr>
<td>Potential hazardous waste sites that are part of Superfund program</td>
<td>55</td>
</tr>
<tr>
<td>Sites currently on the Final National Priorities List</td>
<td>4</td>
</tr>
<tr>
<td>Sites not on the National Priorities List</td>
<td>51</td>
</tr>
<tr>
<td>Facilities that generate hazardous waste from large quantity generators</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: EPA Envirofacts (www.epa.gov/enviro, quick search San Bernardino, CA, Dec 2005)

In San Bernardino County, as of January 1, 2006, there are 55 potential hazardous waste sites that have been listed under the Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Within this program, there is a National Priorities List, made up of four hazardous waste sites that have been assigned the highest cleanup priority. These four National Priorities List sites are:

- Marine Corps Logistics Base in Barstow;
- George Air Force Base in Victorville;
- Newmark Groundwater Contamination in San Bernardino; and
- Norton Air Force Base in San Bernardino.

Based on information provided by the San Bernardino County Fire Department, Hazardous Materials Division, as the CUPA for the County they hold approximately 6,500 permits with businesses throughout the County for various hazardous materials and hazardous waste activities. This number is a general figure based on known permit holders and can vary as businesses modify their activities.

### Hazardous Materials Transportation

The Hazardous Materials Transportation Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation (DOT), the Federal Highway Administration, and the Federal Railroad Administration. The Hazardous Materials Transportation Act requires that carriers report accidental releases of hazardous materials to the DOT at the earliest practical moment (49 Code of Federal Regulations [CFR] Subchapter C). Incidents that must be reported include deaths, injuries requiring hospitalization, and property damage exceeding $50,000. Caltrans sets standards for trucks in California. The regulations are enforced by the CHP.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of their business in the delivery of hazardous materials.
Under the RCRA, the EPA sets standards for transporters of hazardous waste. In addition, California regulates the transportation of hazardous waste originating or passing through the state; state regulations are contained in the California Code of Regulations (CCR), Title 13. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

The CHP and Caltrans have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. The CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identifications teams at locations throughout the state.

Hazardous Materials Emergency Response

The Office of Emergency Services (OES) coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state’s readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response, and recovery efforts. During major emergencies, OES may call upon all state agencies to help provide support. Due to their expertise, the California National Guard, CHP, Department of Forestry and Fire Protection, Conservation Corps, Department of Social Services, and the Caltrans are the agencies most often asked to respond and assist in emergency response activities.

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop “area plans” for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification, coordination of affected government agencies and responsible parties, training, and follow-up.

The California Hazardous Materials Incident Reporting System is a post incident reporting system to collect data on incidents involving the accidental release of hazardous materials. Information on accidental releases of hazardous materials are reported to and maintained by OES.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a project could have a significant impact on Hazards and Hazardous Materials, if the project would cause any of the following effects:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
• Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

• Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

• Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

• For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

• For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

• Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

• Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3. IMPACT ANALYSIS

The following impact analysis discussion will compare the proposed project against the specific significance criteria outlined in Section 2 above and explain whether or not the project may result in a significant adverse environmental effect.

Impact HAZ-1
Future growth and development generated from implementation of the 2007 General Plan will result in projects which will generate hazardous wastes to or from the project site.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact HAZ-2
There is a strong connection between health risk and the proximity of the source of air pollution. Local jurisdictions have the responsibility for determining land use compatibility for sensitive receptors. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to poor air quality such as hazardous emissions. The following are land uses where sensitive receptors are typically located: schools, playgrounds and childcare centers; long-term health care facilities; rehabilitation centers; convalescent centers; hospitals; retirement homes; and residences.

There are no specific provisions in the Plan Update that directly creates a new source that emits hazardous emissions, or handles hazardous materials, waste or substances within one-quarter mile of an existing or proposed school. In fact, the San Bernardino County General Plan Update can be a very effective tool to minimize the siting of any facilities that handle, use, store, transport or emit hazardous materials, substances or waste. Project reviews should identify both projects that have a direct probability of pollution-related emissions and projects that may be affected by existing (e.g., upwind) sources. The CARB developed an Air Quality
and Land Use Handbook: A Community Health Perspective, which provides advisory recommendations for siting new sensitive land uses in proximity to sources which may pose a potential health risk. Table IV-G-3 outlines these recommendations.

### Table IV-G-3. Recommendations on Siting New Sensitive Land Uses

<table>
<thead>
<tr>
<th>Source Category</th>
<th>Advisory Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeways and high-traffic roads</td>
<td>• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.</td>
</tr>
</tbody>
</table>
| Distribution centers | • Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU operations exceed 300 hours per week).  
  • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points. |
| Rail yards | • Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.  
  • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches. |
| Ports | • Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks. |
| Refineries | • Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation. |
| Chrome Platers | • Avoid siting new sensitive land uses within 1,000 feet of a chrome plater. |
| Dry cleaners using perchloroethylene | • Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district.  
  • Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations. |
| Gasoline dispensing facilities | • Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities. |

Source: Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, CalEPA, CARB, Table 1-1, Page 4.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

**Impact HAZ-3**

Government Code Section 65962.5 typically refers to a list of facilities that may be subject to RCRA permits. As previously stated, there are numerous existing facilities within the County that hold RCRA permits to engage in certain aspects of operations involving hazardous waste generation. There are no specific provisions in the San Bernardino County General Plan Update that directly require the siting of any new RCRA facilities, or modification of existing facilities. Any new hazardous waste operations coming into the County or modifications of existing facilities will, however, be required to comply with the Plan goals, policies and objectives, as well as all local, state and federal laws, regulations and programs related to hazardous waste generation activities.
Impact HAZ-4
Development of land uses allowed by the Update of the General Plan could potentially impact airspace required for safe aircraft operations. New development allowed by the General Plan could also be incompatible with existing or new airports exposing people and property on the ground to crash hazards associated with aircraft operations.

The two basic components of airport safety include the safety of those in the aircraft and the safety of those on the ground. The first involves the protection of airspace required for safe aircraft operations. The second deals with compatibility of surrounding land uses in terms of exposing people and property on the ground to crash hazards associated with aircraft operations.

Impact HAZ-5
Pursuant to the Emergency Services Act, the state has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government agencies and private persons. Response to hazardous materials incidents is one part of this plan. The Plan is administered by the OES, which coordinates the responses of other appropriate agencies.

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop “area plans” for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification, coordination of affected government agencies and responsible parties, training, and follow-up.

Further, the Hazardous Materials Division of the San Bernardino County Fire Department works in conjunction with city and County firefighters to respond to hazardous materials incidents, assists the District Attorney in the investigation of environmental crimes, and responds to illegal waste disposal complaints.

A primary Board of Forestry responsibility is set forth in Public Resources Code Section 4130, which directs the Board to classify all lands within state responsibility areas (SRAs) based on cover, beneficial water uses, probable erosion damage and fire risks and hazards; to determine the intensity of protection to be given each type of wildland; and to prepare a fire plan to assure adequate statewide fire protection so that lands of each type be assigned the same intensity of protection. The Board’s approach to assessing and ensuring wildland fire protection is the California Fire Plan.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.
**Impact HAZ-6**

Development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas. Even if structures are built with the most current fire-safe building techniques and standards, these structures may be damaged or destroyed during major wildland fire conflagrations. People occupying these structures during a wildland fire will also be subject to injury or death.

The majority of catastrophic wildland fires occur in the mountain region and impact both mountain and foothill communities. The desert-mountain interface areas of the county, from Pinon Hills easterly to southern Hesperia, south Apple Valley and on to Yucca and Morongo Valleys, also has a history of substantial property loss from wildland fires caused by heavy shrub and grass growth in and around rural residential areas.

Certain areas in the County are more susceptible to wildland fire risks and hazards due to: (1) the rugged terrain; (2) the types and amounts of vegetation; (3) pathogen infestation that leads to vegetation die-off; (4) climatic factors; and (5) the presence of people and development.

San Bernardino County has a history of significant wildland fires. In recent history, the Bear Fire burned over 50,000 acres in late 1970 and the Panorama Fire a decade later burned approximately 23,000 acres. The Panorama Fire of 1980, sparked in Waterman Canyon, was fueled by 100 mph Santa Ana winds. Development within the City of San Bernardino at the base of the foothills suffered the greatest damage. Neighborhoods in the North Park and Verdemont areas west of Waterman Canyon were especially hard hit. In 2003, the Old Fire and Grand Prix Fire began on different days and eventually joined and combined to burn over 160,000 acres. Over 1,100 homes were destroyed at a cost of almost 50 million dollars. Extensive damage occurred in the Del Rosa area of San Bernardino at the base of the foothills easterly of Waterman Canyon. The Old Fire and Grand Prix Fire, along with other fires during that same October, 2003 weekend, has been one of the most significant fire events in southern California history. The Old Fire was the first major fires in recent history to cause extensive damage to structures in the mountain top communities of the San Bernardino Mountains. The mountain community of Cedar Glen, near Lake Arrowhead, was particularly hard hit by a fire storm that caused extensive loss of property.

Following the 1980 Panorama Fire, several agencies, cities and the County formed a taskforce that prepared the Foothill Communities Protective Greenbelt Program. This program included recommendations that called for a variety of firesafe measures for residential development and individual building standards. These measures were adopted by the County as fire safety standards and were transformed into a Fire Safety Overlay in the 1989 General Plan. After the fires of 2003, the County made further safety improvements in the Fire Safety Overlay. These standards are carried forward in the Development Code Update that is part of the overall General Plan Update Program addressed in this EIR.

*Despite the imposition of certain mitigation measures presented in Section 4 below, the impact cannot be mitigated to a level below significance.*

**4. Mitigation Measures**

By incorporating the following policies into all future proposed projects brought before the County for review and approval, potential adverse impacts to hazardous materials can be reduced or mitigated to a level of non-significance.
Mitigation HAZ-1
The County shall promote the proper handling, storage, transportation and disposal of hazardous materials and hazardous wastes through implementing a variety of regulatory, technical oversight, emergency, and waste management services. These programs are effective mechanisms for reducing the potential impact to the public health and safety and the environment.

Mitigation HAZ-2
The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.

Mitigation HAZ-3
The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.

Mitigation HAZ-4
The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.

Mitigation HAZ-5
The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.

Mitigation HAZ-6
The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.

Mitigation HAZ-7
The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.

Mitigation HAZ-8
The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.

Mitigation HAZ-9
The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.

Mitigation HAZ-10
The County shall use the County’s Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.
Mitigation HAZ-11
The County shall ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated, in accordance with all applicable local, state and federal laws, regulations.

Mitigation HAZ-12
The County shall protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses, in accordance with all applicable local, state and federal laws, regulations and policies.

Mitigation HAZ-13
The County shall include extensive public participation in the County’s application review process for siting specified hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety, and the environment, in accordance with all applicable local, state and federal laws, regulations and policies.

Mitigation HAZ-14
The County shall require a conditional use permit/site approval and a Land Use/Zoning Amendment from applicants for specified hazardous waste facilities. The applicant shall meet all provisions of the specified hazardous waste facility overlay district as well as other General Plan and Development Code provisions.

Mitigation HAZ-15
The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses (see Table IV-G-3), as recommended in CARB’s Air Quality and Land Use Handbook: A Community Health Perspective.

Mitigation HAZ-16
For all proposed development in the County, the County shall require the review of any and all ACLUP within proximity of the development to determine land use compatibility, thereby minimizing [mitigating] any potential hazards to airport operations, people and property.

Mitigation HAZ-17
Within the County’s Development Code, one overlay district has been established relating specifically to siting hazardous waste facilities in areas that protect the public health, safety, welfare and the environment. This zone also buffers hazardous waste facilities so that incompatible land uses cannot be permitted in the future. The zone also identifies permitted used, within the overlay zone and outlines the applicable permit review procedures. This zone operates as outlined below.

82.18.020 – Location Requirements
A. The Hazardous Waste Overlay District shall be applied to areas where a Hazardous Waste Facility is being approved concurrently.

B. The Hazardous Waste Overlay District may most appropriately be located in the following land use zoning districts:

(1) Resource Conservation (RC) for land disposal and incineration facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.
(2) Regional Industrial (IR) for treatment, incineration, recycling, storage and transfer facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.

C. Siting Criteria for Hazardous Waste Facilities: Refer to policies in the Safety Element of the General Plan or to Table 5-2 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.

D. A Risk Assessment evaluating a proposal for a Hazardous Waste Facility shall determine the appropriate location for the overlay district for the facility.

82.18.020 – Development Standards

A. Review procedures include State and County processes. The types of applications required for local evaluation of a specified hazardous waste facility proposal include both discretionary and ministerial permits. The required permits or processes include:

(1) A General Plan Amendment to apply the HW overlay district to the proposed site and respective buffer.

(2) A Conditional Use Permit in compliance with Chapter 88.06 (Conditional Use Permit and Minor Use Permit).

(3) A Special Use Permit issued by the San Bernardino County Fire Department, which shall be required as a condition of approval of the Conditional Use Permit.

(4) Ministerial Permits from the Building and Safety Division for building, grading, flood control, etc.

For a complete discussion of the local application review process, refer to Section 5.3.3 and Table 5-4 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.

B. Compatible land uses. The following list of use classifications may be compatible with a hazardous waste facility depending on the risk assessment and are allowed within a HW overlay district.

(1) Contract/Construction Services.

(2) Manufacturing Operations I & II.

(3) Open Lot Services I & II.

(4) Repair Services I, II & III.

(5) Salvage Services I and II.

(6) Transportation Services I & II.

(7) Wholesale/Warehouse Services I & II.

C. Prohibited land uses. The following uses are specifically prohibited from the HW Overlay District:

(1) Agricultural uses of any type.

(2) Residential uses of any type.

(3) Facilities with a high concentration of people/immobile population, including schools, hospitals, auditoriums, amphitheaters, jails, etc.
Mitigation HAZ-18
The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County’s Development Code, Chapter 82.13, shall be strictly enforced. New development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.

Mitigation HAZ-19
Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies being developed by the U.S. Geological Survey and other federal agencies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement feasible advance public notification methods to warn of impending hazardous conditions.

Mitigation HAZ-20
The Office of Emergency Service (OES)s, County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

5. **SIGNIFICANT UNMITIGATED IMPACTS**

Development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas. Even if structures are built with the most current fire-safe building techniques and standards, these structures may be damaged or destroyed during a wildland fire. People occupying these structures during a wildland fire will also be subject to injury or death.
CHAPTER IV

H. HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY

1. SETTING

Hydrology/Flooding

Existing Watersheds

A watershed is the area or region from which surface water flows to a particular water body. Three different Regional Water Quality Control Boards (RWQCB) cover the County: the Santa Ana Region, Lahontan Region and Colorado River Region. The most important element for the economic survival of San Bernardino County is the availability, beneficial use, and conservation of its water. Some of the main water features (including lakes and rivers) in the three regions of the County are shown in Figures 6-13A through 6-13C of the Conservation Background Report.

Federal Emergency Management Agency (FEMA)

FEMA provides a majority of the flood hazard mapping in the County. The most common means of planning to avoid or at least mitigate flood damage is participation in the Natural Flood Insurance Program (NFIP). FEMA administers the program, which makes flood insurance available to those communities that have enacted local ordinances restricting development within the 100-year floodplain. The local floodplain ordinances must meet or exceed FEMA’s regulations. As part of NFIP, FEMA prepares a Flood Insurance Rate Map delineating the theoretical boundaries of the 100-year floodplain (i.e., the area within which the statistical frequency of flooding is believed to be 1 in 100 in any given year). These maps form the basis for regulating floodplain development and the rating of flood insurance policies.

Water quality issues are becoming increasingly significant throughout the state as well as the County. Improved monitoring techniques have revealed the presence of man-made chemicals and their residues, as well as naturally occurring toxic chemicals, in most of the state's surface and ground waters. Overdraft of aquifers in the arid southwest is known to be a significant contributor to degradation of groundwater quality. In an effort to address water quality issues as they relate to water resources in the county, one must consider groundwater, imported water, recycled water, and surface water as well as degradation of water quality caused by stormwater runoff and various waste and chemical products. One such issue for the County is the presence of high levels Total Dissolved Solids (TDS).

Increases in groundwater TDS are a function of the recharge of saline water originating from storm flows, urban runoff, imported water, and incidental recharge. TDS are also attributed in part to salt contamination from past and existing agricultural and land uses. The TDS impacts of agriculture on groundwater usually originate from fertilizer use on crops, consumptive use, and dairy waste disposal. On an annual basis, the total amount of TDS from manure discharged to the southern half of the Basin that will reach groundwater averages about 29,000 tons (SAWPA 2002).

The Chino Basin Watershed covers approximately 405 square miles. Surface drainage is generally southward, from the San Gabriel Mountains toward the Santa Ana River and Prado Flood Control Basin (RWQCB Santa Ana Region 2002). Although originally developed as an agricultural area, the watershed is being steadily urbanized. The principal remaining
agricultural area is the Chino Dairy Preserve. Located in the south-central part of the watershed, the Preserve contains approximately 340,000 cows, which generate the waste equivalent of more than two million people. Since the Preserve is unsewered, dairy operations have significantly affected the quality of the water resources in the area.

The responsibilities of cities and counties participating in NFIP include requiring that all new construction have its lowest floor elevated to or above the “base flood elevation” (this is calculated in conjunction with the 100-year floodplain delineation) and keeping records of development occurring within the designated floodplain. Under federal law, flood insurance must be purchased when obtaining a federally backed loan for a home within the Flood Insurance Rate Maps 100-year floodplain. The availability of other federal funds also may be affected by participation in NFIP. The city or County must submit a biennial report to FEMA describing any changes in the community’s flood hazard area, development activities that have taken place within the floodplain, and the number of floodplain residents and structures. The County is a participant in the NFIP. FEMA Flood Insurance Rate Maps for the County are shown in Figures 7-6a and 7-6b of the Safety Background Report.

Flooding is a serious hazard in San Bernardino County. Flooding is known to occur on the Santa Ana River, San Timoteo Creek, Snow Creek, and Rattlesnake Creek. Wildfires can increase flooding hazards in watershed basins in the County when burned vegetation and soils have decreased ability to absorb runoff from storm events.

Mudflows are known to occur throughout the County and can be caused by earthquakes or heavy storm events. Mudflows have been known to occur in the above river and creeks.

Seiches are a potential hazard known to occur at reservoirs and even swimming pools in the County. Seiches are associated with earthquake hazards in the County. For more information on earthquake hazards please refer to Hazards & Hazardous Materials section in this document.

**San Bernardino County Flood Control District**

The San Bernardino County Flood Control District was formed as an urgency and progressive measure for the preservation and promotion of public peace, health, and safety as a direct aftermath of the disastrous March 1938 floods, which took many lives and caused millions of dollars in property damage. The District exercise control overall mainstreams in the County; acquires right-of-way for all main channels, constructs, channels, and has carried out an active program of permanent channel improvements in coordination with the U.S. Army Corps of Engineers (USACOE). Through the years, the District has been primarily concerned with control of flood waters in major watercourses and channels under the jurisdiction of the District. Due to the vastness of the County, it has been impossible for them to provide assistance to individual property owners Countywide.

The District is subdivided into six zones with interest (Figure 7-7 of the Safety Background Report), responsibilities, or geographical divisions distinctive of the particular zone. In matters of taxation or ventures, each zone functions independently although by mutual agreements joint activities may be entered into (San Bernardino County Flood Control District, 1997). The six zones, although bounded by defined limits within the Act, are presented in Table IV-H-1.
Master Drainage Plans

There are several drainage plans that have been prepared for the different cities within the County (refer to Table IV-H-2). Master Drainage Plans are used as guidelines for future flood control facility improvements, for future planning and coordinating with San Bernardino County Flood Control District, local cities, future development activities, and as a basis for developing funding mechanisms. The following section provides a summary of the existing Master Drainage Plans in the County.

Water Quality

In order for a developable area to thrive, it must have sufficient environmental resources. One of the most important and valuable resources is water. Water attracts urbanization where it is abundant and can be put to beneficial use. However, not all water can be put to beneficial use if it is contaminated. A major problem with water quality is water pollution. Varieties of sources cause, or have potential to cause, water pollution. In San Bernardino County a number of water quality improvements are being developed to mitigate negative groundwater quality impacts from nearly a century of agricultural, industrial, and residential point and non-point source contributions. Chemicals of concern include:

- Total Dissolved Solids;
- Total Inorganic Nitrogen such as Nitrates;
- Perchlorate;
- Arsenic;
- Pharmaceuticals;
- Methyl tertiary butyl ether; and
- Volatile Organic Compounds (VOCs).

More details regarding specific water quality issues within watersheds in San Bernardino County refer the Conservation Background Report.

Stormwater

Stormwater runoff can cause contamination of reservoirs and adversely impact the quality of water in a groundwater basin. When rain falls on an urban area, the first flush of runoff can pick up and transfer a considerable number of pollutants, including chemical herbicides, pesticides, fertilizers, hazardous spill materials, animal droppings, gasoline and oil drippings, and litter. Sewage lines may also overflow. If the developing area is located in the watershed of a reservoir, these potentially pathogenic and carcinogenic contaminants can enter the water. The Safety Background Report presents the stormwater collection and distribution system in the Valley, Mountain, and the Desert regions of the County.

The Santa Ana RWQCB has required the unincorporated areas of the County, the 16 incorporated cities of the County within the Santa Ana River watershed, and the San Bernardino Flood Control District, as permittees, to be included in the National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (the Permit). The Permit and Section 4 of the Report of Waste Discharge, dated April 1995, require the development and adoption of New Development/Redevelopment Guidelines (Guidelines).
These Guidelines are to be used by the permittees of the San Bernardino County Stormwater Program as a supplement to the Drainage Area Management Program and the Report of Waste Discharge. The purpose of preparing the Guidelines was to identify pollutant prevention and treatment measures that could be incorporated into development projects. The Guidelines recommend which Best Management Practices (BMPs) should be required as standard practice. The Guidelines provide information on storm water quality management planning, general conditions, special conditions, and construction regulatory requirements. The Guidelines also define structural and non-structural BMPs and lists the BMPs that are considered as “standard practice” for new developments. A major philosophy of the County’s NPDES stormwater quality program, as set forth in the report of waste discharge, is a regional approach to stormwater quality planning and management on a watershed basis (San Bernardino County Stormwater Program 2000).

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Hydrology/Water Quality, if the project would cause any of the following effects:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or situation on- or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Inundation by seiche, tsunami, or mudflow.
3. **Impact Analysis**

All individual projects implemented under the General Plan will be required to comply with applicable federal, state, and local water quality regulations. Currently, the County of San Bernardino follows state standards for water quality, and does not have their own specific standards. During construction, projects will be required to obtain coverage under the state’s General Permit for Construction Activities that is administered by the California Regional Board, RWQCB. Storm water management measures will be required to be identified and implemented that will effectively control erosion and sedimentation and other construction-based pollutants during construction. Other management measures, such as construction of detention basins, will be required to be identified and implemented that will effectively treat pollutants that would be expected for the post-construction land use. Because projects will be subject to regulatory requirements, impacts to water quality standards or waste discharge requirements related to implementation of the General Plan are considered less than significant.

**Impact HWQ-1**

Since groundwater can be a significant potential source of the potable water supply, impacts to water supply are presented in Section IV-P, Utilities and Service Systems. Development under the General Plan may substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact HWQ-2**

Development under the General Plan may substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or situation on- or off-site.

The San Bernardino County Flood Control District is the responsible agency for the operations and maintenance of the existing stormwater drainage system. Also, the District is responsible for the planning of all future stormwater drainage and flood control system. The updated General Plan includes goals and policies to minimize any potential impact that may exceed the existing and future capacity of a stormwater drainage system. Impacts are considered to be less than significant with the implementation of the mitigation measures below.

All future individual construction projects over one-acre in size that are implemented under the updated County of San Bernardino General Plan will be required to have coverage under the state’s General Permit for Construction Activities. As stated in the Permit, during and after construction, BMPs will be implemented to reduce/eliminate adverse water quality impacts resulting from development. Compliance with applicable state and local water quality regulations will ensure that impacts to water quality are less than significant.

The impacts from placing housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map are considered to be less than significant with implementation of the identified mitigation measures.
CHAPTER IV

Project Analysis

The impacts from placing within a 100-year flood hazard area structures that would impede or redirect flood flows are considered to be less than significant with implementation of the identified mitigation measures.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact HWQ-3
The County of San Bernardino consists of three separate land area types: mountain, desert and valley. Each land area type has its own distinct flooding risks and challenges. The Mountainous area consists of steep terrain that can create a potential risk for high velocity flood flows. The Desert area consists of relatively flat terrain that can create a potential risk for broad, shallow flood flows which can also be of high velocity. The Valley area consists of relatively flat terrain with a higher degree of urbanization and population. Flood flows from the mountain and desert area are typically contained within flood control structures that are located within the Valley area. The San Bernardino County Flood Control District is the responsible agency for the planning, design, operations and maintenance of the current and future stormwater and/or flood control system. Any type of proposed development within these land areas shall be coordinated with this agency. Impacts are considered to be less than significant with implementation of the identified mitigation measures.

A seiche is a to and fro vibration of a waterbody that is similar to the slopping of water in a basin. Once initiated, oscillation within the waterbody can continue independently. Seiches are often triggered by earthquakes. According to the County of San Bernardino General Plan, the most likely area that could be subject to seiche is mountain area that includes various lakes. Tsunamis are tidal waves that occur in coastal areas; therefore, since the County boundary is not located in a coastal area, no impacts due to tsunamis will occur. The County includes a large desert area which, when stormwater and sand sediment are combined, would typically create mudflow conditions. The San Bernardino County Flood Control District operates/maintains flood control and sediment detention basins within areas that are populated. Therefore, impacts from seiche, tsunami, or mudflows are considered to be less than significant with implementation of the identified mitigation measures.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. Mitigation Measures

The following Mitigation Measures will be incorporated into the General Plan as Policies, to reduce the identified impacts to a level below significance.

Mitigation HWQ-1
The County Water Masters shall continue to monitor the County’s adjudicated groundwater basins to ensure a balanced hydrological system in terms of withdrawal and replenishment of water from groundwater basins. Since groundwater may be a significant source of potable water supplies in the County, the impacts of growth resulting in water supply impacts are presented in Section P (Utilities and Service Systems) of this EIR.
Mitigation HWQ-2
The County shall promote conservation of water and maximize the use of existing water resources by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater.

Mitigation HWQ-3
The County shall require water reclamation systems and the use of reclaimed wastewater and other non-potable water to the maximum extent feasible for:

- Agricultural uses;
- Industrial uses;
- Recreational uses;
- Landscape irrigation; and
- Groundwater recharge projects.

Mitigation HWQ-4
The County shall apply water conservation and water reuse (reclamation) measures that are consistent with County, state and/or federal policies and regulations on wastewater.

Mitigation HWQ-5
The County shall require new development to implement feasible water conservation measures recommended by the water agency or purveyor that supplies the development with water.

Mitigation HWQ-6
Drainage courses shall be kept in their natural condition to the greatest extent feasible to retain habitat, and allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.

Mitigation HWQ-7
The County shall seek to retain all natural drainage courses in accordance with the Flood Control Design Policies and Standards where health and safety are not jeopardized.

Mitigation HWQ-8
The County shall prohibit the conversion of natural watercourses to culverts, storm drains, or other underground structures except where required to protect public health and safety.

Mitigation HWQ-9
The County shall allow no development in designated flood plains, which would alter the alignment or direction or course of any blue-line stream.

Mitigation HWQ-10
When development occurs, the County shall maintain the capacity of the existing natural drainage channels where feasible, and flood-proof structures to allow 100-year storm flows to be conveyed through the development without damage to structures.
Mitigation HWQ-11
Where technically feasible as part of its efforts to protect residents from flood hazards, the County shall require naturalistic drainage improvement where modifications to the natural drainage course are necessary. As an example, channel linings that will allow the re-establishment of vegetation within the channel may be considered over impervious linings (such as concrete). Where revegetation is anticipated, this must be addressed in the channel's hydraulic analysis and the design of downstream culverts.

Mitigation HWQ-12
The County shall establish an economically viable flood control system by utilizing channel designs including combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Where adjacent to development, said drainage shall be covered by an adequate County drainage easement with appropriate building setbacks established there from.

Mitigation HWQ-13
The County shall not place streams in underground structures where technically feasible, except to serve another public purpose and where burial of the stream is clearly the only means available to safeguard public health and safety.

Mitigation HWQ-14
To mitigate potential impacts related to adverse water quality, the County shall require new high-density developments using septic tank leach field/seepage pit systems for wastewater disposal to include in their project plans, analyses of alternatives wastewater treatment and disposal methods.

Mitigation HWQ-15
Within the County’s Development Code, one overlay district has been established relating specifically to provide greater public safety, promoting public health, and minimizing public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas. The Flood Plan Safety “FP” Overly District does this and operates as described below.

82.16.020 – Location Requirements
(a) The FP1, FP2, and FP3 overlay districts described in Section 82.16.040 are applied to areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study" for the County of San Bernardino, dated 1978, which has subsequent updates with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary Maps. Subsequent report and map updates that may be published in the future shall further identify additional flood hazard areas. The most current copy of the Flood Insurance Study is on file with the Clerk of the Board.

(b) The Flood Insurance Study establishes the minimum areas to which the FP overlay districts may be applied. Additional areas may be added after studies for the areas are prepared by the Flood Control District or other governmental agencies (e.g., Corps of Engineers).

82.16.050 – Development Standards
(a) Standards of construction. The following provisions shall apply in all areas of special flood hazards:

(1) Anchoring. All new construction and substantial improvements shall be anchored to the foundation to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. If a structure is elevated on fill as specified in Subsection A.2.e, and A.3.a, the anchoring requirement shall be satisfied. Other alternative anchoring techniques that are effective may be considered.

(2) Construction materials and methods.

(A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. This would include but not be limited to water resistant lumber, floor coverings, adhesives, paints, masonry construction and finishes, water proof electrical systems, and mechanical footings, or other acceptable materials measures.

(B) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. This would include but not be limited to elevating the structure, parallel alignment of structure, with water flow, increase the structural designs to withstand hydrologic and hydrographic sources, and increase depth of footings.

(C) All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(D) Adequate drainage paths be provided around structures on slopes to guide flood waters around and away from proposed structures.

(E) If fill is placed to elevate pads one foot above base elevation, it must be demonstrated that fill will not settle and is protected from erosion, scour, or differential settlement, as follows.

(I) Fill shall be compacted to 95 percent per ASTM (American Society of Testing Materials) Standard D-698.

(II) Fill slopes of granular material shall be no steeper than one-half-foot horizontal to one-foot vertical ratio unless substantiating data for steeper slopes is provided, and the slopes are approved by the County.

(III) If flow velocities are greater than five feet per second, fill slopes shall be armored with stone or rock slope protection.

(3) Elevation and flood proofing.

(A) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated to one foot above base flood elevation in the FP1 area, and one foot above ground level in the FP2 area. Upon completion of the structure, the elevation of the lowest habitable floor, including basement, shall be certified by a registered professional engineer or licensed land surveyor, and verified by the Building Official to be properly elevated above the floodplain elevation at the time of certification. The certification or verification shall be provided to the Flood
Plain Management Administrator. In instances when the base flood elevation data has not been provided on the Flood Insurance Rate Map (FIRM), the provisions of Subsection 82.1101B. of this Development Code shall apply. The administrator may further exempt proposed single-family residences from this requirement when the base flood elevation data has not been provided on the FIRM.

(B) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated above the highest adjacent grade at least one foot higher than the depth number specified in feet on the FIRM, or at least two feet if no depth number is specified. Upon the completion of the structure, the elevation of the lowest habitable floor shall be certified by a registered professional engineer or licensed land surveyor, or verified by the Building Official to be properly elevated above the flood plain elevation as derived from the adopted FEMA map, applicable to subject area at the time of certification. Such certification or verification shall be provided to the Flood Plain Management Administrator.

(C) Nonresidential construction shall be elevated in compliance with Subsection A.3. of this Section or together with attendant utility and sanitary facilities and shall:

(I) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(II) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(III) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Flood Plain Management Administrator.

(D) All new construction and substantial improvements to existing structures, shall include fully enclosing structural areas below the lowest floor that are subject to flooding, and the areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement shall either:

(I) Be certified by a registered professional engineer or an architect; or

(II) Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters; or

(III) Be verified by the Flood Plain Administrator or his designee as complying with flood proofing standards approved by the Federal Insurance Administration.

(b) Utility standards.

(1) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
(2) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(3) All public utilities and facilities such as electrical, telephone, cable TV, gas etc., shall utilize flood proofing measures in their location and construction to minimize flood damage.

(c) Land use application review requirements.

(1) All preliminary proposals shall identify the flood hazard area and the elevation of the base flood.

(2) All final plans shall provide the elevation of proposed structures and pads above the flood plain elevation as derived from the FEMA map adopted at the time of certification. If the site is filled above the base flood, the final pad elevation shall be certified by a registered professional engineer or licensed land surveyor and shall be submitted to the Flood Plain Management Administrator. The entire site need not be elevated; only the building pads need be elevated and other means of conducting storm flows through the site shall be provided.

(3) All proposals shall be consistent with the need to minimize flood damage.

(4) All proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(5) All proposals shall provide adequate drainage to reduce exposure to flood hazards and not deflect flood flows onto other properties.

(d) Manufactured homes. All new and replacement manufactured homes and additions to manufactured homes shall comply with all applicable provisions this Section.

(1) Nonresidential construction shall be elevated in compliance with Subsection A.3.

(2) All manufactured homes shall be securely anchored to a permanent foundation system to resist flotation, collapse or lateral movement. Methods of anchoring shall include, but not be limited to, the use of over-the-top or frame ties to ground anchors.

(e) Floodway standards. Floodway areas are located within a special flood hazard areas and are established as specified in Subsections 85.020305 A. and B. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential, the following provisions apply.

(1) Encroachments, including fill, new construction, substantial improvements, stockpiling, and other development are prohibited unless certification by a registered professional engineer or architect is provided, demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) If Subsection A.1 is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of this Section.

Mitigation HWQ-16
The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.
5. **Significant Unmitigated Impacts**

With implementation of the identified General Plan goals and policies, and the incorporation of the above-identified mitigation measures, all impacts related to hydrology and water quality effects are reduced to a less than significant level.

Table IV-H-1. Flood Control District Zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Location</th>
<th>Size of Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>The westerly portion of the San Bernardino Valley extending from Beech Avenue in the Fontana area to the Los Angeles County line, all south of the San Gabriel mountain range divide. This embraces the cities of Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, and Upland, and the communities of Alta Loma, Etiwanda, and Guasti.</td>
<td>275 square miles</td>
</tr>
<tr>
<td>Zone 2</td>
<td>The central area of the San Bernardino Valley easterly of Zone 1 to approximately the Santa Ana River and City Creek demarcations. This includes the Cities of Colton, Fontana, Grand Terrace, Rialto, and San Bernardino, together with the communities of Bloomington, Del Rosa, Devore, and Muscoy.</td>
<td>318 square miles</td>
</tr>
<tr>
<td>Zone 3</td>
<td>The easterly end of the San Bernardino Valley east from Zone 2 including the Cities of Highland, Loma Linda, Redlands, and Yucaipa, and communities of Oak Glen and Forest Falls.</td>
<td>366 square miles</td>
</tr>
<tr>
<td>Zone 4</td>
<td>The Mojave River Valley from the San Bernardino mountains to Silver Lake and including the Town of Apple Valley, the cities of Adelanto, Barstow, Hesperia, and Victorville, and all or portions of the communities of Daggett, Helendale, Hinkley, Hodge, Oro Grande, Phelan, and Yermo</td>
<td>1,783 square miles</td>
</tr>
<tr>
<td>Zone 5</td>
<td>The mountainous watershed of the Mojave River on the crest and north slopes of the San Bernardino mountains including the communities of Crestline, Green Valley Lake, Lake Arrowhead, Lake Gregory, and Running Springs.</td>
<td>163 square miles</td>
</tr>
<tr>
<td>Zone 6</td>
<td>The remainder of the County not embraced by other zones including portions of the San Gabriel and San Bernardino Mountains and the semi-Desert portion of the County. This embraces the cities of Big Bear, Needles, and Twenty-Nine Palms, the town of Yucca Valley, the communities of Amboy and Trona, and the Lucerne Valley and Morongo Valley Districts.</td>
<td>17,200 square miles</td>
</tr>
</tbody>
</table>

Source: San Bernardino County Flood Control System Number Index and General File Codes.
### Table IV-H-2. Master Plans Within The County

<table>
<thead>
<tr>
<th>Zone</th>
<th>Name of Master Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>City of Chino and Cypress Channel</td>
</tr>
<tr>
<td>1</td>
<td>Etiwanda Area</td>
</tr>
<tr>
<td>1</td>
<td>City of Rancho Cucamonga Etiwanda Area</td>
</tr>
<tr>
<td>1</td>
<td>Etiwanda San Sevaine/City of Rancho Cucamonga</td>
</tr>
<tr>
<td>1</td>
<td>Ontario Master Plan of Drainage</td>
</tr>
<tr>
<td>1</td>
<td>Ontario Master Plan of Storm Drains</td>
</tr>
<tr>
<td>1</td>
<td>Ontario</td>
</tr>
<tr>
<td>1</td>
<td>Rancho Cucamonga</td>
</tr>
<tr>
<td>1</td>
<td>San Sevaine</td>
</tr>
<tr>
<td>2</td>
<td>Fontana</td>
</tr>
<tr>
<td>2</td>
<td>Reche Canyon</td>
</tr>
<tr>
<td>3</td>
<td>Yucaipa Master Plan of Drainage</td>
</tr>
<tr>
<td>4</td>
<td>Hesperia Master Plan of Drainage</td>
</tr>
<tr>
<td>4</td>
<td>Adelanto</td>
</tr>
<tr>
<td>4</td>
<td>Town of Apple Valley</td>
</tr>
<tr>
<td>4</td>
<td>Apple Valley West/Desert Knolls</td>
</tr>
<tr>
<td>4</td>
<td>Baldy Mesa</td>
</tr>
<tr>
<td>4</td>
<td>Phelan</td>
</tr>
<tr>
<td>6</td>
<td>Rancho Lucerne</td>
</tr>
<tr>
<td>6</td>
<td>Moonridge-Rathbone Creek Master FC Plan</td>
</tr>
<tr>
<td>6</td>
<td>Master Plan of Drainage-Rathbun Creek</td>
</tr>
<tr>
<td>6</td>
<td>Twentynine Palms</td>
</tr>
<tr>
<td>4</td>
<td>Victorville</td>
</tr>
<tr>
<td>6</td>
<td>Yucca Valley</td>
</tr>
<tr>
<td>1</td>
<td>City of Upland</td>
</tr>
<tr>
<td>6</td>
<td>City of Needles</td>
</tr>
<tr>
<td>3</td>
<td>City of Big Bear Lake</td>
</tr>
<tr>
<td>4</td>
<td>City of Barstow</td>
</tr>
<tr>
<td>1</td>
<td>County Comprehensive Strom Drain Plan #1 (San Antonio Flood)</td>
</tr>
<tr>
<td>1</td>
<td>County Comprehensive Strom Drain Plan #2 (Cucamonga Creek)</td>
</tr>
<tr>
<td>2</td>
<td>County Comprehensive Strom Drain Plan #3 (Rialto Channel)</td>
</tr>
<tr>
<td>3</td>
<td>County Comprehensive Strom Drain Plan #6 (East Highland)</td>
</tr>
<tr>
<td>3</td>
<td>County Comprehensive Strom Drain Plan #5 (Yucaipa, Live Oak Canyon)</td>
</tr>
<tr>
<td>2</td>
<td>County Comprehensive Strom Drain Plan #3 (Sierra, Fontana)</td>
</tr>
<tr>
<td>2</td>
<td>County Comprehensive Strom Drain Plan #3, Proj. 3 (Colton, Rialto, Lytle Creek)</td>
</tr>
<tr>
<td>2</td>
<td>County Comprehensive Strom Drain Plan #7 (Cajon, Devore)</td>
</tr>
<tr>
<td>3</td>
<td>County Comprehensive Strom Drain Plan #4 (Loma Linda, Redlands)</td>
</tr>
<tr>
<td>2</td>
<td>Project 3-5 Area Drainage Plan (Rialto Channel)</td>
</tr>
<tr>
<td>1</td>
<td>W. Cucamonga Creek Channel</td>
</tr>
<tr>
<td>2</td>
<td>Project 3-4 Bloomington - Crestmore</td>
</tr>
</tbody>
</table>

Source: San Bernardino County Flood Control Department
I. LAND USE AND PLANNING

1. SETTING

Since the land area of San Bernardino County exceeds 12 million acres, the General Plan background assessment and policy development has been organized to allow for easier understanding of the unique issues at a more localized level while being able to aggregate issues to a countywide perspective. This organization for evaluation is based on:

- Spheres of Influences of the incorporated cities within the County,
- Community Plans,
- Economic study regions, and
- The remainder area.

The organization of the County into these discrete areas allows for the understanding of issues at a community level, an assessment of the appropriate land use designations, and evaluation of applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effects.

General Plan Land Use Designations

The General Plan identifies and proposes the following land use designations to guide the growth and development of the County:

- Resource Conservation (RC);
- Agriculture (AG);
- General Commercial (CG);
- Rural Living (RL) (with several discrete minimum lots sizes);
- Service Commercial (CS);
- Single Residential (RS) (with several discrete minimum lots sizes);
- Community Industrial (IC);
- Multiple Residential (RM);
- Regional Industrial (IR);
- Neighborhood Commercial (CN);
- Institutional (IN);
- Office Commercial (CO);
- Special Development (SD);
- Rural Commercial (CR);
- Floodway (FW);
- Multiple Residential (RM);
- Specific Plan (SP); and
- Highway Commercial (CH);
- Open Space (OS).

Community Plans

Community plans are policy instruments focusing on a particular region or community within the overall County’s General Plan. The land use elements within each of the Community Plans, often the core around which other elements are developed, do not propose significant land use changes. Instead, goals and policies are included to guide development in a manner that maintains the existing mix of land uses, preserves the character of the community, and complements existing development. To preserve existing community character, many of the land use goals and policies in the Community Plans direct the location and concentration of future development areas consistent with the countywide land use map, and the scale and
arrangement of future development such that it complements the existing community character. Community Plans are prepared for the following communities:

- Bear Valley
- Bloomington
- Crest Forest
- Hilltop
- Homestead Valley
- Joshua Tree
- Lake Arrowhead
- Lucerne Valley
- Lytle Creek
- Morongo Valley
- Muscoy
- Oak Glen
- Oak Hills
- Phelan/Pinon Hills

a) Valley Region

Existing General Plan Designations

Of the 1,885,913 countywide unincorporated acres covered under existing General Plan designations only 51,766 acres are in the Valley Region. Nearly half, 24,241 acres, of the Valley’s 51,766 acres of unincorporated acreage is devoted to residential uses. There are 2,155 acres of commercial land uses and nearly 5,155 acres of industrial land use designations. Agriculture and Resource conservation designations take up 938 acres and 1,769 acres respectively. Also within the Valley Region there are 9.1 square miles (5,281 acres) of Floodway, almost 1,600 acres of specific plan designations, 2,875 acres of Institutional land use designation and 7,216 acres of planned development.

Existing Land Uses

In the Valley Region, almost half of the 51,766 acres of unincorporated County land is existing single and multifamily residential uses, occupying 24,236 acres. The Valley Region also has nearly 5,155 acres of industrial uses. Commercial uses occupy almost 2,155 acres, while agriculture uses occupy 938 acres, and a classification that allows mineral extraction, regional parks, farming and Open Space uses (Resource Conservation) occupies 1,778 acres. Other existing land uses include 2,875 acres of institutional uses and 7,216 acres of planned development and almost 1,600 acres of specific plan. There are also 5,820 acres of improved flood and waterways in the Valley Region.

Existing Incorporated Cities

Following are the fifteen incorporated cities located in the Valley Region:

- Chino
- Chino Hills
- Colton
- Fontana
- Grand Terrace
- Highland
- Loma Linda
- Montclair
- Upland
- Yucaipa
- Ontario
- Rancho Cucamonga
- Redlands
- Rialto
- San Bernardino
b) Mountain Region

Existing General Plan Designations

Approximately 84,937 acres or 133 square miles of the Mountain Region is unincorporated, the Mountain Region has only one incorporated city -- the City of Big Bear Lake. Approximately 39,767 acres of the unincorporated Mountain land is designated Resource Conservation. Residential land use designations occupy approximately 36,092 acres of the total unincorporated Mountain land. Relative to the other regions there is little commercial, 798 acres, and even less, 100 acres, of industrial land use designations in the unincorporated Mountain Region. Other land use designations include 437 acres of agriculture, 596 acres of institutional uses and 4,067 acres of planned development. There are almost 5 square miles (3,080 acres) of Floodway designation and no specific plan designations.

Existing Land Uses

The Mountain Region has 36,084 acres of residential uses, 798 acres of commercial uses and 100 acres of industrial uses. Other existing uses include 437 acres of agriculture, and 39,776 acres of Resource Conservation (which allows recreational facilities, mineral extraction, grazing, animal raising, and regional parks). There are also 596 acres of institutional uses and 4,067 acres of planned development classification. There are also 3,080 acres of improved flood and waterways.

Existing Incorporated Cities

- City of Big Bear Lake

c) Desert Region

Existing General Plan Designations

There are 1,749,209 acres of land under existing general plan designations in the Desert Region. Of this almost 1.8 million area 595,525 acres are designated as residential use most of which, almost 562,000 acres, are in the rural living designation. The Desert Region has 6,581 acres of commercial and 16,493 of industrial land use designations. Other designations include 6,902 acres of institutional, 10,465 of planned development and over 1.06 million acres of Resource Conservation. There are almost 17 square miles (10,787 acres) of Floodway designation and no specific plan designations.

Existing Land Uses

Within the Desert Region there are over one million acres of land uses such as mineral extraction, grazing and Open Space. There are also 595,283 acres of existing residential uses. The Desert Region has 6,342 acres of commercial uses, about 16,493 acres of industrial uses, 6,902 acres of institutional uses and 10,901 acres of planned development. There are also 10,787 acres of improved areas that are subject to flooding in the Desert Region.
Existing Incorporated Cities

Following are the eight incorporated cities located in the Desert Region:
- Adelanto
- Apple Valley
- Barstow
- Hesperia
- Needles
- Twentynine Palms
- Victorville
- Yucca Valley

Focused Land Use Studies

Focused Land Use studies were conducted in specific areas of the county facing individual land use challenges, particular to each area studied. The three areas subject to a Focused Land Use Study are West Fontana, Mentone, and Newberry Springs.

West Fontana

The West Fontana area is an unincorporated area with irregular boundaries, and isolated pockets of unincorporated islands intertwined with the City of Fontana. The unincorporated area has developed with eclectic land uses and incompatible uses abutting each other. Residential land use designations that evolved to a variety of mixed uses, many of which have been established without proper permits and developed in conflict with traditional residential while adjacent areas in the City are being approved under industrial zoning. Inadequate infrastructure is also characteristic of West Fontana although the City is extending infrastructure as annexation takes place. The area is under substantial growth pressure and the County and City development standards are at different levels creating lost expectations for new development not to City standards. The City is also focusing on annexation of key areas such as Foothill Blvd and areas suitable for industrial development south of the I-10 Freeway.

Mentone

The Mentone area is characterized as a semi-rural area with citrus farming as the historic economic base. The area is under tremendous pressure to develop as the City of Redlands moves east towards Redlands and Crafton Hills. Factions of the community desire to remain rural as long as possible and avoid incompatible uses. However, general new conventional higher density housing tracts have been built over the last year. In addition, the Mentone community desires to ensure water and adequate utilities in general while pacing growth to revenue sources for infrastructure.

Newberry Springs

The Newberry Springs area is in the high desert east of Barstow and in need of economic development, especially related to freeway commercial capitalizing on the Historic Route 66. Residents are concerned about urban sprawl moving easterly from Barstow a network of unpaved roads. Once extensive alfalfa farms have given way to less water consumptive agricultural uses like pistachio orchards. Scattered rural residential uses that combine home-based businesses occupy most of the area. Deteriorated paved roads depleting underground water supplies, and no Parks, libraries, etc, characterize the infrastructure in the area. More housing will bolster the local economic growth.
Incidental Land Use Designation Changes / Zoning Changes

The County of San Bernardino maintains a “One Map” System for the General Plan Land Use map and the Zoning map. The project includes the following modifications to the land use/zoning map:

- Deleted land use designations on all properties (i.e. BLM and U.S. Forest Service lands) that the County does not have land use jurisdiction while labeling each remaining individual County jurisdiction property with a land use designation;
- Redefined Resource Conservation boundaries abutting non Resource Conservation areas where deleting designations from non-jurisdictional land created a discrepancy;
- Align land use designations to parcel boundaries;
- Remove all obsolete zoning “prefixes” and “suffixes”;
- Revise all residential land use designations into a standardized list of minimum lot sizes for the Agriculture, Rural Living, and Single Family Residential designations;
- Incorporate BLM and USFS boundary changes into the land use map;
- Changed all Planned Development (PD) designations to Specific Development (SD) with either a residential or commercial suffix indicating the primary designated use;
- Corrected City Boundary discrepancies;
- Zoning changes in certain small unincorporated pockets in the SOI of the Cities of Chino and Montclair to establish a more consistent land use pattern;
- Corrected mapping to the recently adopted unincorporated Glen Helen Specific Plan; and
- Made land use changes to specific properties in Phelan, Pinon Hills, Muscoy, West Chino, Mentone/Crafton Hills, Joshua Tree, Lucerne, Apple Valley, Newberry Springs and Hesperia.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Land Use/Planning, if the project would cause any of the following effects:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan
3. **IMPACT ANALYSIS**

**Impact LU-1**
The General Plan does not contain policies or programs proposing development (e.g., freeways or other major linear infrastructure facilities) that could physically divide an established community in the County. Development under the General Plan will involve residential, commercial, and industrial uses that will be designed to be compatible with adjacent existing development and maintain the existing community character. The proposed General Plan policies guide future development to already established communities reinforcing their viability.

The 2007 General Plan proposes to eliminate redundant policies and consolidate many other policies in order to be more concise in the delivery of sound guidance for future development. For example, the Plan involves the deletion of Policy D-45 (“Provide a harmonious mix of residential, commercial and industrial land uses which will generate sufficient tax revenues to pay the costs of maintaining desired levels of services and adequate infrastructure facilities”); however, the deletion of this Policy does not cause a physical impact because it is replaced by new Policy CI 11.5 (“makes available or establishes financial mechanisms (such as assessment and community facility districts) to most efficiently spread the cost of necessary infrastructure improvements as determined by the local public agency over all development benefiting from such improvements. Provide legal written notice to all people affected by such financial mechanism cost,”) which is a redrafting and consolidation of previous policies. Also, new Policy CI 11.4 (“ensures that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development”) is added.

Another example of consolidation is the deletion of Policy D-56 (“Provide new services only within defined urban and rural service boundaries,”) and Policy LU-9 (“Coordinate land use policies with cities”) which would remove the County’s restrictions on where new services could adequately be provided. However, deletion of this Policy is not a land use impact because of new Policy LU 9.2, which “discourages leap-frog development and urban sprawl by restricting the extension or creation of new urban services or special districts to areas that cannot be sustained in a fiscally responsible manner.” Due to the addition of new policy LU 9.2, the deletion of Policies D-56 and LU-9 is considered a less than significant impact.

**Impact LU-2**
Due to new, rewritten, and consolidated policies such as CI 11.4 and CI 11.5, there will be a less than significant land use impact due to the deletion of Policies BI-3, BI-4, D-45 and D-56. In addition, implementation of the 2007 General Plan may lead to potential conflicts with regional plans of other agencies such as the Airport Land Use Plans for County Airports and the air Quality Attainment Plans for either of the Air Quality Management Districts. Conformance with those regional plans is presented in other sections of this EIR (e.g., Traffic Hazards and Air Quality).

**Impact LU-3**
Implementation of the 2007 General Plan may conflict with adopted or proposed Habitat Conservation Plans. Policy CO 2.1 and CO 2.3 encourages habitat conservation. Policy CO 2.1 reads that “the County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. And Policy CO 2.3 reads that “in addition to conditions of approval that may be required for specific future
development proposals, the County will establish long term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, regional, and local issues that directly affect development rights.

The County took a lead role in the preparation of a Multi-Species Habitat Conservation Plan (MSHCP) for the San Bernardino Valley in 1995. The Plan was conceived as a program that would address and resolve the continuing conflicts between community growth and preservation of rare, threatened and endangered species.

The difficulties in developing a comprehensive plan and disagreements with the United States Fish and Wildlife Service over various aspects of the plan ultimately lead to a decision to discontinue work on the program. The program has been on hold since 2002.

Other Habitat Conservation Plans within the boundaries of San Bernardino County include but are not limited to:

- Participation in West Mojave Plan (largest HCP in country)
- Upper Santa Ana Wash
- Angelus Block;
- Highlands Roadway Project;
- Cushenbery Sand and Gravel;
- High Desert Power Project;
- Reichel;
- SCE/Etiwanda and Mira Loma Corridor;
- Sunland Communications; and
- Vulcan Material (aka Calmat) Cajon Creek and Delhi-Sands Flower Loving Fly.

### 4. Mitigation Measures

There are no significant Land Use and Planning impacts identified and therefore no mitigation measures are required. However, it should be noted that the policies of the 2007 General Plan function as issue mitigation. General Plan Policies are mitigation in other topical areas while for land use and planning, they are addressed as part of project.

### 5. Significant Unmitigated Impacts

None have been identified.
J. MINERAL RESOURCES

1. SETTING

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an “ore deposit” is defined as a deposit of ore or minerals having a value materially in excess of the cost of developing, mining and processing the mineral and reclaiming the project area. Mineral resources are an integral part of development and the economic well being of the County. The conservation, extraction and processing of those mineral resources is essential to meeting the needs of society. In San Bernardino County minerals are a foremost natural resource, with the Desert Planning Area accounting for over 90 percent of all County mining activities.

There are 92 mines within the County (Figures 6-11-A thru 6-11-C of the Conservation Background Report) prepared as part of the update of the County’s General Plan). Table IV-J-1 includes a list of some of the mines and processing plants that are located with the County. There are several large calcium carbonate mining operations in San Bernardino County. The County is home to the largest cement producer in the state. It also has the largest rare earth mine in North America. Extensive aggregate mining is also a major component of the mining industry within the County.

Table IV-J-1. Prominent Mine and Processing Plant Locations in San Bernardino County

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Site Name</th>
<th>Commodity</th>
<th>Mine/Plant (M/P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BMCS Insulation Products</td>
<td>Ontario Plant</td>
<td>Perlite</td>
<td>P</td>
</tr>
<tr>
<td>3. Cargill Inc./Leslie Salt</td>
<td>Amboy Plant</td>
<td>Salt</td>
<td>M/P</td>
</tr>
<tr>
<td>4. CV Organic Fertilizer Co.</td>
<td>Amboy Mine</td>
<td>Gypsum</td>
<td>M</td>
</tr>
<tr>
<td>5. Mitsubishi Cement</td>
<td>Cushenbury Plant</td>
<td>Cement</td>
<td>M/P</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Molycorp Incorporation</td>
<td>Molycorp Mill</td>
<td>Rare Earths</td>
<td>M/P</td>
</tr>
<tr>
<td>8. North American Chemical Corporation</td>
<td>Westend Plant</td>
<td>Boron, Sodium Sulfate</td>
<td>M/P</td>
</tr>
<tr>
<td>10. Pacific Salt and Chemical Company</td>
<td>Searles Dry Lake</td>
<td>Salt</td>
<td>M/P</td>
</tr>
<tr>
<td>11. Rheox Inc</td>
<td>Hector Mine</td>
<td>Bentonite</td>
<td>M/P</td>
</tr>
<tr>
<td>12. Riverside Cement Co</td>
<td>Oro Grande Plant</td>
<td>Cement</td>
<td>P</td>
</tr>
<tr>
<td>13. Salt Products Co.</td>
<td>Salt</td>
<td></td>
<td>M/P</td>
</tr>
<tr>
<td>(Southdown)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Specialty Mineral Incorporated</td>
<td>Mud Hills</td>
<td>Zeolite</td>
<td>M</td>
</tr>
<tr>
<td>16. Superior Salt Inc.</td>
<td>Dale Lake</td>
<td>Salt</td>
<td>M/P</td>
</tr>
<tr>
<td>17. Superior Salt Inc.</td>
<td>Dale Lake</td>
<td>Salt</td>
<td>M/P</td>
</tr>
<tr>
<td>18. Viceroy Gold Corporation.</td>
<td>Castle Mountain Mine</td>
<td>Gold/Silver</td>
<td>M*</td>
</tr>
<tr>
<td>19. Pfizer Chemical</td>
<td>Castle Mountain Mine</td>
<td>Silver</td>
<td>M*</td>
</tr>
</tbody>
</table>

Source: USGS Mine and Processing Plant Locations, Arranged by State and County, 2001; CGS, California Non-Fuel Minerals, 2004

More details on mining resources in San Bernardino County are provided in the Conservation Background Report. In addition to the known mines and areas of mineral resources outlined in the Conservation Background report, the California Geological Survey (CGS) has an ongoing classification project for San Bernardino County which is mandated by the Surface Mining and Reclamation Act (SMARA). SMARA addresses the need for a continuing supply of mineral resources and to prevent or
minimize the negative impacts of surface mining to public health, property and the environment. The Act applies to anyone, including government agencies, engaged in surface mining operations in California, including federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. This includes, but is not limited to, prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials. The Draft General Plan Update incorporates the requirements and mineral classification and designation information of SMARA.

The California Department of Conservation’s Division of Mines and Geology Mineral Land Classification Project continues to provide the County with mineral resource maps which have proved to be of value in land use planning and mineral conservation. The State Department of Conservation, Division of Mines and Geology, is also in the process of identifying lands within the County with the potential for mineral resource recovery and will be used by the County in identifying new mineral resource areas to help ensure their preservation. The programs produce maps of Mineral Resource Zones (MRZ) that designate known or suspected economic mineral deposits.

The County requires mining operations to have approved Mining/Reclamation Plans in compliance with the applicable sections of the Public Resources Code; SMARA; the State Administrative Code, Natural Resources, Mining and Geology; State Mining and Geology Board; and the San Bernardino County General Plan and Development Code prior to the start of mining operations. Before a mining project is approved, a reclamation plan must be prepared and approved by the County. The plan must include the following information:

- Maximum anticipated depth of extraction;
- A description of the reclamation land use;
- A description of the manner in which affected streambed channels and stream banks will be rehabilitated to a condition minimizing erosion;
- Final slope stability;
- Removal of improvements and actions to reduce compaction of areas sited for roads, buildings, or other improvements; and
- Revegetation methods to reestablish wildlife habitat and provide long-term soil stabilization.

The plan also includes performance standards for:

- Revegetation;
- Drainages and erosion control;
- Reclamation of prime agricultural land and other agricultural land;
- Stream protection, including protection of surface water and groundwater;
- Topsoil salvage; and
- Slope stability.

The State requires that a Mining Report be submitted annually by each mine operator. The Report must include information as to the amount of land disturbed during the previous year, acreage reclaimed during the previous year, and any amendments to the mine’s reclamation plan. This process helps the County and the State to track mining operations. The County performs at least one inspection of all active mines and mines that are temporarily inactive in compliance with SMARA.
CHAPTER IV  
Project Analysis

2. **SIGNIFICANCE CRITERIA**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Mineral Resources, if the project would cause any of the following effects:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

3. **IMPACT ANALYSIS**

**Impact MR-1**

The proposed update of the County’s General Plan does not propose any land uses that would conflict with known mineral resources of regional or state importance. However, impacts to mineral resources will be significant if adjacent land uses preclude the availability for future development of significant mineral resources. The 1989 General Plan addresses the protection of mineral resources with current goals and policies consistent with the state SMARA and associated mineral resource classification. The Draft General Plan Update incorporates the prior goals and policies with minor modifications and clarifications to be consistent with the format and more simplified approach of the other sections of the General Plan update. The Resource Conservation Land Use/Zoning designation is assigned to remote areas. Low density development optimizes mineral resource availability of regionally significant mineral sites and can minimize potential land use conflicts.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact MR-2**

The siting and permitting of mineral operations in the County continues to be controversial. The leading issues include land use competition, surface and groundwater issues, as well as noise, dust, and truck-traffic in populated area. The impacts of increased amounts of air emissions, hydrology and water quality affecting land use noise and transportation and traffic issues in the County are analyzed in further detail in the respective topical sections of this EIR. The County will work with mine operators to help prevent mining operations from negatively impacting adjacent residential and commercial land use. However, it is anticipated that resistance to mining will continue to push production to more rural areas in the Desert Planning Area, with increased transportation costs impacting the cost of these materials to County consumers. Designation of mining sites with MRZ and operation mapping has been added in the 2007 General Plan update.

*This impact can be mitigated to a level below significance by the adoption of certain mitigation measures presented in Section 4, below.*

4. **MITIGATION MEASURES**

The following mitigation measures are incorporated into the project to reduce its impacts on mineral resources.
Mitigation MR-1
The County shall protect the current and future extraction of mineral resources that are important to the County’s economy while minimizing impacts of this use on the public and the environment.

Mitigation MR-2
In areas containing valuable mineral resources, the County shall establish and implement conditions, criteria and standards that are designed to protect the access to, and economic use of, these resources, provided that the mineral extraction does not result in significant adverse environmental effects and that open space uses have been considered for the area once mining operations cease.

Mitigation MR-3
The County shall incorporate the mineral classification or designation information, including the maps, when they are completed by the state Mining and Geology Board and the Division of Mines and Geology, including new and updated information in the updated County General Plan.

Mitigation MR-4
The County shall recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. The Infrastructure Map, one of the layers of the General Plan mapping system, will be amended to identify mine sites that have a long-term operational horizon.

Mitigation MR-5
The County shall implement the state Mineral Resource Zone designations to establish a system that identifies mineral potential and economically viable reserves. These designations are as follows:

MRZ-1: Adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This designation shall be applied where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.

MRZ-2: Adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This designation shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

MRZ-3: Containing deposits whose significance cannot be evaluated from available data.

MRZ-4: Available information is inadequate for assignment to any other MRZ zone.

SZ Areas: Containing unique or rare occurrences of rocks, minerals or fossils that are of outstanding scientific significance shall be classified in this zone.

IRA: San Bernardino County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.
Mitigation MR-6
Mining operators/owners will provide buffers between mineral resources (including access routes) and abutting incompatible land uses. New mineral and non-mineral development in these zones shall be designed and reviewed according to the compatibility criteria specified in this policy.

Mitigation MR-7
The County shall protect existing mining access routes by giving them priority over proposed alterations to the land, or by accommodating the mining operations with as good or better alternate access, provided the alternate access does not adversely impact proposed open space areas or trail alignment.

Mitigation MR-8
The County shall provide for the monitoring of mining operations for compliance with established operating guidelines, conditions of approval and the reclamation plan.

5. **SIGNIFICANT UNMITIGATED IMPACTS**

There are no unmitigated impacts to mineral resources. Significant unmitigated impacts to mineral resources could occur in the event that a future incompatible land use is permitted on or near a significant mineral resource prior to identification and classification of the resource. However, implementation of the above mitigation measures will avoid this situation.
K. NOISE

1. SETTING

The unincorporated and residential areas, along with noise-sensitive receptors and potential noise generators, are shown on Figures 4-1A through 4-1C of the Noise Background Report (Appendix I), for each of the three planning regions. Focusing on unincorporated areas of the County, noise-sensitive receptors include convalescent homes, hospitals, day-care centers, residential areas, fire stations, schools, hotels, libraries and campgrounds. Since hotels and most fire stations contain sleeping quarters, they are classified as noise-sensitive receptors. The County applies the same noise abatement criteria to hotels and residences and buildings where people normally sleep. Potential major noise generators include roadways, airports, industrial plants, railroads, racetracks, off-highway vehicle areas and public shooting ranges.

Based on the results presented in the Noise Background Report, prepared for the update to the County General Plan, the unincorporated portions of the County represent the full range of community noise environments from very quiet rural to moderately noisy suburban to noisy urban. Noise patterns in the County are generally consistent with published data regarding the intensity of development/type of land use and the expected levels of environmental noise. More details regarding the noise environment in the County can be found in the Noise Background Report. The Noise Element of the General Plan also contains additional information regarding noise and its effects, and presents policies and standards for compatibility between noise levels and land uses. Section 87-0905(b)(3) of the County Code reinforces these standards for new residential and other development that may be adversely affected by high noise levels. Section 87-0905(b)(2) of the County Development Code (Noise Ordinance) presents limits on noise generation from commercial and industrial uses that may adversely affect adjacent uses.

Noise levels discussed in the Noise Background Report, Noise Element, and in this section are based on equivalent noise levels (Leq) expressed as “A” weighted decibels (dBA). An Leq value is a constant or single computed noise level that represents the same acoustic energy associated with a varying noise level over a given period of time. Leq values are usually expressed for one-hour time periods, but longer or shorter times may be specified. “A” weighted decibels reflect the frequency sensitivity of human ears. Longer term standards are identified in the County Noise Element. These include the Day-Night Average Noise Level (Ldn), which is a 24-hour equivalent noise level with a “penalty” of 10 dBA added to noise levels during the night time (10:00 p.m. to 7:00 a.m.), to account for the added nuisance of noise during these hours. A similar 24-hour average is the Community Noise Equivalent Level (CNEL), which also includes a 5 dBA addition during the evening hours (7:00 p.m. to 10:00 p.m.). CNEL values are usually only about 1 dBA higher than Ldn values, and the two terms are often used interchangeably.

Decisions made by local governments affecting lands within defined influence boundaries around airports are subject to review by the local Airport Land Use Commission (ALUC) for consistency with the countywide Airport Land Use Plan. The Airport Land Use Plan addresses aircraft noise, as well as safety, and the planning and review process used by the ALUC is set forth in the California Public Utilities Code (Sections 21670 through 21679.5). Typically, Airport Land Use Plans define areas with a Community Noise Equivalent Level (CNEL) above 65 dBA as being incompatible with residential land uses.
2. **SIGNIFICANCE CRITERIA**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Noise, if the project would cause any of the following effects:

- **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**
- **Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.**
- **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**
- **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**
- **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.**
- **For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.**

Specific standards that can be used to define the numerical threshold above which noise levels are considered a significant impact for a given land use are found in the County Noise Element and are presented in Table IV-K-1. These standards indicate that a Day-Night Average Noise Level or a Community Noise Exposure Level (Ldn or CNEL) in excess of 70 decibels (dBA) is normally unacceptable for residential uses and for most other sensitive land uses. Ldn values between 60 and 70 dBA are conditionally acceptable, meaning that additional study and appropriate mitigation measures are necessary to avoid impacts. The County Code requires that exterior noise levels affecting new residential development be reduced to no more than 60 dBA, or 65 dBA if the best available noise reduction technology has been applied (Section 87-8905(b)(3)).

3. **IMPACT ANALYSIS**

**Impact N-1**

Vehicle traffic noise from freeways and arterial roadways causes the Ldn value of adjacent areas, some of which have land use designations allowing residential uses or other sensitive uses, to exceed 60 or even 70 dBA. Similar noise effects are associated with areas adjacent to railroad track operations.

The extent of noise impacts associated with freeways and arterial roadways depends on traffic volume, speed, and other factors. As an example, the Noise Background Report (Table 4-3 of the Noise Background Report) indicates that a freeway carrying a modest average daily traffic (ADT) volume of 28,000 will cause the Ldn to exceed 60 dBA out to a distance of 790 feet from the roadway. Distances to other Ldn contours under different traffic conditions are also presented in the Noise Background Report. Similarly, the estimated distance to the 60 dBA Ldn noise contour adjacent to an intensively used freight train line ranges from 800 to 1,200 feet, depending on train speed. Land use designations allowing residential and other
sensitive land uses within these distances from roadways or railroad lines with these noise levels are not compatible and could lead to significant noise impacts.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact N-2**
The development of new industrial and commercial uses may create stationary noise sources that generate noise levels which are incompatible with adjacent residential or other sensitive land uses. Adherence to applicable regulations in the County Code will reduce these impacts.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

**Impact N-3**
Aircraft noise generates occasional, but intrusive noise levels to the occupants of property adjacent to airports and/or under the flight patterns of aircraft using airports. Development of residential or other noise sensitive uses in the vicinity of airports may expose people to incompatible noise levels.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

4. **Mitigation Measures**

**Mitigation N-1**
The County shall consider areas within San Bernardino County as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Table IV-K-1 (see Noise Element Policy N-1.1, and Section 87-0905(b)(1) of the County Code). Consistent with (new) Policy N-1.7, the County shall prevent incompatible land uses in such areas.

**Mitigation N-2**
Consistent with Policy N-1.2 and N-2.1, the County shall ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Table IV-K-2. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries. For each application involving such a land use at a location where the Ldn is expected to be in excess of 60 dBA, based either on noise contours for future traffic volumes as presented in the Noise Element or on the project’s location near a freeway, arterial street, or railroad line that may reasonably be expected to generate a similar noise level, the County shall require a project specific noise analysis.

As described in the Noise Element, the acoustical analysis shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
CHAPTER IV  

Project Analysis

- Include estimated noise levels in terms of the descriptors shown in the Noise Background Report (Appendix I) for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element;

- Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance; and include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided [see Existing Policy NO-1d].

Mitigation N-3
When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

Mitigation N-4
Implementation of measures N-1 and N-2 above should avoid or reduce potential aircraft noise impacts to a level below significance. The County shall submit all projects involving land use decisions on properties within airport influence areas to the Airport Land Use Commission for review.

Mitigation N-5
The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC).

Mitigation N-6
The County shall limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.

Mitigation N-7
Within the County’s Development Code, one overlay district has been established to protect the public from high noise levels. The Noise Hazard “NH” Overlay District has been created to provide greater public safety by establishing land use review procedures and requirements for land uses in areas with identified high noise levels. The NH District operates as described below.

82.18.020 – Location Requirements

The NH overlay district may be applied to those areas where the Average Day-Night Sound Level (Ldn) is 65 decibels, 65 dBA or greater.

82.18.030 – Development Standards

When a land use application or development permit is proposed within the NH overlay district, the following standards shall apply with respect to residential uses:
(a) Acoustical report required. Noise levels shall be identified. An acoustical report shall be performed to identify noise impact. Any recommendation for noise attenuation or other mitigation measures shall be incorporated into the design standards or conditions of approval as applicable.

(b) Interior noise levels. Interior noise levels in all single family and multi family residences and educational institutions shall not exceed 45 dBA Ldn emanating from sources outside of the residential building.

(c) Exterior noise levels. Exterior noise levels in all single family residential land use areas and multi family residential land use areas should not exceed 65 dBA Ldn. Exterior noise levels shall not exceed 70 dBA Ldn for any residential use areas. Ability to mitigate exterior noises to the levels of 65 dBA Ldn and 70 dBA Ldn shall be considered by the review authority when determining the actual Ldn level with which the land uses must comply.

(d) Noise mitigation measures. In areas where noise exceeds the noise standard, measures shall be taken to mitigate noise levels. An acoustical report identifying these mitigation measures shall be required and reviewed by the Environmental Health Services Division before issuance of any required development permits or approval of land use applications.

5. **Significant Unmitigated Impacts**

There are no noise impacts that cannot be mitigated to a level below significance.
### Table IV-K-1. Noise Level Standards

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Community Noise Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ldn or CNEL, dBA</td>
</tr>
<tr>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Residential – Single Units, Mobile homes</td>
<td></td>
</tr>
<tr>
<td>Residential – Multiple Units, Group Living, Mixed Commercial Residential Use</td>
<td></td>
</tr>
<tr>
<td>Transient Lodging - Motels, Hotels, Transient Housing</td>
<td></td>
</tr>
<tr>
<td>Institutional, Schools, Libraries, Churches, Hospitals, Nursing Facilities</td>
<td></td>
</tr>
<tr>
<td>Auditoriums, Concert Halls, Amphitheaters</td>
<td></td>
</tr>
<tr>
<td>Sports Arena, Outdoor Spectator Sports</td>
<td></td>
</tr>
<tr>
<td>Open Space, Playgrounds, Parks, Natural Resources Preservations</td>
<td></td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries</td>
<td></td>
</tr>
<tr>
<td>Commercial Services, Office, Research and Development, Retail Sales, Vehicle Sales</td>
<td></td>
</tr>
<tr>
<td>Industrial, Manufacturing, Wholesale, Storage, Utilities, Extractive, Agriculture</td>
<td></td>
</tr>
</tbody>
</table>

**Normally Acceptable**

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

**Conditionally Acceptable**

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and necessary noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.

**Normally Unacceptable**

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and necessary noise insulation features included in the design.

**Clearly Unacceptable**

New construction or development should generally not be undertaken.

Source: State of California General Plan Guidelines, Appendix C: Noise Element Guidelines, 2003, Governor’s Office of Planning and Research, pg. 250
### Table IV-K-2. Hourly Noise Level Performance Standards – Locally – Regulated Sources

<table>
<thead>
<tr>
<th>LAND USE CATEGORY</th>
<th>7 am - 10 pm</th>
<th>10 pm - 7 am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential or other noise-sensitive receivers</td>
<td>55 dB(A)</td>
<td>45 dB(A)</td>
</tr>
<tr>
<td></td>
<td>75 dB(A)</td>
<td>65 dB(A)</td>
</tr>
</tbody>
</table>

* Noise sources that are stationary and not preempted from local noise control. Preempted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

These limits are set forth in Section 87-0905(b)(2) of the County Development Code. Additional limits are specified in the code for other land use categories, including professional services, commercial, and other industrial uses.
L. POPULATION AND HOUSING

1. SETTING

   Population

   The State of California, Department of Finance predicts that San Bernardino County will be one of the fastest growing regions in the United States. According to the Department of Finance, the County is predicted to have a population of 2,456,089 in 2020 and 2,762,307 in 2030. The Valley Region of the County has experienced most of this growth.

   Housing Stock

   The projected increase in the housing stock reflects the population trend identified above. While the population of the County (incorporated cities and unincorporated County) is projected to rise by 467,041 over the next 10 years, the housing stock will increase by 151,650 units over the same interval (refer to Tables 3-6 and 3-9 of the Housing Background Report prepared for the update to the County’s General Plan).

   The spatial distribution of new residential construction is expected to continue to be skewed toward the Valley Region of the County. About 70% of the new units to be built in the County between 2000 and 2010 are expected to be located in the Valley Region. Although the Mountain and Desert regions are increasing their share of the projected growth, over 70% of the housing units in the County shall still be found in the Valley Region in 2020.

   With a projected increase of 198,640 residents to the unincorporated portions of the County Regional Statistical Area (RSA) over the next 10 years, the unincorporated housing stock is expected to increase by 63,149 units. In line with the population growth, the Valley and Mountain Regions are projected to experience the greatest growth in housing, with a slower rate of growth occurring in the Desert region. According to the 1994 SCAG Regional Growth Forecast, the unincorporated Valley Region is projected to add nearly 45,000 new housing units (+63%). Consistent with the County trend, the growth in the Valley Region represents over 70% of the total unincorporated growth. The remainder of the unincorporated housing growth is respectively split between the Mountains and Desert regions, with 10,286 and 8,207 additional units.

2. SIGNIFICANCE CRITERIA

   The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Population/Housing, if the project would cause any of the following effects:

   - Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
   - Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
   - Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
### Table IV-L-1. Housing Trends by Regional Statistical Area (RSA) 1980-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Valley RSA 28</td>
<td>17,764</td>
<td>26,356</td>
<td>8,592</td>
<td>43,497</td>
<td>17,141</td>
<td>73,102</td>
<td>29,605</td>
</tr>
<tr>
<td>East Valley RSA 29</td>
<td>40,056</td>
<td>21,846</td>
<td>-18,210</td>
<td>27,296</td>
<td>5,450</td>
<td>42,347</td>
<td>15,051</td>
</tr>
<tr>
<td><strong>Mountain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSA 30</td>
<td>13,254</td>
<td>14,161</td>
<td>907</td>
<td>18,677</td>
<td>4,516</td>
<td>28,963</td>
<td>10,286</td>
</tr>
<tr>
<td><strong>Desert</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baker RSA 31</td>
<td>2,693</td>
<td>4,228</td>
<td>1,535</td>
<td>4,236</td>
<td>8</td>
<td>5,351</td>
<td>1,115</td>
</tr>
<tr>
<td>Barstow RSA 32a &amp;</td>
<td>24,909</td>
<td>20,641</td>
<td>-4,268</td>
<td>24,791</td>
<td>4,150</td>
<td>28,141</td>
<td>3,350</td>
</tr>
<tr>
<td>Victor Valley RSA 32b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morongo Basin RSA 33</td>
<td>15,011</td>
<td>16,549</td>
<td>1,538</td>
<td>16,522</td>
<td>-27</td>
<td>20,025</td>
<td>3,503</td>
</tr>
<tr>
<td>Outlying Deserts RSA 34</td>
<td>1,101</td>
<td>1,373</td>
<td>272</td>
<td>1,333</td>
<td>-40</td>
<td>1,572</td>
<td>239</td>
</tr>
<tr>
<td><strong>Total Unincorporated</strong></td>
<td>114,788</td>
<td>105,154</td>
<td>-9,634</td>
<td>136,352</td>
<td>31,198</td>
<td>199,501</td>
<td>63,149</td>
</tr>
</tbody>
</table>

Note: Unincorporated Total may not correspond to numbers presented in other tables due to methodology.

Sources: 1980 & 1990 Census; 1994 SCAG Growth Forecast
3. IMPACT ANALYSIS

Impact PH-1
The update of the San Bernardino County General Plan anticipates additional population and household growth in the County. The policies within the proposed General Plan and the associated Community Plans and the Development are designed to manage this projected growth. With the implementation of the proposed General Plan, the majority of the projected growth will be directed towards developed areas of the County, such as the Community Plan areas and the SOI areas.

Implementation of the proposed General Plan and the Community Plan policies will have several adverse indirect impacts on resources other than housing (for example, increase in traffic levels, deterioration of air quality, loss of open space, and increase in ambient noise). These are discussed throughout the FEIR and appropriate mitigation measures are proposed.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Impact PH-2
Buildout under the General Plan update is not likely to displace substantial numbers of existing housing and/or people, necessitating the construction of replacement housing elsewhere. The General Plan Update is intended to guide the location and intensity of land uses in San Bernardino County. The land use maps primarily apply to undeveloped land within the County; and does not redesignate lands designated for residential development to other land uses, such as Commercial or Industrial, thus the proposed project is not expected to directly displace existing housing and/or people such that it would lead to the need for the development of replacement housing elsewhere. Redevelopment activities have low to moderate potential to displace existing older housing. However, redevelopment requirements under State law require replacement and additional set aside housing. The Housing Element includes policies that address the factors that could lead to the need for replacement housing. Policies Housing Program 5-a through Housing Program 5-u promote the conservation of the County’s current stock of affordable housing. By limiting the conversion of affordable housing to other uses, these policies reduce the potential for displacement of people and housing. Policies Housing Program 6-a through Housing Program 6-b prevent discrimination in housing, which reduces the potential for displacement of people. Policies Housing Program 7-a through Housing Program 7-b promote the development of all types of housing, including affordable housing, to meet regional housing needs. The development of affordable housing throughout the County would help ensure that replacement housing would not be necessary if very low and low-income populations increase over time.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

Mitigation PH-1
The County shall continue to utilize Planned Development density bonus and density transfer provisions as described in the County Development Code to allow creation of lot sizes less than that normally required by residential land use districts.
Mitigation PH-2
The County shall continue to allow mobile home parks in the Single Residential Land Use District at densities specified in the Development Code and in the Multiple Residential Land Use District subject to design guidelines which will ensure compatibility with the natural environment while minimizing potential adverse environmental impacts.

Mitigation PH-3
The County shall continue the Community Development Block Grant single-family homeowner rehabilitation loan program in order to rehabilitate housing and improve neighborhoods.

Mitigation PH-4
The County shall use and update the County Rehabilitation Guide for inspection of existing renter- and owner-occupied dwelling units to facilitate economical and safe rehabilitation of housing.

Mitigation PH-5
The County shall contract with for-profit and non-profit developers and assist them in acquiring and rehabilitating vacant Housing and Urban Development and VA repossessed properties. These houses will be resold at affordable prices to first-time and other homebuyer families.

Mitigation PH-6
Because the preservation of existing housing stock is important in providing housing opportunities for all income levels, housing and community rehabilitation programs shall be established and implemented through the following action programs.

Mitigation PH-7
The County shall preserve units at risk of being lost to lower income households through completion of their federal subsidies and affordability covenants or contracts by developing various kinds of incentives or other programs.

Mitigation PH-8
The County shall preserve historic structures through the use of various federal and state tax incentive and other programs.

Mitigation PH-9
The County shall continue to implement the Housing Incentives Program such that it would encourage the phasing of affordable housing in large planned developments when the density bonus incentive has been implemented.

Mitigation PH-10
The County shall identify and use surplus public land to assist in the provision of housing that is affordable to lower income groups.

Mitigation PH-11
The County shall identify sites for affordable housing in the various planning regions of the County.
Mitigation PH-12
The County shall continue to pursue opportunities to acquire and “bank” sites, as necessary, to be used for affordable housing.

Mitigation PH-13
The County shall continue to integrate all aspects of housing assistance and development planning within the Consolidated Plan, consistent with the broader County General Plan and Development Code, and Community Plans in order to identify the existing inventory as well as proposed locations for affordable housing.

Mitigation PH-14
The County shall continue to allow emergency and transitional shelters in any land use district with the appropriate permits, and concurrently develop the appropriate location and design standards for such uses.

Mitigation PH-15
Because of the various lifestyles and population characteristics of the County's residents, a variety and balance of housing types and densities shall be provided, through the General Plan Update, to require that all new planning area or specific plan studies provide housing types and densities commensurate with demonstrated lifestyles, projected needs, and population characteristics of the individual planning area.

Mitigation PH-16
Because it is desirable to optimize use of and limit adverse impacts on existing infrastructure and natural resources such as open space and air quality, more intensive residential development shall be encouraged in areas close to major transportation corridors where the infrastructure already exists and/or is underutilized, through the following actions-programs.

Mitigation PH-17
The County shall identify areas of the County where urban infill is appropriate, and encourage their development through the use of various incentives.

Mitigation PH-18
In the unincorporated areas of the County, the County shall designate residential land use districts within close proximity (three to five miles) of major transportation corridors. The more intensive residential land uses (RS and RM) shall be designated in urbanized areas, and less intensive residential land uses (RS-1, RL-2.5, etc.) in the more rural areas.

Mitigation PH-19
Throughout the County, the County shall continue to encourage mixed-use development through the Planned Development process that includes dense, multiple family residential developments as well as clustered, single family residential development, and other uses which provide convenient shopping and employment opportunities close to major transportation corridors.

5. **SIGNIFICANT UNMITIGATED IMPACTS**
None have been identified.
M. PUBLIC SERVICES

1. SETTING

   Law Enforcement

The San Bernardino County Sheriff’s Department, in collaboration with various cities and other agencies having jurisdiction in the County, provides law enforcement services to the incorporated and the unincorporated communities in the County. Many cities have contracted police protection services to the County Sheriff’s Department. Crime statistics summary from the Federal Bureau of Investigation Crime Index and the California Crime Index for the County of San Bernardino show that from 1992 to 2001 the numbers of incidents have decreased by more than 35,000 annually, a reduction of 34%. However, the pattern of crimes remains unchanged over the years with the majority of crimes throughout the County being property crimes and larceny theft, followed by incidents of violent crimes and arson (Source: California Department of Justice).

Data from the California Department of Justice (refer to Table 2-60 of the Circulation and Infrastructure Background Report prepared for the County General Plan update) show there were a total of 6,303 criminal justice personnel in San Bernardino County in 2001. Of this total, more than 4,500 personnel were employed specifically in law enforcement positions. These statistics report that the number of personnel in the criminal justice system has increased steadily from 1992 to 2001.

The personnel of the San Bernardino Sheriff’s Department provide law enforcement services to the County’s citizens through 24 patrol stations and 13 specific divisions, including an Aviation Division headquartered at the Rialto Airport.

The San Bernardino Sheriff’s Department maintains three correctional facilities, the West Valley Detention Center in Rancho Cucamonga; the Glen Helen Rehabilitation Center, a two-unit, male and female-inmate facility in Devore; and, the Central Rehabilitation Center that houses federal inmates for the United States Marshall Service located in the City of San Bernardino. Additionally, the County of San Bernardino has 11 Superior Court jurisdictions. More details on law enforcement services of the County are provided in the Circulation and Infrastructure Background Report.

Fire Protection

Fire protection services are collaboratively provided through various agencies in San Bernardino County. Below is a brief discussion about these agencies. More details on fire protection services in the County are provided in the Circulation and Infrastructure Background Report prepared for this project.

County of San Bernardino Fire Department: The San Bernardino County Fire Department provides services through 63 fire stations located throughout the four divisions of the Department: Mountain, North Desert, South Desert, and Valley Division.

Fire Districts and County Service Areas (CSAs): There are six County governed fire protection districts and 24 CSAs with fire protection authority. These help make up the overall County fire districts.
California Department of Forestry: The California Department of Forestry has 12 fire stations located at the following locations:

- Chino;
- Chino Hills;
- Crestline;
- Devore;
- Hesperia;
- Highland (Station 541 and 542);
- Lucerne Valley;
- Phelan;
- Yucaipa (Crafton Hills and Station 551); and
- Yucca Valley

Healthcare

California State Law and County Code has assigned the County of San Bernardino Department of Public Health (the Department) the responsibility of protecting the health of the County’s citizens. As the primary agency in charge of its residents’ health, the Department carries out wide-ranging, yet comprehensive, public health programs including traditional public health services mandated by the state of California, but also a substantial range of personal health services provided at the request of its residents, and triaged as priority by the County Board of Supervisors and County-mandated regulatory services. The Department operates more than 30 major programs dedicated to specific public health activities. Specific public health related services include control of communicable diseases, epidemiology, veterinary services, the Public Health Laboratory, child and adolescent health programs, the California Children Services Program, family planning and maternal health services, nutrition services, including the Women, Infants, and Children (WIC) program, preventive health services for the aging, school health, control of chronic disease, public health nursing services, food protection, safe drinking water programs, waste management, animal care and control services, education programs, registration of vital events, and public health data collection and analysis. The Department operates 33 major programs. A list of the Department programs and services is provided in Appendix D to the Circulation and Infrastructure Background Report.

There are approximately 24 hospitals in the overall County area. There is one County hospital – Arrowhead Regional Medical Center that is a full service acute care hospital. Arrowhead also has the only burn treatment facility for both San Bernardino and Riverside counties. There are approximately 283 beds in this County facility. There are also 17 private hospitals that are considered “general acute care” facilities. Of these 17 facilities, 15 have basic emergency services with a physician on duty. The remaining two facilities have basic emergency services with a physician on stand-by. There is one “rural general acute care” hospital located in the Lake Arrowhead area. There are also two major acute psychiatric hospitals in the County. The California Institution for Men also has a hospital onsite. There are approximately 3,269 beds combined for the County’s hospitals.

More details on healthcare services of the County are provided in the Circulation and Infrastructure Background Report prepared for this project.

1 http://www.co.san-bernardino.ca.us/pubhlth/misc/mission.htm
CHAPTER IV

Project Analysis

Libraries

The San Bernardino County Library system currently serves approximately 1,100,000 people in 18 cities and all San Bernardino County’s unincorporated areas through the 29 facilities and two bookmobiles. Twenty-eight of the buildings are branch libraries located throughout the vast county while the Administration building in the City of San Bernardino is considered the 29th branch. The 28 branch facilities have a combined 177,925 square feet of library space, providing one library for every 714 square miles, an equivalent of 0.21 square feet per person residing in a library’s service area. More details on library facilities in the County are provided in the Circulation and Infrastructure Background Report prepared for the County’s General Plan.

Education

With a County-wide K-12 student population of an approximate 420,000 students attending more than 480 schools, the San Bernardino County Superintendent of Schools (SBCSS) office is a regional agency. The SBCSS provides vital and necessary service, leadership and advocacy to the 34 K-12 districts in the County (Source: California Department of Education, California Basic Education Data System, Various Years). Table IV-M-1 provides the location and enrollment levels, while Table IV-M-2 offers schools by type, for the District’s 2002-03 school year. The County has 13 colleges: California State University at San Bernardino, six community colleges, four state-approved institutions, and two Western Association of Schools and Colleges accredited non-public institutions. Table IV-M-3 shows the location and enrollment levels of these colleges. The County also has six Special Education Local Plan Areas (SELPAs) consisting of Desert/Mountain; East Valley; Fontana Unified School District; Morongo Unified School District; San Bernardino City Unified School District; and West End SELPA, and three regional occupational programs including Baldy View; Colton-Redlands-Yucaipa; and county schools regional occupational programs. The County Board of Supervisors exercises direct control over the County School System. The County School System is under the jurisdiction of the State Board of Education.

2. Significance Criteria

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Public Service, if the project would cause any of the following effects:

---

2 Desirable space for public libraries is 0.5-0.6 square feet per capita for a community of population between 35,000-100,000 persons. Source: Joseph L Wheeler and Herbert Goldhor, Practical Administration of Public Libraries (New York: Harper and Row, 1962) p. 554
CHAPTER IV  Project Analysis

- The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire protection.
  - Police protection.
  - Schools.
  - Parks.
  - Other public facilities (e.g., safety).

3. IMPACT ANALYSIS

Law Enforcement

Impact PS-1
Increase in population and human activity in the area will result in an increase in the need for law enforcement services. San Bernardino County has a higher crime rate than the state average and, therefore, crime is one of the main concerns among residents.

Community Facilities Districts have been created in some areas of the County to help provide law enforcement services. Additional Community Facilities Districts will be created in the future in the County to assist in the provision of these services. The update to the San Bernardino County General Plan includes objectives and policies related to police services that will help to ensure the provision of adequate law enforcement services and meet future County residents’ needs.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Fire Protection

Impact PS-2
Growth and development in the unincorporated communities of San Bernardino County will result in an increase in demand for fire protection services. However, in anticipation of that growth, the County has established policies that guide the provisions of fire services and require financial participation by projects.

Of the various public services, fire infrastructure planning is a high priority for the County, especially after the wildfire disasters of 2003. Fire hazard planning continues to be coordinated with land use planning to minimize the detrimental impacts to life and safety of the County residents and the firefighters, as well as damages to property and structures; these issues will be addressed under “safety” in the impact analysis.

The Fire Department currently has eight fire stations either funded and under construction, or pending funding and approval. The necessary type of equipment and staffing at the fire stations may change as development occurs. The provision of additional fire stations and equipment will help serve the needs of future County residents.

The update to the San Bernardino County General Plan provides goals and policies related to fire protection services. Implementation of these goals and policies will reduce the impacts
of future growth of the County on the services. Related goals and policies are included in the Mitigation Measures discussion below.

*This impact can be mitigated to a level below significance by the adoption of certain mitigation measures presented in Section 4, below.*

### Health Care

**Impact PS-3**

With the projected growth in the unincorporated areas of San Bernardino County will result in an increased use of health care facilities. Hospitals and other health care centers will need to expand their facilities or create new facilities in areas that show population growth. Also, doctors and health care physicians will need to be on hand to properly staff these facilities to suit the various needs of residents.

*This impact can be mitigated to a level below significance through the adoption of the Land Use Element, which provides suitable land use designations to accommodate health care facilities.*

### Libraries

**Impact PS-4**

Future growth within the County will result in need for additional library facilities to serve the needs of future County residents. Significant impacts will occur. The San Bernardino County Library Facilities Master Plan presents the library’s need for new facilities over the next 20 years. The Facilities Master Plan establishes three levels of facilities priorities, encompassing renovation, expansion, and replacement of the 29 facilities. The Facilities Master Plan will serve as a major analytical tool for the library’s applications for funds from the Library Bond Act of 2000 (Proposition 14). The plan will result in a total of 666,556 square feet of space, or 0.36 square feet per capita for an approximate service area population of 1,866,146. Provision of additional library facilities as provided by the Facilities Master Plan will provide for future County residents’ library needs, reducing the impact of the future population growth.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

### Education

**Impact PS-5**

Population growth in the County shall increase the number of school age children needing to be served by the various school districts along the County. This will require the expansion of existing school sites/facilities and the construction of new schools. The new school sites will need to be located in proximity to the areas they will serve. Schools are not under County control.

The budget cuts for schools and community colleges due to the state’s economic difficulties during the last two years are the most critical issues faced by the San Bernardino County education system. The proposed fee increases and enrollment freezes in the state budget will affect the total enrollment in colleges for County residents. Another concern for schools is the decreasing rate of enrollments within the school districts.
The update of the County’s General Plan includes a policy that requires the provision of convenient access to County educational facilities that will help in providing future school facilities to serve additional County residents.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

4. Mitigation Measures

The following information is provided in accordance with the Goals and Policies Report for the County of San Bernardino.

**Law Enforcement**

**Mitigation PS-1**
The County shall provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.

**Mitigation PS-2**
The County shall seek and commit sufficient investigative resources for effective follow-up on criminal offenses.

**Mitigation PS-3**
The County shall assess and update training and equipment needs on a routine basis when possible to ensure policing methods are effectively executed while minimizing unnecessary liability.

**Fire Protection**

**Mitigation PS-4**
The County shall protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.

**Mitigation PS-5**
The County shall create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery and thereby identify geographic areas that are in need of infrastructure improvements so that those areas can take the necessary steps to improve that infrastructure and eventually can adequately support the commensurate improvement in fire service delivery.

**Mitigation PS-6**
The County shall encourage development in areas that have adequate infrastructure for the provision of fire service that include, but are not limited to, water system infrastructure that is capable of delivering appropriate fire flow and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.
Mitigation PS-7
The County shall create Community Facilities District or other long-term financial instruments within proposed developments and areas available for development to provide a fair share funding mechanism to support pro-rata increases for the provision of long-term fire protection. The Community Facilities Districts should be designed to provide sustained long-term levels of staffing operations, equipment, and facilities. The Community Facilities Districts should also be designed specifically to the impacts of the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.

Libraries

Mitigation PS-8
The County shall ensure that adequate school, library, and day-care facilities are available and appropriately located to meet the needs of its residents

Education

Mitigation PS-9
The County shall provide convenient access to K-12 and higher educational opportunities for all, activities for youth, and programs for residents of all ages.

5. Significant Unmitigated Impacts
All public service impacts are mitigated to a level below significance.
## Table IV-M-1. School Districts, 2002-03

<table>
<thead>
<tr>
<th>School District</th>
<th>City</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Adelanto School District (elem)</td>
<td>Adelanto</td>
<td>5,548</td>
</tr>
<tr>
<td>2 Alta Loma School District (elem)</td>
<td>Alta Loma</td>
<td>7,609</td>
</tr>
<tr>
<td>3 Apple Valley Unified School District</td>
<td>Apple Valley</td>
<td>13,850</td>
</tr>
<tr>
<td>4 Baker Valley Unified School District</td>
<td>Baker</td>
<td>213</td>
</tr>
<tr>
<td>5 Barstow Unified School District</td>
<td>Barstow</td>
<td>6,816</td>
</tr>
<tr>
<td>6 Bear Valley Unified School District</td>
<td>Big Bear Lake</td>
<td>3,390</td>
</tr>
<tr>
<td>7 Central School District (elem)</td>
<td>Rancho Cucamonga</td>
<td>5,231</td>
</tr>
<tr>
<td>8 Chaffey Joint Union High SD</td>
<td>Ontario</td>
<td>21,981</td>
</tr>
<tr>
<td>9 Chino Valley Unified School District</td>
<td>Chino</td>
<td>32,916</td>
</tr>
<tr>
<td>10 Colton Joint Unified School District</td>
<td>Colton</td>
<td>24,018</td>
</tr>
<tr>
<td>11 Cucamonga School District (elem)</td>
<td>Rancho Cucamonga</td>
<td>2,892</td>
</tr>
<tr>
<td>12 Etiwanda School District (elem)</td>
<td>Etiwanda</td>
<td>10,287</td>
</tr>
<tr>
<td>13 Fontana Unified School District</td>
<td>Fontana</td>
<td>40,168</td>
</tr>
<tr>
<td>14 Helendale School District (elem)</td>
<td>Helendale</td>
<td>603</td>
</tr>
<tr>
<td>15 Hesperia Unified School District</td>
<td>Hesperia</td>
<td>16,195</td>
</tr>
<tr>
<td>16 Lucerne Valley Unified School District</td>
<td>Lucerne Valley</td>
<td>1,005</td>
</tr>
<tr>
<td>17 Morongo Unified School District</td>
<td>Twentynine Palms</td>
<td>9,467</td>
</tr>
<tr>
<td>18 Mountain View School District (elem)</td>
<td>Ontario</td>
<td>3,439</td>
</tr>
<tr>
<td>19 Mt. Baldy Joint School District (elem)</td>
<td>Mt. Baldy</td>
<td>80</td>
</tr>
<tr>
<td>20 Needles Unified School District</td>
<td>Needles</td>
<td>1,190</td>
</tr>
<tr>
<td>21 Ontario-Montclair School District (elem)</td>
<td>Ontario</td>
<td>27,270</td>
</tr>
<tr>
<td>22 Oro Grande School District (elem)</td>
<td>Oro Grande</td>
<td>2,846</td>
</tr>
<tr>
<td>24 Rialto Unified School District</td>
<td>Rialto</td>
<td>30,172</td>
</tr>
<tr>
<td>25 Rim of the World Unified School District</td>
<td>Lake Arrowhead</td>
<td>5,780</td>
</tr>
<tr>
<td>26 San Bernardino City Unified School District</td>
<td>San Bernardino</td>
<td>56,096</td>
</tr>
<tr>
<td>28 Silver Valley Unified School District</td>
<td>Yermo</td>
<td>2,670</td>
</tr>
<tr>
<td>29 Snowline Joint Unified School District</td>
<td>Phelan</td>
<td>8,785</td>
</tr>
<tr>
<td>30 Trona Joint Unified School District</td>
<td>Trona</td>
<td>350</td>
</tr>
<tr>
<td>31 Upland Unified School District</td>
<td>Upland</td>
<td>13,237</td>
</tr>
<tr>
<td>32 Victor Elementary School District</td>
<td>Victorville</td>
<td>9,442</td>
</tr>
<tr>
<td>33 Victor Valley Union High School District</td>
<td>Victorville</td>
<td>10,424</td>
</tr>
<tr>
<td>34 Yucaipa-Calimesa Joint Unified School District</td>
<td>Yucaipa</td>
<td>9,242</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>406,720</strong></td>
</tr>
</tbody>
</table>

Source: San Bernardino County Superintendent of Schools
(www.sbcss.k12.ca.us) California Department of Education (www.cde.ca.gov),
and California Post Secondary Education Commission (www.cpec.ca.gov)
### Table IV-M-2. Schools by Type, 2002-03

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>296</td>
</tr>
<tr>
<td>Middle</td>
<td>73</td>
</tr>
<tr>
<td>Junior High</td>
<td>2</td>
</tr>
<tr>
<td>High School</td>
<td>50</td>
</tr>
<tr>
<td>K-12</td>
<td>5</td>
</tr>
<tr>
<td>Alternative</td>
<td>11</td>
</tr>
<tr>
<td>Special Education</td>
<td>6</td>
</tr>
<tr>
<td>Continuation</td>
<td>24</td>
</tr>
<tr>
<td>Community Day</td>
<td>12</td>
</tr>
<tr>
<td>Juvenile Court</td>
<td>2</td>
</tr>
<tr>
<td>Calif. Youth Authority</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>482</strong></td>
</tr>
</tbody>
</table>

Source: California Department of Education, Educational Demographics Unit

### Table IV-M-3. Colleges, San Bernardino County

<table>
<thead>
<tr>
<th>College District</th>
<th>Location</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>California State University</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 California State University, San Bernardino</td>
<td>San Bernardino, CA</td>
<td>16,341</td>
</tr>
<tr>
<td><strong>California Community Colleges</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Barstow College</td>
<td>Barstow, CA</td>
<td>3,349</td>
</tr>
<tr>
<td>3 Chaffey Community College</td>
<td>Rancho Cucamonga, CA</td>
<td>19,984</td>
</tr>
<tr>
<td>4 Copper Mountain College</td>
<td>Joshua Tree, CA</td>
<td>2,158</td>
</tr>
<tr>
<td>5 Crafton Hills College</td>
<td>Yucaipa, CA</td>
<td>5,519</td>
</tr>
<tr>
<td>6 San Bernardino Valley College</td>
<td>San Bernardino, CA</td>
<td>14,273</td>
</tr>
<tr>
<td>7 Victor Valley College</td>
<td>Victorville, CA</td>
<td>11,793</td>
</tr>
<tr>
<td><strong>State-Approved Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Community Christian College</td>
<td>Redlands, CA</td>
<td>N/A</td>
</tr>
<tr>
<td>9 Everest College</td>
<td>Rancho Cucamonga, CA</td>
<td>N/A</td>
</tr>
<tr>
<td>10 Inland Valley College</td>
<td>Upland, CA</td>
<td>N/A</td>
</tr>
<tr>
<td>11 International School of Theology</td>
<td>Fontana, CA</td>
<td>89</td>
</tr>
<tr>
<td><strong>WASC-Accredited Non-public Institutions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Loma Linda University</td>
<td>Loma Linda, CA</td>
<td>3,297</td>
</tr>
<tr>
<td>13 University of Redlands</td>
<td>Redlands, CA</td>
<td>4,297</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>81,100</strong></td>
</tr>
</tbody>
</table>

Source: California Post Secondary Education Commission (http://www.cpec.ca.gov/)
CHAPTER IV

N. RECREATION

1. SETTING

Open space can be a resource to be used for recreational purposes, including regional parks and other areas that are suited for hiking, nature enjoyment, skiing and similar uses. While modern society has created many types of recreation that can occur in an urban setting, open areas in the outdoors remain an important location for many people seeking rest and relaxation. The County of San Bernardino has an abundance of outdoor recreational opportunities. Within the County there are: water sports; hiking, bicycling, and equestrian activities; off-road vehicle recreation; fishing, camping and hunting; passive recreation and enjoyment of the natural setting; and developed parks. The major providers of outdoor recreation are the BLM, the USFS, State Department of Parks and Recreation, National Parks, County Regional Parks Department, and local City Parks Departments.

The BLM has jurisdiction of vast areas of the County. The BLM manages about 6,076,378 acres of public land in the Desert Region of the County, which represents about 47% of the County's public land holdings. BLM special management areas in the County include: California Desert Conservation Plan; Northern & Eastern Colorado Desert Management Plan; Northern & Eastern Mojave Desert Plan; and the West Mojave Habitat Conservation Plan and California Desert Conservation Plan Amendment. In addition to these plans, the BLM manages the congressionally designated Wilderness Areas, of which there are 28 of these in the County. These Wilderness Areas are undeveloped lands which have no permanent improvements or human habitation. There are also six off-highway vehicle recreation areas which are open spaces where vehicles such as off-road motorcycles are used. These off-highway vehicle areas are: Spangler Hills, El Mirage, Stoddard Valley, Johnson Valley, Rasor and Dumont Dunes.

The U.S. Department of Agriculture, U.S. Forest Service (USFS), manages the majority of the geographic area within the Mountain Regions of the County totaling over 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains. The mission of the USFS is to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations. The national forests are managed by the USFS for multiple uses including recreation, watershed protection, grazing, wildlife, and forest management. Within the San Bernardino County portion of the San Bernardino National Forest lie the Cucamonga Wilderness, San Gorgonio Wilderness, and Bighorn Mountain Wilderness. The USFS has recently updated the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The USFS also administers the Pacific Crest Trail (PCT), which is a designated National Scenic Trail approximately 2,650 miles long running from Canada to Mexico. One hundred fifteen miles of the PCT trail runs through San Bernardino County.

The National Park Service regulates the Mojave National Preserve, Joshua Tree National Park, and Death Valley National Park. All of these National Parks attract visitors for the scenic beauty and uniqueness in the California landscape.

The California Department of Parks and Recreation manages a number of parks within the County, including: Silverwood State Recreation Area, Providence Mountain State Recreation Area, Chino Hills State Recreation Area and Wildwood Canyon. Wildwood Canyon is a new park and is currently not available for public use.
There are also nine regional parks in the County. Regional parks generally encompass 100 or more acres and are designed to serve a population of 100,000 residents. These regional parks offer a variety of recreational and entertainment opportunities.

In addition to the regional parks, there are 17 community parks within the County. Community parks serve a 2- to 4-mile radius with a population of 50,000 to 80,000. The size of these parks is generally from 15 to 20 acres. Community, municipal and neighborhood park facilities are provided by self-governed park districts within the unincorporated portions of the County and by cities and towns within the unincorporated areas. These facilities typically include playgrounds, sports fields, and senior citizen centers. Table IV-N-1 lists the County’s regional and community parks.

The U.S. Forest Service operates and maintains an additional 914 miles of roadway that is open to the general public for pursuit of various recreational opportunities.

Inventory of Recreational Areas by Planning Region

a) Valley Region

The Valley Region of the County contains only 20% of the land area of the County, but almost three-quarters of the County’s population lives there. State parks in the region include Chino Hills State Park and Wildwood Canyon State Park Property. Table IV-N-2 lists the regional and community parks in the Valley Region of the County.

b) Mountain Region

Most of the Mountain Region of the County of San Bernardino is covered by the Angeles and San Bernardino National Forests. State parks include Silverwood Lake State Recreation Area. Table IV-N-3 lists the regional and community parks in the Mountain Region of the County.

c) Desert Region

The Desert Region of the County has the most recreational opportunities. Off-Highway Vehicle Recreation Areas in the Desert include Spangler Hills, El Mirage, Stoddard Valley, Johnson Valley, Rasor, Dumont Dunes. National Parks in the Desert Region are Death Valley, Mojave National Preserve, and Joshua Tree. State parks in the region are Providence Mountain State Park, and Providence Mountains State Recreation Area. Table IV-N-4 lists the regional and community parks in the Desert Region of the County.

d) County

When examining the County as a whole it is important to note that the County is currently within the County standard of 2.5 acres of park area for each 1,000 population. The County population total (incorporated and unincorporated) is approximately 1,716,166. Using the County standard of 2.5 acres per 1,000 populations, the County would need approximately 4,290 acres of parkland. The total parkland in all three planning regions is 9,647 acres. The County meets the standard of 2.5 acres of parkland per 1,000 populations.
CHAPTER IV

Project Analysis

2. **SIGNIFICANCE CRITERIA**

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Recreation, if the project would cause any of the following effects:

- The project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- The project includes recreational facilities or requires the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

3. **IMPACT ANALYSIS**

Impacts related to increased demand for recreational opportunities will be significant if a proposed project requires new construction to maintain acceptable performance standards for public parks or recreational opportunities and that new construction causes new significant environmental impacts.

*a) Valley Region*

**Impact REC-1**

The County does not have adequate park space for the projected population called for by the updated General Plan in the Valley Region. The County would need an additional 1,712 acres of parkland to meet the accepted standard.

The 2030 projected unincorporated County population for the Valley Region is 186,224. The total projected population for incorporated city residents in the Valley Region is 1,716,384. This brings the projected total residents of the Valley Region to 1,902,608. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. Using the County standard, the required regional park space for the Valley Region would be approximately 4,757 acres. Currently, there are approximately 3,045 acres of regional and community parks in the Valley Region.

There is a planned regional park, Colton Regional Park, which will add 150 acres of parkland to the Valley Region. The County and local cities would still need an additional 1,562 acres of regional parkland in the Valley Region.

This impact can be mitigated by the adoption of certain mitigation measures presented in Section 4, below.

*b) Mountain Region*

**Impact REC-2**

The 2030 projected unincorporated County population for the Mountain Region is 72,833. The total projected population for incorporated city residents in the Mountain Region is 11,890. This brings the projected total residents of the Mountain Region to 84,723. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Mountain Region would be
approximately 213 acres. Currently, there are approximately 1,551 acres of regional and community parks in the Mountain Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

c) Desert Region

Impact REC-3
The 2030 projected unincorporated County population for the Desert Region is 148,918. The total projected population for incorporated city residents in the Desert Region is 548,584. This brings the projected total residents of the Desert Region to approximately 698,000. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Desert Region would be approximately 1,745 acres. Currently, there are approximately 5,051 acres of regional and community parks in the Desert Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

d) County

Impact REC-4
The 2030 projected population for the County, as a whole is 2,685,486. Under the County’s guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The County as a whole currently has 9,647 acres of parkland. The County as a whole will meet the County standard.

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, national forests, state parks and BLM land which the people of the County can use.

Since this Impact is not significant, no mitigation measures are necessary.

4. Mitigation Measures

Mitigation REC –1
The County shall support the establishment of "urban open space areas" within urban areas, and seek to develop or retain these areas through cooperation with local cities. Where possible, these areas shall be located along or near regional trail routes.

Mitigation REC –2
The County shall strive to achieve a standard of 14.5 acres of undeveloped lands and/or trails per 1,000 population and 2.5 acres of developed regional parkland per 1,000 populations. "Undeveloped lands" may include areas established to buffer regional parks from encroachment by incompatible uses.
**CHAPTER IV**  

*Project Analysis*

**Mitigation REC –3**  
When specific projects are reviewed which exhibit natural features worthy of regional park land status, the County shall require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.

**Mitigation REC –4**  
The County shall ensure that the variety of recreational experiences at Regional Park sites meets the needs of the region.

**Mitigation REC –5**  
The County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.

**Mitigation REC –6**  
The County shall implement the Quimby Act (Gov. Code Section 66477) through the subdivision process in providing for local opportunities (both passive and active).

**Mitigation REC –7**  
Areas in new developments that are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.

**Mitigation REC –8**  
In addition to parkland to meet the 3 acres per 1,000 local park standard, large-scale housing projects in the Valley Region with 100 or more units shall provide on-site recreational facilities, including pools, tennis courts and turfed play areas and tot-lots.

**Mitigation REC –9**  
The County shall classify local parks in three categories: Local, Neighborhood and Community Parks, and establish size and location standards as follows:

- **Local Park:** A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.

- **Neighborhood Park:** A walk-in park, up to 10 acres, with a service radius of a half-mile. Serves a neighborhood and provides a passive recreation location for all age groups.

- **Community Park:** A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius.

**Mitigation REC –10**  
The County shall expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems.

**Mitigation REC –11**  
The County shall provide a regional trail system, plus rest areas, to provide continuous interconnecting trails that serve major populated areas of the County and existing and
proposed recreation facilities through the regional trail system. The purpose of the County regional trails system shall be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system.

Mitigation REC –12
The County shall provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails and the trail route and use descriptions shown in Figures 2-11A through 2-11C of the Circulation Background Report.

Mitigation REC –13
The County shall work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system; and to secure trail access through purchase, easements or by other means.

Mitigation REC –14
The County shall utilize public funding mechanisms whenever possible to protect and acquire lands for open space uses.

Mitigation REC –15
The County shall actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction and operation.

Mitigation REC –16
The County shall use general funds, user fees, proceeds from concession operations and other sources that may be available to finance open space and trail acquisition, construction and operation.

Mitigation REC –17
The County shall include open space and trail acquisition and development in its Capital Improvement Programs.

Mitigation REC –18
The County shall locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.

Mitigation REC –19
The County shall use lands already in public ownership or proposed for public acquisition, such as right-of-way for flood control channels, abandoned railroad lines and fire control roads for trails wherever possible, in preference to private property.

Mitigation REC –20
The County shall encourage the dedication or offers of dedication of trail easements where appropriate for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.

Mitigation REC –21
The County shall monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Resources Overlay. Existing trail easements or alignments shall be mapped in their correct positions; proposed alignments shall be mapped in general locations. The Resources
Overlay shall be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.

**Mitigation REC –22**
The County shall use active and abandoned road, utility, and railroad rights-of-way for non-vehicular circulation in all new development when found feasible.

**Mitigation REC –23**
The County shall require proposed development adjacent to trail systems to dedicate land for trailhead access points. Existing right-of-way and surplus public properties should be utilized for these staging areas whenever possible.

**Mitigation REC –24**
The County shall begin acquisition of trail easements or rights-of-way after a trail route plan has been adopted, unless a trail segment is to be acquired through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.

**Mitigation REC –25**
The County shall develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas.

**Mitigation REC –26**
To preserve and protect recreational facilities in the County, the County shall utilize public funding mechanisms wherever possible to protect and acquire regional park lands.

**Mitigation REC –27**
To expand recreational opportunities in the County, the County shall utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas. The County Department of Public Works shall contact the Regional Parks Department or other County open space agency prior to disposing of any surplus lands.

5. **SIGNIFICANT UNMITIGATED IMPACTS**

All impacts on recreation would be less than significant after mitigation.
### Table IV-N-1. Regional and Community Parks in San Bernardino County

<table>
<thead>
<tr>
<th>Regional Parks</th>
<th>Community Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calico Ghost Town Regional Park</td>
<td>Big Bear Park</td>
</tr>
<tr>
<td>Glen Helen Regional Park</td>
<td>Chet Hoffman Park</td>
</tr>
<tr>
<td>Moab Regional Park</td>
<td>Crest Park</td>
</tr>
<tr>
<td>Mojave River Forks Regional Park</td>
<td>Dana Point Park</td>
</tr>
<tr>
<td>Yucaipa Regional Park</td>
<td>Midway Park</td>
</tr>
<tr>
<td>Cucamonga-Guasti Regional Park</td>
<td>Pioneer Park</td>
</tr>
<tr>
<td>Lake Gregory Regional Park</td>
<td>Sugarloaf Park</td>
</tr>
<tr>
<td>Mojave Narrows Regional Park</td>
<td></td>
</tr>
<tr>
<td>Prado Regional Park</td>
<td></td>
</tr>
</tbody>
</table>

Source: [http://www.co_san_bernardino.ca.us/parks/GIS](http://www.co_san_bernardino.ca.us/parks/GIS)

The adequacy of outdoor recreational opportunities is typically measured in terms of the quantity of space and the quality of the facilities and programs. County standards for the quantity of space distinguish between local and regional parkland: 2.5 acres of developed regional parkland per 1,000 populations.
Table IV-N-2. Regional Parks and Community Parks in the Valley Region

<table>
<thead>
<tr>
<th>Regional Parks</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prado Regional Park</td>
<td>2,000</td>
</tr>
<tr>
<td>Cucamonga-Guasti Regional Park</td>
<td>150</td>
</tr>
<tr>
<td>Yucaipa Regional Park</td>
<td>885</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>3,035</strong></td>
</tr>
<tr>
<td>Community Parks</td>
<td></td>
</tr>
<tr>
<td>Miller Park</td>
<td>8</td>
</tr>
<tr>
<td>Running Deer Park</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>10</strong></td>
</tr>
<tr>
<td><strong>Total Regional and Community Park Acres</strong></td>
<td><strong>3,045</strong></td>
</tr>
</tbody>
</table>

Sources: [http://www.co.san-bernardino.ca.us/parks/GIS](http://www.co.san-bernardino.ca.us/parks/GIS)

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 3,202 acres of parkland would be required for the Valley Region’s year 2000 population of approximately 1,280,964. Therefore, the local recreation facilities would not have capacity available to support additional population and 157 acres of additional parkland that are required for the existing population in the Valley Region. However, the Mountain and Desert Region have parkland in excess of the 2.5 acres for each 1,000 of population. Countywide the requirement for park area is exceeded by 5,513 acres.
Table IV-N-3. Regional Parks and Community Parks in the Mountains Region

<table>
<thead>
<tr>
<th>Regional Parks</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Helen Regional Park</td>
<td>1,340</td>
</tr>
<tr>
<td>Lake Gregory Regional Park</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>1,490</strong></td>
</tr>
<tr>
<td>Community Parks</td>
<td></td>
</tr>
<tr>
<td>Big Bear City Park</td>
<td>9</td>
</tr>
<tr>
<td>Crest Park</td>
<td>3</td>
</tr>
<tr>
<td>Crestline Park</td>
<td>2</td>
</tr>
<tr>
<td>Dana Point Park</td>
<td>8</td>
</tr>
<tr>
<td>Erwin Lake Park</td>
<td>2</td>
</tr>
<tr>
<td>Grout Bay Park</td>
<td>8</td>
</tr>
<tr>
<td>Meadows Edge Park</td>
<td>9</td>
</tr>
<tr>
<td>Switzer Park Picnic Area</td>
<td>12</td>
</tr>
<tr>
<td>Thurman Flats Picnic Grounds</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>61</strong></td>
</tr>
</tbody>
</table>

**Total Regional and Community Park Acres: 1,551**

Sources: [http://www.co.san-bernardino.ca.us/parks/GIS](http://www.co.san-bernardino.ca.us/parks/GIS)

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 139 acres of parkland would be required for the Mountain Region’s year 2000 population of approximately 55,428. The Mountain Region has 1,551 acres of parkland currently which is over the standard for park areas.
Table IV-N-4. Regional Parks and Community Parks in the Desert Region

<table>
<thead>
<tr>
<th>Regional Parks</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Morongo Regional Park</td>
<td>183</td>
</tr>
<tr>
<td>Calico Ghost Town Regional Park</td>
<td>480</td>
</tr>
<tr>
<td>Moabi Regional Park</td>
<td>1,100</td>
</tr>
<tr>
<td>Mojave Narrows Regional Park</td>
<td>840</td>
</tr>
<tr>
<td>Mojave River Forks Regional Park</td>
<td>2,393</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>4,996</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community Parks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Big River Park and Recreation Site</td>
<td>14</td>
</tr>
<tr>
<td>Chet Hoffman Park</td>
<td>4</td>
</tr>
<tr>
<td>Covington Park</td>
<td>3</td>
</tr>
<tr>
<td>Midway Park</td>
<td>16</td>
</tr>
<tr>
<td>Pioneer Park</td>
<td>12</td>
</tr>
<tr>
<td>Sugarloaf Park</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Acres:</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

| **Total Regional and Community Park Acres** | **5,051** |

Sources: [http://www.co.san-bernardino.ca.us/parks/GIS](http://www.co.san-bernardino.ca.us/parks/GIS)

Based on the County standard of 2.5 acres of park area for each 1,000 population served, 950 acres of parkland would be required for the Desert Region’s year 2000 population of approximately 379,774. The Desert Region has 5,051 acres of parkland currently which is over the standard for park areas.
CHAPTER IV

O. TRANSPORTATION/TRAFFIC

1. SETTING

San Bernardino County extends from the eastern edge of the Los Angeles metropolitan region to the Arizona border. Because of its location, the County acts as the gateway between southern California and the continental United States. The vast majority of travel trips in the County are made by automobile, using the existing network of freeways and arterial highways. Transit (i.e., bus and commuter rail) service is also an increasingly important mode of transportation in the more urbanized parts of the County. A small fraction of the trips are made utilizing other modes of transportation such as air, intercity rail, bicycling and walking.

San Bernardino County has major freeway and railroad corridors that provide access to cargo and products between the Ports of Los Angeles and Long Beach and the rest of the country. Currently, these ports are two of the busiest ports in the world, and, as a result, a large portion of the goods traveling into and out of the United States pass from these ports through the County either by truck or rail. Cargo operations are aided by two large-scale railroad classification yards and a state-of-the-art intermodal transfer facility located within the County.

Other rail infrastructure includes portions of three commuter rail lines, connecting the County to Los Angeles and Orange Counties, and two transcontinental routes operated by Amtrak. The County has also been identified as one of the prime locations for the development of magnetic levitation high-speed rail, Maglev, in the near future.

The aviation industry also has a strong presence in San Bernardino County, with a total of 44 public and private airports and 25 heliports. Included in these are Ontario International Airport, one of the fastest growing commercial airports in the United States; Southern California Logistics Airport (SCLA) and San Bernardino International Airport (SBDIA), new intermodal gateways for air freight just beginning to develop; and Cable Airport, the largest privately-owned airport in the United States.

Roadway System

There are currently over 10,000 miles of roadways located within San Bernardino County. These facilities fall under the jurisdiction of one of three levels of governmental agencies responsible for construction and maintenance of roadway infrastructure. Caltrans is responsible for maintaining approximately 1,240 miles of roadway throughout the County. This total includes six federal (Interstate) freeways, two federal (U.S.) highways and eighteen state highways, also known as state routes. The San Bernardino County Department of Public Works is responsible for maintaining approximately 2,830 miles of both paved and unpaved roadways primarily located in unincorporated areas of the County. These facilities range in classification from major arterial highways to local streets. The remaining 5,930 miles of roadways within San Bernardino County fall under the jurisdiction of the numerous incorporated municipalities located across the County. These facilities also range in classification from major arterials to local streets. Figures 2-1A through 2-1C of the Circulation Background Report show the extensive roadway network that currently exists within the Valley, Mountain and Desert Regions. Figures 2-2A through 2-2C of the Circulation Background Report show the roadway network that is currently under County jurisdiction in the three regions.
Roadway Descriptions

The following roadways are considered to be major transportation corridors and routes within San Bernardino County. A brief description of each facility and, if available, its current lane configuration, average daily traffic volume (ADT) and operating level of service (LOS) for the specified time period are provided.

Freeways

Freeways act as major thoroughfares across the County and provide regional access to areas located both inside and outside the County boundaries. Caltrans is responsible for designing, building and maintaining all freeway facilities located in the County. Descriptions of the interstate freeway facilities located in San Bernardino County are provided below.

San Bernardino Freeway (I-10) – The San Bernardino Freeway travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Ontario Freeway (I-15) – The Ontario Freeway extends north from the San Diego metropolitan area through the western portion of San Bernardino County and continues in a north-easterly direction to Las Vegas, Nevada and beyond.

State Route 30 (SR-30) – State Route 30 provides an alternative connection between I-10 and I-215 for residents of eastern San Bernardino and Highland. This facility currently extends easterly from I-215 to State Route 330 then turns southward and continues to its junction with the I-10 Freeway. SR-30 will become the eastern section of SR-210 and be expanded to three lanes in each direction once construction is completed.

Needles Freeway (I-40) – The Needles Freeway splits from I-15 just east of Barstow and continues east until the Arizona State Line. This facility is a major trucking route providing access to Los Angeles to the west and Flagstaff, Arizona and beyond to the east.

The Pomona Freeway (SR-60) – The Pomona Freeway splits from I-10 in downtown Los Angeles and rejoins it in the City of Beaumont as it travels through the Inland Empire. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east and Ontario as well as a portion located on unincorporated county land southeast of Ontario.

Chino Valley Freeway (SR-71) – The Chino Valley Freeway travels southeast from the I-10/SR-210 Interchange in San Dimas to the Riverside Freeway (SR-91) in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 210 (SR-210) – State Route 210 begins at an interchange with the Golden State Freeway (I-5) in Los Angeles County and continues east across the Valley region to its current terminus at Alder Avenue in the City of Rialto. Construction is currently in progress to extend this facility to SR-30, and that facility will become the eastern segment of SR-210

Interstate 215 (I-215) – Interstate 215 provides an alternative route to I-15 through San Bernardino County by splitting from I-15 near Devore and reconnecting south in Riverside County.
State Route 259 (SR-259) – State Route 259 is a connector route that begins just south of 16th Street in the city of San Bernardino and continues northward until it merges with State Route 30.

State Highways

State highways also fall under Caltrans’ jurisdiction and provide additional connectivity and access not afforded by the interstate freeways discussed earlier. These facilities are especially important in providing access to many areas of both the Mountain and Desert Regions. Descriptions of the state highway facilities located in San Bernardino County are provided below.

Angeles Crest Highway (SR-2) – Angeles Crest Highway is a rural highway that travels from State Route 210 in La Canada Flintridge northeast to Pearblossom Highway (SR-138). This roadway is primarily used as access into the Angeles Crest National Forest.

Waterman Avenue / Rim of the World Highway / Happy Trails Highway / Palmdale Road (SR-18) – The portion of this roadway from SR-30 to Big Bear Lake is a major access route into the Lake Arrowhead and Big Bear Lake resorts. This facility continues north and then east along the southern shore of Big Bear Lake. Beyond Baldwin Lake, it turns northwest and travels to the SR-247 junction in Lucerne Valley where it turns west continuing to Central Road in Apple Valley. This facility continues west from Central Road in Apple Valley as Happy Trails Highway until it becomes D Street in Victorville and eventually reaches I-15. SR-18 merges with I-15 and continues south to Palmdale Road where it turns westward until it merges with SR-138 just west of the San Bernardino County Line. From I-15 to it junction with SR-138, this roadway provides a direct connection between Victorville and Palmdale. This segment also operates as a bypass for trucks making deliveries in the western portion of the Los Angeles Metropolitan Region.

Mill Creek Road / North Shore Drive (SR-38) – This facility is a major access route to the Big Bear Lake area. From I-10, SR-38 travels north, as Orange Avenue, and east, as Lugonia Avenue, out of the City of Redlands into unincorporated county land, passing through the community of Mentone where it is named Mentone Boulevard. East of Mentone, SR-38 becomes Mill Creek Road and continues traveling northeast into the San Bernardino National Forest until the junction with SR-18 just east of Big Bear Lake. From this junction, SR-38 continues west past Big Bear Lake as North Shore Drive before terminating at SR-18 just west of Big Bear Lake.

Mojave-Barstow Highway (SR-58) – The Mojave-Barstow Highway originates in Barstow at I-15 and travels west through Kern County to Mojave in Los Angeles County. This facility provides a connection between Barstow and Mojave. It also provides some relief to I-15 during periods of severe congestion.

Twentynine Palms Highway / Aqueduct Road (SR-62) – Twentynine Palms Highway (SR-62) travels along the extreme southern edge of San Bernardino County. SR-62 extends north from I-10 out of Riverside County and continues east through Yucca Valley all the way to the Arizona State Line. This rural highway provides access to Yucca Valley, Twentynine Palms and Joshua Tree National Park.

Foothill Boulevard (US-66/SR-66)/ 5th Street / Greenspot Road / Florida Street – This corridor is a major thoroughfare across the entire northern portion of the Los Angeles
Metropolitan Area. In San Bernardino County, it begins as Foothill Boulevard at the Los Angeles County line and is classified as a state highway (US-66/SR-66). It extends eastward through the cities of Upland, Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto. After entering the City of San Bernardino, it becomes 5th Avenue, a primary arterial, and continues east into the City of Highland. East of Boulder Avenue, this roadway becomes Greenspot Road, a secondary arterial, and continues through the eastern portion of the City of Highland. At the edge of East Highlands, the classification is again changed to a minor arterial or residential street. Greenspot Road continues south and east until becoming Florida Street. The terminus of this corridor is Florida Street which is located in the extreme eastern portion of the City of Highlands and links to Mill Creek Road (SR-38) through Garnett Street.

Euclid Avenue (SR-83) – Euclid Avenue (SR-83) is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between 19th Street (SR-30), Foothill Boulevard (SR-66), the San Bernardino Freeway (I-10), the Pomona Freeway (SR-60) and the Chino Valley Freeway (SR-71).

State Route 127 (SR-127) – This rural highway extends north from I-15 in Baker and continues through Inyo County to the Nevada State Line. It is primarily used to provide access to Death Valley National Monument from the east and to other rural properties located in southeastern Inyo County.

Pearblossom Highway (SR-138) – Pearblossom Highway is a rural highway that travels southeast from Palmdale in Los Angeles County to an interchange with I-15 at Cajon Junction. This segment provides a connection between the Antelope Valley and Apple Valley for commuters and commercial traffic. SR-138 continues east and then south from I-15 through the San Bernardino National Forest until it terminates at Rim of the World Highway (SR-18). This segment provides access to the Lake Arrowhead and Big Bear Lake resorts from the northwest.

Carbon Canyon Road / Chino Hills Parkway (SR-142) – This corridor is designated as a state highway (SR-142) and extends southwest through the cities of Chino and Chino Hills. This facility provides a direct connection between San Bernardino County and Orange County.

State Route 173 (SR-173) – This rural highway extends north from Rim of the World Highway (SR-18) and continues counterclockwise around Lake Arrowhead before terminating at SR-138 just northwest of Silverwood Lake. The portion of roadway between Willow Creek Jeep Trail and Pacific Crest National Scenic Trail is unpaved.

State Route 189 (SR-189) – This rural highway splits from Rim of the World Highway (SR-18) and continues east until it terminates at a junction with SR-173. This facility provides access to residential properties in the Twin Peaks and Blue Jay communities.

Barstow Road / Old Woman Springs Road (SR-247) – Barstow Road (SR-247) is a north-south rural highway that originates at I-15 and provides access between Barstow and Lucerne Valley. Old Woman Springs Road (SR-247) travels southeast from Lucerne Valley to Yucca Valley and terminates at SR-62.

City Creek Road (SR-330) – City Creek Road (SR-330) originates as an interchange with SR-30. It is located at the southward turn in the SR-30 alignment and is currently a divided freeway until just north of Highland Avenue. From Highland Avenue, this facility continues
north and east as a rural highway until it terminates at a junction with SR-18 in the Running Springs community. This roadway operates as an alternative access route for the Lake Arrowhead and Big Bear Lake areas.

Federal U.S. Highways

These facilities are also under Caltrans’ jurisdiction and operate in a similar manner to state highways discussed above. Descriptions of the federal highway facilities located in San Bernardino County are provided below.

United States Highway 95 (US 95) – US 95 is a rural highway that travels along the extreme eastern border of San Bernardino County. This facility provides a connection between Las Vegas, Nevada, I-15, I-40 and I-10.

Three Flags Highway (US 395) – This roadway is a rural highway that extends from Cajon Pass in Hesperia north through Victorville and continues along the eastern edge of the Sierra Nevada Mountains. This facility is a connection between I-15, SR-18 and SR-58.

Roadway Facilities

Jurisdiction for these roadways fall under either the County or that of the municipality in which there are located. These facilities provide connectivity between residential and commercial regions, as well as, channeling traffic to the numerous interstate freeways and state highways located throughout the County. Descriptions of major roadway facilities located in San Bernardino County are provided below.

Valley – East/West Facilities

16th Street / Base Line Road – This primary arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino and Highland.

19th Street (SR-30) – Nineteenth Street originates in Upland just west of Mountain Avenue and extends to just east of Haven Avenue in Rancho Cucamonga where it terminates at San Benito Avenue. The entire segment between Mountain Avenue and Haven Avenue is classified as a state highway (SR-30) from Mountain Avenue to Haven Avenue.

2nd Street – This secondary arterial is located in the City of San Bernardino and extends from Mount Vernon Avenue to Waterman Avenue. This street provides access to the San Bernardino Metrolink station and Park & Ride lot as well as San Bernardino International Airport from I-215.

3rd Street – Third Street is a secondary arterial that provides access to the San Bernardino Metrolink station, Park & Ride lot and San Bernardino International Airport. This street begins just east of Mount Vernon Avenue and extends eastward to Palm Avenue, traveling just to the north of San Bernardino International Airport.

4th Street – This roadway is located in the City of Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside the City of Ontario as San Bernardino Avenue.
5th Avenue / Sand Canyon Road – This facility begins in the City of Redlands just east of I-10 and continues eastward into unincorporated San Bernardino County. At this point the roadway turns southeast and becomes Sand Canyon Road, continuing to the City of Yucaipa. This roadway provides direct access to Crafton Hills College and acts as an alternative route to I-10 as it passes from the City of Redlands into the City of Yucaipa. It is currently classified as a secondary arterial.

40th Street – Fortieth Street originates from Kendall Drive in the City of San Bernardino and extends eastward until eventually turning south and becoming Del Rosa Avenue. This roadway provides an east-west thoroughfare across the northern portion of the City of San Bernardino.

Agua Mansa Road – This secondary arterial travels through the southern portion of the City of Colton and provides a connection into Riverside County.

Arrow Highway / 8th Street – Arrow Highway is a primary arterial that travels through the city of Montclair and becomes 8th Street once it enters the city of Upland. This facility parallels the Burlington Northern Santa Fe (BNSF) rail line upon which the Metrolink San Bernardino Line operates. Arrow Highway / 8th Street provides access to both the Montclair Transportation Center and the Upland Metrolink station. This facility is also a major corridor for commuters traveling west into Los Angeles County.

Arrow Route - This roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana and ends in Rialto.

Barton Road / Washington Street / Brookside Avenue / Citrus Avenue – This corridor begins at La Cadena Drive in the city of Grand Terrace and continues eastward along the border between the cities of Colton and San Bernardino, where its name is changed to Washington Street. After entering the city of Loma Linda its name returns to Barton Road and it continues into the city of Redlands. In the city of Redlands, its name is changed again to Brookside Avenue and finally to Citrus Avenue.

Bloomingston Avenue – This primary arterial provides a connection between I-10 and the Rialto Metrolink station. It is also a connection between the two major north-south thoroughfares of Cedar Avenue and Riverside Avenue in the city of Rialto.

Colorado Street – This secondary arterial is a link between Oak Glen Road and Wildwood Canyon Road and acts as a reliever for traffic utilizing I-10 through the city of Yucaipa.

Colton Avenue / Inland Center Drive – This primary arterial is located between the cities of San Bernardino and Colton.

Edison Avenue – This roadway begins just east of SR-71 in the city of Chino and extends eastward through the city of Ontario. It is classified as a primary arterial.

Grand Avenue – This primary arterial extends from the boundary between the cities of Chino and Chino Hills westward through Chino Hills into Los Angeles County.
Highland Avenue – Highland Avenue passes through the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino and Highland. This roadway originates as a secondary arterial at Amethyst Street in the City of Rancho Cucamonga and continues east to Milliken Avenue. From Milliken Avenue, it continues as a minor arterial until it reaches Rochester Avenue. Between Rochester Avenue and Etiwanda Avenue, Highland Avenue is once again a secondary arterial. At Etiwanda Avenue, this roadway returns to a minor arterial until the SR-210 and I-15 interchange. For the segment east of this interchange to Sierra Avenue, Highland Avenue becomes a secondary arterial. At Sierra Avenue, this roadway becomes a state highway (SR-30) and continues until just east of California Street where SR-30 turns north, just before I-215. At this point, Highland Avenue becomes a primary arterial and continues to Boulder Avenue in the City of Highland. The roadway then reverts back to a secondary arterial until it reaches Church Street. East of Church Street, Highland Avenue becomes a minor arterial before terminating at Pleasant View Lane.

Holt Boulevard – Holt Boulevard is a primary arterial that originates in the City of Pomona and provides a connection between SR-71 and I-10 as well as access to Ontario International Airport.

Jurupa Street / Jurupa Avenue – Jurupa Street originates at Archibald Avenue and continues east to Etiwanda Avenue as a secondary arterial. From Etiwanda Avenue to Mulberry Avenue, this roadway becomes Jurupa Avenue, a minor arterial. At Mulberry Avenue, it returns to a secondary arterial and continues to Sierra Avenue.

Live Oak Canyon Road – This facility is a secondary arterial located at the extreme southern edge of San Bernardino County. It provides a connection between San Timoteo Canyon Road and I-10 in the City of Redlands.

Lugonia Avenue / Mentone Boulevard / Mill Creek Road – Lugonia Avenue begins at Mountain View Avenue as a secondary arterial and extends eastward across the City of Redlands. At Orange Street, it becomes a state highway (SR-38) before entering unincorporated San Bernardino County. At this point, it becomes Mentone Boulevard and eventually Mill Creek Road. This roadway is one of the primary access routes to Big Bear Lake and the surrounding communities.

Merrill Avenue / Mill Street – Merrill Avenue originates as a secondary arterial at Cherry Avenue in unincorporated San Bernardino County west of the City of Fontana. At Fontana Avenue, the classification is changed to primary arterial and continues eastward to Riverside Avenue. The classification returns to secondary arterial and will continue as such until reaching Mount Vernon Avenue. From Mount Vernon Avenue to its terminus at Tippecanoe Avenue, this roadway is again classified as a primary arterial.

Mission Boulevard – This roadway is a primary arterial that parallels the Union Pacific rail line for its entire distance across San Bernardino County. It is a major thoroughfare across the county and provides access to Ontario International Airport.

Oak Glen Road – This roadway is a secondary arterial that begins at I-10 and travels northeast through the City of Yucaipa and eventually turns south into Riverside County.

Redlands Boulevard – Beginning just east of the I-215 and I-10 interchange, Redlands Boulevard is a primary arterial that parallels I-10 as it crosses the City of Redlands. This facility provides drivers with an alternative to I-10 if congestion or delay is encountered.
Riverside Drive – Riverside Drive is a primary arterial that originates at SR-71 just outside the southern boundary of the City of Pomona. It extends eastward paralleling SR-60 through the cities of Ontario and Chino until terminating just inside Riverside County at Etiwanda Avenue. This facility provides an alternative route to avoid congestion or delay on SR-60.

San Bernardino Avenue / 4th Street – This roadway extends across a large portion of San Bernardino County and travels through the cities of Montclair, Ontario (as 4th Street), Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto before ending in the City of Colton. San Bernardino Avenue begins again in the City of San Bernardino at Tippecanoe Avenue and continues east through the City of Redlands and into unincorporated San Bernardino County.

Slover Avenue – Slover Avenue parallels the I-10 Freeway on the south, extending from Etiwanda Avenue east to Pepper Avenue. A majority of this facility is located in unincorporated San Bernardino County with small segments passing through the Cities of Fontana and Rialto.

Wildwood Canyon Road – Wildwood Canyon Road is a secondary arterial that extends through the southern portion of the City of Yucaipa. It is a connection between I-10 and Oak Glen Road.

Valley Boulevard – This facility is a primary arterial that runs parallel to the I-10 Freeway to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and the Cities of Fontana and Rialto before terminating at Mount Vernon Avenue in the City of Colton.

Yucaipa Boulevard – This roadway originates at I-10 and extends through the central portion of the City of Yucaipa.

Valley – North/South Facilities

14th Street – This roadway is a minor arterial / residential street located between Yucaipa Boulevard and Oak Glen Road in the City of Yucaipa.

Alabama Street – Alabama Street is a primary arterial that extends from Third Street in the City of Highland to Barton Road in the City of Redlands. This roadway is a relief route to SR-30 through the City of Highland.

Alder Avenue – Alder Avenue is a north-south connector that provides access along the eastern boundary of the City of Fontana. This facility is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This primary arterial extends from Hillside Road in the City of Rancho Cucamonga, through the City of Ontario and into Riverside County. This facility is a major north-south corridor across San Bernardino County that provides access to both SR-210, I-10 and SR-60 as well as Ontario International Airport.

Bryant Street – Located in the City of Yucaipa, Bryant Street is a primary arterial from Mill Creek Road to Wildwood Canyon Road. This facility is the easternmost major thoroughfare in the city of Yucaipa.
Cajon Boulevard – Cajon Boulevard begins in unincorporated San Bernardino County just southeast of the I-15 and I-215 interchange. This major arterial extends southeast through the City of San Bernardino before becoming Mount Vernon Avenue. This roadway parallels I-215 and also located along Historic Route 66.

California Street / San Timoteo Canyon Road – California Street originates just south of the Santa Ana River in the City of Redlands as a minor arterial. This roadway becomes a secondary arterial from San Bernardino Avenue to Barton Road. From Barton Road, this roadway, now titled San Timoteo Canyon Road, becomes a primary arterial and extends southeast into Riverside County.

Cedar Avenue – Cedar Avenue is a primary arterial from Baseline Road to Bloomington Avenue, just south of the City of Rialto in unincorporated San Bernardino County. South of Bloomington Avenue, this roadway continues into Riverside County as a primary arterial.

Central Avenue – This corridor travels through the cities of Upland, unincorporated San Bernardino County, Montclair and Chino along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this facility provides a north-south connection between I-10, SR-60 and SR-71.

Cherry Avenue – This facility is located almost entirely within the City of Fontana with a portion traveling through unincorporated San Bernardino County. This roadway extends from north of I-15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This facility provides a connection between SR-210 and I-10 and access to The California Speedway.

Citrus Avenue – Citrus Avenue is located in the City of Fontana and extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Del Rosa Drive / Del Rosa Avenue – Del Rosa Avenue begins at 39th Street in the City of San Bernardino and extends south to San Bernardino International Airport. This secondary arterial provides direct access to the airport from SR-30.

E Street – This facility is a primary arterial that begins at Kendall Drive in the City of San Bernardino and extends south to I-10. Traveling parallel to I-215, E Street operates as an alternative to I-215 during periods of congestion and delay. It also provides access to SR-30 and I-10.

Etiwanda Avenue – Etiwanda Avenue is a primary arterial located in the cities of Rancho Cucamonga, Ontario, Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Garnet Street – Garnet Street is a minor arterial located on the eastern edge of the Foothill Boulevard east-west corridor. This facility connects Florida Street to Mill Creek Road (SR-38).

Grove Avenue – This roadway is a secondary arterial that extends from Foothill Boulevard in the City of Upland south to the Chino Airport in the City of Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.
Haven Avenue – Haven Avenue is a primary arterial located in the City of Rancho Cucamonga and extending through the City of Ontario. This roadway provides direct access to SR-210, I-10 and SR-60.

Hunts Lane – Located at the terminus of E Street just east of the I-10 and I-215 interchange in the City of San Bernardino, Hunts Lane is a primary arterial between E Street and Redlands Boulevard. South of Redlands Boulevard to Barton Road, Hunts Lane is classified as a secondary arterial.

Kendall Drive – This secondary arterial is located in the northern portion of the City of San Bernardino and extends from Cajon Boulevard southeast to I-215 at North Palm Avenue. From Palm Avenue, it continues southeast as a primary arterial to its terminus at E Street. This facility is an alternate route for traffic traveling along I-215.

La Cadena Drive – La Cadena Drive splits from Mount Vernon Avenue in the City of Colton and continues south to I-10. From I-10, this roadway continues southwest until merging with I-215 at the Riverside County Line.

Milliken Avenue – This roadway extends from Banyan Street, north of SR-210, to Riverside Drive, south of SR-60, and provides direct access to SR-210, I-10 and SR-60. Milliken Avenue is a secondary arterial.

Monte Vista Avenue – Monte Vista Avenue begins at SR-210 in Los Angeles County and travels south through the cities of Montclair and Chino. Between SR-210 and I-10, this roadway is classified as a primary arterial.

Mountain Avenue – The northern terminus of this roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and the cities of Upland and Ontario before ending at Edison Avenue in the City of Chino. This facility is classified as a primary arterial except for the segment between 19th Street and 16th Street which is classified as a state highway (SR-30).

Mountain View Avenue – This roadway is located on the boundary between the cities of San Bernardino and Redlands and within the City of Loma Linda. Beginning at San Bernardino Avenue, Mountain View Avenue extends south to Beaumont Avenue. It is classified as a secondary arterial for its entire length.

Mount Vernon Avenue – Mount Vernon Avenue begins as a secondary arterial at Highland Avenue and travels south through the cities of San Bernardino, Colton and Grand Terrace before entering Riverside County. From Highland Avenue to I-215 just north of the City of Grand Terrace, this facility is classified as a primary arterial.

Mulberry Avenue – This roadway extends from Slover Avenue to the Riverside County Line in the City of Fontana. It is a secondary arterial.

Orange Street / Boulder Avenue – Boulder Avenue is a divided primary arterial located in the City of Highland, just east of SR-30, and extends southward from Highland Avenue to Lugonia Avenue in the City of Redlands. From Lugonia Avenue to I-10, this roadway is classified as a state highway (SR-38) and a primary arterial from I-10 to Citrus Avenue.
Palm Avenue – This roadway is a primary arterial that extends from Highland Avenue in the City of San Bernardino to 5th Street in the City of Highland. It completes the relief corridor occupied by Alabama Avenue to the south.

Pepper Avenue – Pepper Avenue begins Baseline Street as a minor arterial in the City of San Bernardino and continues south to Foothill Boulevard where it becomes a secondary arterial. This classification holds for its entire remaining length to Slover Avenue in the City of Colton.

Rancho Avenue – Beginning at Foothill Boulevard / 5th Street in the City of San Bernardino, Rancho Avenue is a secondary arterial that travels southward through the City of Colton and terminates at La Cadena Drive.

Reche Canyon Road – This secondary arterial extends southeast from Barton Road in the City of Colton into Riverside County.

Riverside Avenue – Riverside Avenue is a primary arterial that extends across the Valley Region of San Bernardino County and continues into Riverside County. This major north-south corridor originates at Sierra Avenue, just south of I-15, in the City of Fontana. It extends to the southeast along the northeastern boundary of the City of Rialto before turning to the southeast of Rialto Municipal Airport. As it passes through the Valley Region, it provides access to SR-30 and I-10 as well as the Rialto Metrolink station.

Sierra Avenue – Sierra Avenue is a major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the extreme northern portion of the City of Fontana. It is a primary arterial and has interchanges with I-15, SR-210 and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Tippecanoe Avenue / Anderson Street – This roadway begins in the City of San Bernardino at Baseline Street as a secondary arterial. Continuing southward, Tippecanoe Avenue becomes a primary arterial at Third Street and extends to I-10. South of I-10, the roadway becomes Anderson Street and continues as a primary arterial to Barton Road.

Victoria Avenue – This secondary arterial is located in the cities of San Bernardino and Highland. It extends from Lynwood Drive to Third Street.

Wabash Avenue – Wabash Avenue extends from San Bernardino Avenue to Fifth Street in the City of Redlands as a secondary arterial and continues south to I-10 as a minor arterial.

Waterman Avenue – This roadway begins at the intersection of Sierra Avenue and Rim of the World Way (SR-18), just south of the San Bernardino National Forest. Traveling south, this roadway is designated as a state highway (SR-18) until reaching SR-30. Beyond SR-30, Waterman Avenue continues as a primary arterial. This roadway parallels I-215 and serves as an alternative route with direct access to I-10 before terminating at Barton Road.

Victor Valley

Arrowhead Lake Road – This primary arterial begins at the eastern terminus of Main Street in the City of Hesperia and continues south until its junction with SR-173. This roadway is a major corridor through the southeastern portion of the City of Hesperia.
**Baldy Mesa Road** – Baldy Mesa Road is a secondary arterial located between Phelan Road and Duncan Road / Bear Valley Road in the community of Phelan.

**Bear Valley Road** – Bear Valley Road is a major east-west corridor through the cities of Victorville, Hesperia and Apple Valley. This roadway begins at the eastern terminus of Duncan Road just west of the City of Victorville in unincorporated San Bernardino County. Traveling west, Bear Valley Road is a secondary arterial until it intersects with US 395. It continues as a primary arterial through its intersections with I-15 and Hesperia Road before terminating at SR-18 east of the City of Apple Valley.

**Duncan Road** – This secondary arterial extends from Baldy Mesa Road east to the western terminus of Bear Valley Road.

**El Mirage Road** – This roadway originates in Los Angeles County and continues eastward as a primary arterial through unincorporated San Bernardino County until it reaches the City of Adelanto. At Koala Road, this facility is reduced from a primary arterial to a minor arterial until it intersects with US 395.

**Hesperia Road** – Originating in the southern portion of the City of Hesperia, Hesperia Road is a north-south primary arterial that travels through the cities of Hesperia and Victorville. From Lime Street to Main Street in the City of Hesperia, this roadway is a secondary arterial. North of Main Street, it becomes a primary arterial and continues northward until terminating at D Street in the City of Victorville.

**Main Street** – Main Street is an east-west roadway that passes through the City of Hesperia. It begins just east of US 395 and intersects with I-15 and Hesperia Road before terminating at Arrowhead Lake Road.

**National Trails Highway** – National Trails Highway originates as an interchange with I-15 in the City of Victorville and continues north and east until terminating at Lenwood Road in the community of Lenwood, just southwest of the City of Barstow.

**Palmdale Road** – Palmdale Road (SR-18) splits from SR-138 in Los Angeles County and terminates at I-15 in the City of Victorville.

**Phelan Road** – This is an east-west facility that begins at SR-138 in the community of Phelan and continues east through unincorporated San Bernardino County until reaching US 395 where it becomes Main Street. This primary arterial intersects with Sheep Creek Road and Baldy Mesa Road.

**Sheep Creek Road** – This primary arterial located in the western edge of unincorporated San Bernardino County. It extends between El Mirage Road to the north and SR-138 in the south.

**Barstow**

**Barstow Road** – This roadway is designated as a state highway (SR-247). Barstow Road begins at Main Street in the City of Barstow and provides access to I-15 and Barstow College before entering unincorporated San Bernardino County.
Main Street – Main Street is an east-west roadway that originates at I-40 and travels west through intersections with I-15, Barstow Road and SR-58 before becoming National Trails Highway (US 66).

Old Highway 58 – This primary arterial is located on the extreme northern edge of the City of Barstow. It begins at I-15 and continues west across the High Desert into Los Angeles County.

Needles

Needles Highway – This primary arterial is located in the northern portion of the City of Needles and provides access to I-40.

Operational Characteristics

Average daily traffic and level of service are two of the most critical factors utilized in determining how well a roadway facility operates. To provide a clearer picture regarding how these factors influence operational capacity, brief descriptions of each characteristic are provided below.

Average daily traffic volumes (ADT) for the roadways described above were obtained using two methodologies. The first approach is used when historical count data are available (preferred approach). A statistical analysis of the count data for the roadway segment is performed to obtain the average growth per year for the facility in question. The growth factor is then applied to the most recent count data available to obtain Base Year 2000 ADT. The second approach is used when count data for the roadway segment is unavailable. In this particular case, the 2000 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Model was used to determine the Year 2000 ADT. An analysis of adjacent roadways near the desired link is used to determine the percent difference between the model data and count data. The percent difference is then applied to the model data for the roadway in question to determine the Year 2000 ADT.

Level of Service (LOS) is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Level of service indicators for the highway and roadway system are based on specific characteristics of traffic flow on designated sections of roadway during a typical day. For mainline freeway and roadway segments, these include overall traffic volume, speed and density. Several physical and operational characteristics of the roadway, such as lane configuration, free-flow speed (typical speed between intersections) and number of intersections per mile, are used to determine the vehicular capacity of the roadway segment. When these two sets of data are compared, a volume to capacity (V/C) ratio is calculated. These factors are then converted to a letter grade identifying operating conditions and expressed as a level of service, or LOS, A through F. LOS A identifies the best operating conditions along a section of roadway and is characterized by free-flow traffic, low volumes and little or no restrictions on maneuverability. LOS F characterizes forced traffic flow with high traffic densities, slow travel speeds and often stop-and-go conditions. For intersections, LOS can be determined by using either the methodology described above or by using the average control delay (the amount of time a vehicle is delayed by the operations of the traffic signal) calculated at an individual intersection.
Information detailing the existing lane configurations, ADT volumes and LOS values for the roadway facilities described above are shown in Tables IV-O-1 through IV-O-4. This data is based on information obtained from the 2004 SCAG RTP model, Caltrans’ 2003 traffic count data and the San Bernardino County Associated Governments (SANBAG) Congestion Management Program (CMP), 2003 Update.

Table IV-O-1. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Freeways Located in San Bernardino County

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Each direction)</th>
<th>ADT Volume (000’s)</th>
<th>LOS AM Peak Hour (EB or NB / WB or SB)</th>
<th>LOS PM Peak Hour (EB or NB / WB or SB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interstate 10</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Los Angeles County Line to Euclid Ave</td>
<td>4 general traffic; 1 HOV</td>
<td>224 – 239</td>
<td>B-C / C-D</td>
<td>D / C</td>
</tr>
<tr>
<td></td>
<td>Euclid Ave to I-15</td>
<td>4 general traffic; 1 HOV</td>
<td>214 - 232</td>
<td>B-C / C -E</td>
<td>C-D / C-D</td>
</tr>
<tr>
<td></td>
<td>I-15 to Sierra Ave</td>
<td>4 general traffic; 1 HOV</td>
<td>186 - 189</td>
<td>C / D-E</td>
<td>D-E / D</td>
</tr>
<tr>
<td></td>
<td>Sierra Ave to I-215</td>
<td>4 general traffic</td>
<td>173 - 179</td>
<td>C-E / C-D</td>
<td>C-D / C-E</td>
</tr>
<tr>
<td></td>
<td>I-215 to SR-38</td>
<td>4 general traffic</td>
<td>141 – 187</td>
<td>A-E / C-F</td>
<td>D-F / A-D</td>
</tr>
<tr>
<td></td>
<td>SR-38 to Riverside County Line</td>
<td>3 general traffic</td>
<td>73 - 122</td>
<td>A / A-E</td>
<td>A-D / A-B</td>
</tr>
<tr>
<td></td>
<td>SR-60 to I-10</td>
<td>4 general traffic</td>
<td>172 - 175</td>
<td>E / C</td>
<td>E / D</td>
</tr>
<tr>
<td></td>
<td>I-10 to SR-210</td>
<td>4 general traffic</td>
<td>90 – 150</td>
<td>A / A-E</td>
<td>B-E / A</td>
</tr>
<tr>
<td></td>
<td>SR-210 to I-215</td>
<td>4 general traffic</td>
<td>80 – 90</td>
<td>A / A-D</td>
<td>B-E / A</td>
</tr>
<tr>
<td></td>
<td>I-215 to US 395</td>
<td>4 general traffic</td>
<td>94 – 114</td>
<td>A / A-F</td>
<td>B-F / A-C</td>
</tr>
<tr>
<td></td>
<td>US 395 to SR-18</td>
<td>3 general traffic</td>
<td>67 – 84</td>
<td>A / A</td>
<td>B-C / A</td>
</tr>
<tr>
<td></td>
<td>SR-18 to Nevada State Line</td>
<td>2 general traffic</td>
<td>28 – 65</td>
<td>A / A-E</td>
<td>A-F / A-E</td>
</tr>
<tr>
<td></td>
<td>Sierr a Ave to I-215</td>
<td>1-2 general traffic</td>
<td>14 - 26</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>I-215 to SR-330</td>
<td>2-4 general traffic</td>
<td>34 – 87</td>
<td>A / A-B</td>
<td>A-B / A</td>
</tr>
<tr>
<td></td>
<td>SR-330 to I-10</td>
<td>2 general traffic</td>
<td>44 – 57</td>
<td>A-C / A</td>
<td>A / A-C</td>
</tr>
<tr>
<td></td>
<td>State Route 30</td>
<td>2 general traffic</td>
<td>11 - 15</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td><strong>Interstate 40</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barstow to Arizona State Line</td>
<td>2 general traffic</td>
<td>11 - 15</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td><strong>State Route 60</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I-10 to I-10</td>
<td>4 general traffic, 1 HOV</td>
<td>180 - 201</td>
<td>A / D-E</td>
<td>D-E / B-D</td>
</tr>
<tr>
<td></td>
<td>State Route 71</td>
<td>3 general traffic; 1 HOV</td>
<td>47 – 59</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>SR-142 to Euclid Ave</td>
<td>2 general traffic; 1 HOV</td>
<td>36 – 40</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>Euclid Ave to Riverside County Line</td>
<td>2 general traffic</td>
<td>33</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>State Route 210</td>
<td>3 general traffic; 1 HOV</td>
<td>110 – 141</td>
<td>A / B-E</td>
<td>D-E / A</td>
</tr>
<tr>
<td></td>
<td>Los Angeles County Line to I-15</td>
<td>3 general traffic; 1 HOV</td>
<td>34 - 52</td>
<td>A / A</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>I-15 to Sierra Ave</td>
<td>3 general traffic; 1 HOV</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table IV-O-2. Existing Lane Configuration, Average Daily Traffic Volumes and Peak Hour Level of Service for State Highways Located in San Bernardino County

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000’s)</th>
<th>LOS AM Peak Hour (EB or NB / WB or SB)</th>
<th>LOS PM Peak Hour (EB or NB / WB or SB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Route 2</td>
<td>Los Angeles County Line to SR-138</td>
<td>2</td>
<td>17 - 28</td>
<td>C-F / C-F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR-30 to SR-138</td>
<td>4</td>
<td>17 – 28</td>
<td>C-F / C-F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR-138 to Lakeview Dr.</td>
<td>2</td>
<td>7 – 11</td>
<td>E / E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lakeview Dr. to SR-38 East</td>
<td>4</td>
<td>16 – 17</td>
<td>E-C / E-C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR-38 East to Bear Valley Cutoff</td>
<td>2</td>
<td>3 – 9</td>
<td>E-C / E-C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bear Valley Cutoff to US-395</td>
<td>4</td>
<td>9 – 42</td>
<td>D / D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>US-395 to Los Angeles County Line</td>
<td>2</td>
<td>6 - 9</td>
<td>D / D</td>
<td></td>
</tr>
<tr>
<td>State Route 18</td>
<td>I-10 to Bryant Ave.</td>
<td>2</td>
<td>12-16</td>
<td>F / F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bryant Ave. to Big Bear Blvd./Greenspot Blvd.</td>
<td>2</td>
<td>2 – 5</td>
<td>D-E / D-E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Big Bear Blvd./Greenspot Blvd. to SR-18 West</td>
<td>4</td>
<td>13</td>
<td>D-E / D-E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR-18 East to Big Bear Dam</td>
<td>2</td>
<td>3</td>
<td>E / E</td>
<td></td>
</tr>
<tr>
<td>State Route 58</td>
<td>Los Angeles County Line to I-15</td>
<td>4</td>
<td>9-13</td>
<td>D / D</td>
<td></td>
</tr>
<tr>
<td>State Route 62</td>
<td>Riverside County Line to Utah Trail</td>
<td>4</td>
<td>12 – 21</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Utah Trail to Arizona State Line</td>
<td>2</td>
<td>1-3</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>State Route 66</td>
<td>Los Angeles County Line to Vineyard Ave.</td>
<td>4 - 6</td>
<td>32 – 42</td>
<td>C-E / D-F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vineyard Ave. to Citrus Ave.</td>
<td>4 - 6</td>
<td>28 – 47</td>
<td>C-F / D-F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Citrus Ave. to I-215</td>
<td>4</td>
<td>15 – 29</td>
<td>B-D / C-E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I-215 to Boulder Ave.</td>
<td>2 - 4</td>
<td>8 – 20</td>
<td>A-D / B-D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boulder Ave. to SR-38</td>
<td>2</td>
<td>11 - 12</td>
<td>D / D</td>
<td></td>
</tr>
<tr>
<td>State Route 83</td>
<td>SR-30 to I-10</td>
<td>4 - 6</td>
<td>14 – 34</td>
<td>B-D / B-D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I-10 to SR-60</td>
<td>4 - 6</td>
<td>28 – 34</td>
<td>B-D / C-D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SR-60 – SR-71</td>
<td>2 - 6</td>
<td>13 – 32</td>
<td>B-C / B-C</td>
<td></td>
</tr>
<tr>
<td>State Route 127</td>
<td>I-15 to Inyo County Line</td>
<td>2</td>
<td>&lt;1 - 2</td>
<td>B / B</td>
<td></td>
</tr>
<tr>
<td>State Route 138</td>
<td>Los Angeles County Line to I-15</td>
<td>2</td>
<td>12 – 14</td>
<td>E / E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I-15 to Waters Dr.</td>
<td>2</td>
<td>1 – 2</td>
<td>C-D</td>
<td></td>
</tr>
</tbody>
</table>
### CHAPTER IV

**Project Analysis**

#### Table IV-O-3. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Federal Highways Located in San Bernardino County

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000's)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States 95</td>
<td>Nevada State Line to Riverside County Line</td>
<td>2</td>
<td>1 - 5</td>
<td>B-C / B-C</td>
</tr>
<tr>
<td>United States 395</td>
<td>Kern County Line to El Mirage Rd.</td>
<td>2</td>
<td>4 - 8</td>
<td>C / C</td>
</tr>
<tr>
<td></td>
<td>El Mirage Rd. to I-15</td>
<td>2</td>
<td>13 - 14</td>
<td>E / E</td>
</tr>
</tbody>
</table>

*Where a range is provided, the roadway characteristic varies across the segment. For example, on US-95 from the Nevada State Line to the Riverside County Line, the ADT varies from 1,000 to 6,000, the AM peak hour LOS varies from B to C, and the PM peak hour LOS varies from B to C.*

#### Table IV-O-4. Existing Lane Configuration, Average Daily Traffic Volume and Peak Hour Level of Service for Major Roadways Located in San Bernardino County

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000's)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valley East-West Facilities</td>
<td>Los Angeles County Line to Cherry Ave.</td>
<td>4 – 6</td>
<td>12 – 27</td>
<td>A-D / B-D</td>
</tr>
<tr>
<td></td>
<td>Cherry Ave. to Cedar Ave.</td>
<td>2</td>
<td>14 – 15</td>
<td>D / D-E</td>
</tr>
<tr>
<td></td>
<td>Cedar Ave. to Boulder Ave.</td>
<td>4</td>
<td>16 - 21</td>
<td>A-C / C</td>
</tr>
<tr>
<td>16th Street / Baseline Rd</td>
<td>Mountain Ave. to Carmelian Ave.</td>
<td>2</td>
<td>9 – 18</td>
<td>D-F / E-F</td>
</tr>
<tr>
<td>19th Street</td>
<td>Carmelian Ave. to Haven Ave.</td>
<td>4</td>
<td>18 - 23</td>
<td>D-F / F</td>
</tr>
<tr>
<td>2nd Street</td>
<td>Mount Vernon Avenue to Waterman Avenue</td>
<td>4</td>
<td>5 - 12</td>
<td>A-B / A</td>
</tr>
<tr>
<td>3rd Street</td>
<td>Mount Vernon Avenue to Palm Avenue</td>
<td>4</td>
<td>8 - 14</td>
<td>B-C / B-D</td>
</tr>
<tr>
<td>I-10 to Milliken Ave.</td>
<td>Milliken Ave. to Etiwanda Ave.</td>
<td>6</td>
<td>18 – 28</td>
<td>A-C / B-C</td>
</tr>
<tr>
<td>5th Avenue / Sand</td>
<td>I-10 to Yucaipa Boulevard</td>
<td>2 – 4</td>
<td>6 – 7</td>
<td>A / A</td>
</tr>
</tbody>
</table>
### ROADWAY SEGMENT

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000’s)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canyon Rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40th Street</td>
<td>Kendall Drive to Del Rosa Avenue</td>
<td>4</td>
<td>9 – 10</td>
<td>D / B</td>
</tr>
<tr>
<td>Agua Mansa Rd</td>
<td>Rancho Avenue to Market Street</td>
<td>2 – 4</td>
<td>4 – 7</td>
<td>A / A-D</td>
</tr>
<tr>
<td>Arrow Highway / 8th Street</td>
<td>Los Angeles County Line to Vineyard Avenue</td>
<td>2 – 4</td>
<td>17 – 25</td>
<td>C-F / C-F</td>
</tr>
<tr>
<td>Arrow Route</td>
<td>Los Angeles County Line to Alder Avenue</td>
<td>2 – 4</td>
<td>14 – 21</td>
<td>B-D / C-D</td>
</tr>
<tr>
<td>Burton Rd / Washington Street / Brookside Avenue / Citrus Avenue</td>
<td>La Cadena Dr. to Washington St.</td>
<td>2 – 4</td>
<td>9 – 20</td>
<td>B-C / C-F</td>
</tr>
<tr>
<td>I-215 to Orange Ave.</td>
<td>4 – 6</td>
<td>17 – 32</td>
<td>C-E / C-F</td>
<td></td>
</tr>
<tr>
<td>Orange Ave. to Wabash Ave.</td>
<td>4</td>
<td>6 – 10</td>
<td>A-B / A-B</td>
<td></td>
</tr>
<tr>
<td>Bloomington Avenue</td>
<td>Cedar Avenue to Riverside Avenue</td>
<td>4</td>
<td>14 – 15</td>
<td>A / B</td>
</tr>
<tr>
<td>Colorado Street</td>
<td>Oak Glen Rd to Wildwood Canyon Rd</td>
<td>4</td>
<td>1 – 2</td>
<td>A / A</td>
</tr>
<tr>
<td>Colton Avenue / Inland Center Drive</td>
<td>10th Street to E Street</td>
<td>2 – 4</td>
<td>11 – 12</td>
<td>B / C</td>
</tr>
<tr>
<td>Edison Avenue</td>
<td>Pipeline Avenue to Cleveland Avenue</td>
<td>4 – 6</td>
<td>13 – 15</td>
<td>A-C / B-C</td>
</tr>
<tr>
<td>Grand Avenue</td>
<td>Los Angeles County Line to Pipeline Avenue</td>
<td>4 – 6</td>
<td>19 – 26</td>
<td>B-D / C-E</td>
</tr>
<tr>
<td>Highland Avenue</td>
<td>Haven Ave. to Cherry Ave.</td>
<td>2</td>
<td>9 – 13</td>
<td>B-D / D-F</td>
</tr>
<tr>
<td></td>
<td>Cherry Ave. to Sierra Ave.</td>
<td>2</td>
<td>13 – 14</td>
<td>D / F</td>
</tr>
<tr>
<td></td>
<td>Sierra Ave. to SR-30 West</td>
<td>2</td>
<td>20 – 24</td>
<td>F / F</td>
</tr>
<tr>
<td></td>
<td>SR-30 West to SR-30 East</td>
<td>4</td>
<td>11 – 23</td>
<td>B-F / B-F</td>
</tr>
<tr>
<td></td>
<td>SR-30 East to SR-330</td>
<td>4</td>
<td>10 – 25</td>
<td>B-D / B-E</td>
</tr>
<tr>
<td>Holt Boulevard</td>
<td>Los Angeles County Line to I-10</td>
<td>4</td>
<td>21 – 29</td>
<td>B-D / B-D</td>
</tr>
<tr>
<td>Jurupa Street / Jurupa Avenue</td>
<td>Archibald Avenue to Sierra Avenue</td>
<td>4 – 6</td>
<td>12 – 25</td>
<td>A-C / A-D</td>
</tr>
<tr>
<td>Live Oak Canyon Rd</td>
<td>San Timoteo Canyon Rd to I-10</td>
<td>2</td>
<td>10 – 11</td>
<td>A / A</td>
</tr>
<tr>
<td>Lugonia Avenue / Mentone Boulevard / Mill Creek Rd</td>
<td>Mountain View Avenue to Valley of the Falls Drive</td>
<td>2</td>
<td>11 – 15</td>
<td>F / F</td>
</tr>
<tr>
<td>Merrill Avenue / Mill Street</td>
<td>Cherry Avenue to Tippecanoe Avenue</td>
<td>2 – 4</td>
<td>9 – 20</td>
<td>A-D / A-E</td>
</tr>
<tr>
<td>Mission Boulevard</td>
<td>Los Angeles County Line to Riverside County Line</td>
<td>4</td>
<td>12 – 24</td>
<td>A-D / B-D</td>
</tr>
<tr>
<td>Oak Glen Rd</td>
<td>I-10 to Riverside County Line</td>
<td>2 – 4</td>
<td>13 – 26</td>
<td>C-D / C</td>
</tr>
<tr>
<td>Redland Boulevard</td>
<td>Hunts Lane to I-10</td>
<td>4</td>
<td>10 – 18</td>
<td>A-B / B-D</td>
</tr>
<tr>
<td>Riverside Drive</td>
<td>SR-71 to Etiwanda Avenue</td>
<td>4</td>
<td>11 – 17</td>
<td>A-B / B-D</td>
</tr>
<tr>
<td>San Bernardino Avenue / 4th Street</td>
<td>Los Angeles County Line to Meridian Avenue</td>
<td>2 – 4</td>
<td>6 – 14</td>
<td>A-D / B-D</td>
</tr>
<tr>
<td>Slover Avenue</td>
<td>Etiwanda Avenue to Pepper Avenue</td>
<td>4</td>
<td>11 – 17</td>
<td>B-E / B-E</td>
</tr>
<tr>
<td>Wildwood Canyon Rd</td>
<td>I-10 to Oak Glen Rd</td>
<td>4</td>
<td>9 – 10</td>
<td>B / A</td>
</tr>
<tr>
<td>Valley Boulevard</td>
<td>Etiwanda Avenue to Mount Vernon Avenue</td>
<td>4</td>
<td>9 – 24</td>
<td>C-F / C-F</td>
</tr>
</tbody>
</table>
## CHAPTER IV

### Project Analysis

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000’s)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valley North-South Facilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yucipa Boulevard</td>
<td>I-10 to Bryant Street</td>
<td>4</td>
<td>19 – 26</td>
<td>B / B</td>
</tr>
<tr>
<td>14th Street</td>
<td>Yucipa Boulevard to Oak Glen Rd</td>
<td>2</td>
<td>2 - 3</td>
<td>A / A</td>
</tr>
<tr>
<td>Alabama Street</td>
<td>3rd Street to Barton Rd</td>
<td>4</td>
<td>14 - 27</td>
<td>A-C / B-E</td>
</tr>
<tr>
<td>Alder Avenue</td>
<td>I-10 to Valley Blvd.</td>
<td>2</td>
<td>1 – 2</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>Valley Blvd. to Foothill Blvd.</td>
<td>4</td>
<td>9 – 11</td>
<td>A / A-B</td>
</tr>
<tr>
<td></td>
<td>Foothill Blvd. to Baseline Rd.</td>
<td>2</td>
<td>4 – 5</td>
<td>B / A</td>
</tr>
<tr>
<td>Archibald Avenue</td>
<td>19th St to Foothill Blvd.</td>
<td>4</td>
<td>17 – 21</td>
<td>A-B / A-B</td>
</tr>
<tr>
<td></td>
<td>Foothill Blvd. to I-10</td>
<td>4</td>
<td>24 – 31</td>
<td>C-D / C-E</td>
</tr>
<tr>
<td></td>
<td>SR-60 to Riverside County Line</td>
<td>4 – 6</td>
<td>10 - 28</td>
<td>B-C / B</td>
</tr>
<tr>
<td>Bryant Street</td>
<td>Mill Creek Rd. to Yucaipa Blvd.</td>
<td>2 – 4</td>
<td>4 – 5</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>Yucaipa Blvd. to Riverside County Line</td>
<td>2</td>
<td>4 – 6</td>
<td>A-C / A-C</td>
</tr>
<tr>
<td>Cajon Boulevard</td>
<td>I-15/I-215 interchange to Mount Vernon Avenue</td>
<td>2</td>
<td>2 - 3</td>
<td>A / A</td>
</tr>
<tr>
<td>Central Avenue</td>
<td>Foothill Blvd. to San Bernardino Ave.</td>
<td>4 – 6</td>
<td>27 – 58</td>
<td>A-B / B-F</td>
</tr>
<tr>
<td></td>
<td>San Bernardino Ave. to I-10</td>
<td>2 – 4</td>
<td>3 – 4</td>
<td>A / A</td>
</tr>
<tr>
<td></td>
<td>I-10. to Redlands Blvd.</td>
<td>4</td>
<td>17 – 18</td>
<td>B / C</td>
</tr>
<tr>
<td></td>
<td>Redlands Blvd. to Barton Rd.</td>
<td>2</td>
<td>8 – 9</td>
<td>B / C</td>
</tr>
<tr>
<td></td>
<td>Barton Rd. to Riverside County Line</td>
<td>2</td>
<td>5 - 6</td>
<td>B / B</td>
</tr>
<tr>
<td>Cedar Avenue</td>
<td>Baseline Rd. to San Bernardino Ave.</td>
<td>2</td>
<td>20 – 24</td>
<td>F / F</td>
</tr>
<tr>
<td></td>
<td>San Bernardino Ave. to I-10</td>
<td>4</td>
<td>33 – 55</td>
<td>C-F / D-F</td>
</tr>
<tr>
<td></td>
<td>I-10 to Riverside County Line</td>
<td>4</td>
<td>17 – 30</td>
<td>C-D / C</td>
</tr>
<tr>
<td>Cherry Avenue</td>
<td>Summit Ave. to Baseline Rd.</td>
<td>4</td>
<td>5 – 9</td>
<td>A-B / B-D</td>
</tr>
<tr>
<td></td>
<td>Baseline Rd. to I-10</td>
<td>4 – 6</td>
<td>12 – 40</td>
<td>B-D / B-D</td>
</tr>
<tr>
<td></td>
<td>I-10 to Jurupa Ave.</td>
<td>4</td>
<td>15 – 34</td>
<td>B-D / A-C</td>
</tr>
<tr>
<td>Citrus Avenue</td>
<td>I-15 to Baseline Rd.</td>
<td>2</td>
<td>2 - 7</td>
<td>A-D / A-C</td>
</tr>
<tr>
<td></td>
<td>Baseline Rd. to I-10</td>
<td>2 – 4</td>
<td>18 – 32</td>
<td>B-E / B-E</td>
</tr>
<tr>
<td></td>
<td>I-10 to Jurupa Ave.</td>
<td>2 – 4</td>
<td>9 – 20</td>
<td>A-E / A-D</td>
</tr>
<tr>
<td>Del Rosa Drive / Del Rosa Avenue</td>
<td>39th Street to Harry Sheppard Boulevard</td>
<td>2 – 4</td>
<td>4 - 11</td>
<td>A / A-C</td>
</tr>
<tr>
<td>E Street</td>
<td>Kendall Drive to I-10</td>
<td>4</td>
<td>9 - 17</td>
<td>A-B / A-B</td>
</tr>
<tr>
<td>Etiwanda Avenue</td>
<td>Summit Avenue to Limonite Avenue</td>
<td>4 – 6</td>
<td>23 - 42</td>
<td>A-C / B-F</td>
</tr>
<tr>
<td>Garnet Street</td>
<td>Florida Street to Mill Creek Rd</td>
<td>2</td>
<td>11 - 12</td>
<td>D / D</td>
</tr>
<tr>
<td>Grove Avenue</td>
<td>Foothill Boulevard to Merrill Avenue</td>
<td>4</td>
<td>14 - 16</td>
<td>B-C / B-C</td>
</tr>
<tr>
<td>Haven Avenue</td>
<td>19th St. to Baseline Rd.</td>
<td>4</td>
<td>20 – 29</td>
<td>C-D / E</td>
</tr>
<tr>
<td></td>
<td>Baseline Rd. to I-10</td>
<td>6 - 8</td>
<td>33 – 52</td>
<td>B-D / D</td>
</tr>
<tr>
<td>Hunts Lane</td>
<td>E Street to Washington Street</td>
<td>2 – 4</td>
<td>12 – 14</td>
<td>C / C-D</td>
</tr>
<tr>
<td>Kendall Drive</td>
<td>Cajon Boulevard to E Street</td>
<td>2 – 4</td>
<td>11 – 18</td>
<td>A-B / A-B</td>
</tr>
<tr>
<td>La Cadena Drive</td>
<td>Mount Vernon Avenue to I-215</td>
<td>4</td>
<td>16 - 20</td>
<td>B-C / C-D</td>
</tr>
<tr>
<td>Milliken Avenue</td>
<td>Banyan Street to Riverside Drive</td>
<td>4 – 6</td>
<td>15 – 20</td>
<td>A-C / A-F</td>
</tr>
<tr>
<td>Monte Vista Avenue</td>
<td>SR-210 to Eucalyptus Avenue</td>
<td>4 – 6</td>
<td>13 - 25</td>
<td>A-B / A-B</td>
</tr>
</tbody>
</table>
### Project Analysis

#### Chapter IV

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000's)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain Avenue</td>
<td>19th St. to Foothill Blvd.</td>
<td>4</td>
<td>18 – 23</td>
<td>C-D / D-E</td>
</tr>
<tr>
<td></td>
<td>Foothill Blvd. to I-10</td>
<td>6</td>
<td>34 – 49</td>
<td>C-D / D-E</td>
</tr>
<tr>
<td></td>
<td>I-10 to SR-60</td>
<td>4</td>
<td>29 – 37</td>
<td>D-E / E</td>
</tr>
<tr>
<td></td>
<td>SR-60 to Edison Ave.</td>
<td>2 – 4</td>
<td>16 – 21</td>
<td>A-C / C-D</td>
</tr>
<tr>
<td>Mountain View Ave.</td>
<td>San Bernardino Ave. to I-10</td>
<td>2</td>
<td>10 - 11</td>
<td>C / D</td>
</tr>
<tr>
<td></td>
<td>I-10 to Barton Rd.</td>
<td>4</td>
<td>19 - 21</td>
<td>B / C-D</td>
</tr>
<tr>
<td>Mount Vernon Ave.</td>
<td>Highland Avenue to Riverside County Line</td>
<td>4</td>
<td>4 - 13</td>
<td>A-C / A-D</td>
</tr>
<tr>
<td>Mulberry Ave.</td>
<td>Slover Avenue to Riverside County Line</td>
<td>4</td>
<td>13 - 14</td>
<td>D / D</td>
</tr>
<tr>
<td>Orange St / Boulder Ave</td>
<td>Highland Ave. to 5th St.</td>
<td>2 – 4</td>
<td>4 – 7</td>
<td>A-C / A-C</td>
</tr>
<tr>
<td></td>
<td>5th St. to I-10</td>
<td>2</td>
<td>11 – 17</td>
<td>D-F / E-F</td>
</tr>
<tr>
<td></td>
<td>I-10 to Citrus Ave.</td>
<td>4</td>
<td>10 - 15</td>
<td>A-B / B-C</td>
</tr>
<tr>
<td>Palm Ave.</td>
<td>Highland Avenue to 5th Street</td>
<td>4</td>
<td>8 - 14</td>
<td>A-C / A-C</td>
</tr>
<tr>
<td>Pepper Ave.</td>
<td>Baseline Street to Slover Ave.</td>
<td>2 – 4</td>
<td>11 - 26</td>
<td>B-D / B-D</td>
</tr>
<tr>
<td>Rancho Avenue</td>
<td>Foothill Blvd. to Mill St.</td>
<td>2</td>
<td>4 - 7</td>
<td>B / B-D</td>
</tr>
<tr>
<td></td>
<td>Mill St. to I-10</td>
<td>4</td>
<td>9 - 20</td>
<td>B-C / B-D</td>
</tr>
<tr>
<td></td>
<td>I-10 to La Cadena Dr.</td>
<td>2</td>
<td>11 - 15</td>
<td>D-F / D-F</td>
</tr>
<tr>
<td>Reche Canyon Rd</td>
<td>Barton Rd to Riverside County Line</td>
<td>2</td>
<td>19 - 20</td>
<td>F / F</td>
</tr>
<tr>
<td>Riverside Ave.</td>
<td>Sierra Avenue to Riverside County Line</td>
<td>4</td>
<td>15 - 43</td>
<td>B-D / B-E</td>
</tr>
<tr>
<td>Sierra Ave.</td>
<td>I-15 to SR-30</td>
<td>2</td>
<td>5 – 18</td>
<td>B-E / C-D</td>
</tr>
<tr>
<td></td>
<td>SR-30 to Arrow Rt.</td>
<td>4</td>
<td>13 – 21</td>
<td>B-C / C</td>
</tr>
<tr>
<td></td>
<td>Arrow Rt. to Slover Ave.</td>
<td>4</td>
<td>26 – 53</td>
<td>C-F / C-F</td>
</tr>
<tr>
<td></td>
<td>Slover Ave. to Riverside County Line</td>
<td>6</td>
<td>13 - 20</td>
<td>A-B / A-B</td>
</tr>
<tr>
<td>Tippecanoe Ave / Anderson Ave</td>
<td>Baseline Street to Barton Rd</td>
<td>4</td>
<td>21 - 27</td>
<td>C / D</td>
</tr>
<tr>
<td>Victoria Ave.</td>
<td>Lynwood Drive to 3rd Street</td>
<td>4</td>
<td>6 – 9</td>
<td>A-C / A-C</td>
</tr>
<tr>
<td>Wabash Ave.</td>
<td>San Bernardino Ave to 5th Street</td>
<td>2 – 4</td>
<td>2 - 6</td>
<td>A / A</td>
</tr>
<tr>
<td>Waterman Ave.</td>
<td>Rim of the World Highway to Barton Rd</td>
<td>4 – 6</td>
<td>19 - 29</td>
<td>A-D / B-E</td>
</tr>
</tbody>
</table>

### Victor Valley

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000's)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrowhead Lake Rd</td>
<td>Main Street to SR-173</td>
<td>2</td>
<td>2 - 3</td>
<td>B / C</td>
</tr>
<tr>
<td>Baldy Mesa Rd</td>
<td>Phelan Rd to Duncan Rd / Bear Valley Rd</td>
<td>2</td>
<td>2 - 7</td>
<td>A / A</td>
</tr>
<tr>
<td>Bear Valley Rd</td>
<td>I-15 to I Ave.</td>
<td>6</td>
<td>27 – 38</td>
<td>C-E / C-D</td>
</tr>
<tr>
<td></td>
<td>I Ave. to Apple Valley Rd.</td>
<td>4 – 6</td>
<td>35 – 36</td>
<td>D / D</td>
</tr>
<tr>
<td></td>
<td>Apple Valley Rd. to Navajo Rd.</td>
<td>4</td>
<td>19 – 34</td>
<td>A-C / C</td>
</tr>
<tr>
<td></td>
<td>Navajo Rd. to SR-18</td>
<td>2</td>
<td>5 – 6</td>
<td>A / A</td>
</tr>
<tr>
<td>Duncan Rd</td>
<td>Baldy Mesa Rd to Bear Valley Rd</td>
<td>2</td>
<td>&lt;1</td>
<td>A / A</td>
</tr>
<tr>
<td>El Mirage Rd</td>
<td>Los Angeles County Line to US 395</td>
<td>2</td>
<td>2 - 4</td>
<td>A / A</td>
</tr>
<tr>
<td>Hesperia Rd</td>
<td>D Street to Lime Street</td>
<td>2</td>
<td>14 - 15</td>
<td>D / D</td>
</tr>
<tr>
<td>Main Street</td>
<td>US 395 to Rock Springs Rd</td>
<td>4</td>
<td>9 - 16</td>
<td>A-D / A-D</td>
</tr>
<tr>
<td>National Trails Highway</td>
<td>I-15 to Lenwood Rd</td>
<td>2</td>
<td>3 - 11</td>
<td>A / A</td>
</tr>
<tr>
<td>Palmdale Rd</td>
<td>Los Angeles County Line to US-395</td>
<td>2</td>
<td>5 – 9</td>
<td>A-B / B-D</td>
</tr>
<tr>
<td></td>
<td>US-395 to I-15</td>
<td>4</td>
<td>28 – 38</td>
<td>C-E / D-F</td>
</tr>
</tbody>
</table>
Chapter IV

Project Analysis

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Number of lanes (Total Two-way)</th>
<th>ADT Volume (000’s)</th>
<th>Peak Hour LOS (AM / PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phelan Rd</td>
<td>SR-138 to US 395</td>
<td>2</td>
<td>8 – 10</td>
<td>A / A</td>
</tr>
<tr>
<td>Sheep Creek Rd</td>
<td>El Mirage Rd to SR-138</td>
<td>2</td>
<td>2 - 11</td>
<td>A / A</td>
</tr>
<tr>
<td><strong>Barstow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barstow Rd</td>
<td>Main Street to Veterans Parkway</td>
<td>4</td>
<td>17 - 18</td>
<td>C / C</td>
</tr>
<tr>
<td>Main Street</td>
<td>National Trails Highway to I-40</td>
<td>4</td>
<td>7 - 16</td>
<td>A-D / A-C</td>
</tr>
<tr>
<td>Old Highway 58</td>
<td>Los Angeles County Line to I-15</td>
<td>2</td>
<td>8 - 9</td>
<td>B / D</td>
</tr>
<tr>
<td><strong>Needles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needles Highway</td>
<td>Nevada State Line to Broadway Street</td>
<td>2</td>
<td>3 – 4</td>
<td>A / A</td>
</tr>
</tbody>
</table>

*Where a range is provided, the roadway characteristic varies across the segment. For example, on 16th Street / Baseline Road from the Los Angeles County Line to Cherry Ave., the number of lanes varies between 4 and 6, the ADT varies from 12,000 to 27,000, the AM peak hour LOS varies from A to D, and the PM peak hour LOS varies from B to D.*

**Facility Deficiencies**

In a region the size of San Bernardino County, mobility becomes a very important issue. The effective operation of freeways and streets is necessary to ensure that the movement of people and goods within and through the region continues as uninterrupted as possible. Overall operating conditions on the County’s major highway systems are typically characterized by heavy peak commute period congestion lasting for several hours in the southbound and westbound direction in the morning and the reverse in the evening hours. Most major freeways and parallel arterial corridors exhibit these heavily directional congestion patterns on a daily basis. Recreational travel also exhibits weekly recurring congestion patterns along the east-west freeways and the I-15 to and from attraction points across the Nevada state line.

Those facilities currently operating at LOS F are included in Table IV-O-5.

**Table IV-O-5. Existing Transportation Facilities Currently Operating at Level of Service F within San Bernardino County**

<table>
<thead>
<tr>
<th>Freeways</th>
<th>Location</th>
<th>Roadway Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound AM</td>
<td>Redlands</td>
<td>Mountain View Avenue to SR-30</td>
</tr>
<tr>
<td>Eastbound PM</td>
<td>San Bernardino</td>
<td>I-215 to Waterman Avenue</td>
</tr>
<tr>
<td>I-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southbound AM</td>
<td>San Bernardino County</td>
<td>I-215 to Oak Hill Road</td>
</tr>
<tr>
<td>Northbound PM</td>
<td>San Bernardino County; Barstow</td>
<td>I-215 to Oak Hill Road; SR-58 to SR-247</td>
</tr>
<tr>
<td>I-215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound AM</td>
<td>Colton, Grand Terrace</td>
<td>Barton Road to I-10</td>
</tr>
<tr>
<td>Southbound AM</td>
<td>Colton, Grand Terrace, San Bernardino</td>
<td>La Cadena Drive to I-10; Orange Show Road to SR-259</td>
</tr>
<tr>
<td>Northbound PM</td>
<td>Colton, Grand Terrace, San Bernardino</td>
<td>La Cadena Drive to I-10; Orange Show Road to 2nd Street; 5th Street to Baseline Road</td>
</tr>
<tr>
<td>Southbound PM</td>
<td>San Bernardino</td>
<td>Mill Street to 2nd Street</td>
</tr>
<tr>
<td><strong>State Highways</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR-38</td>
<td>Redlands, San Bernardino County</td>
<td>I-10 to Bryant Street</td>
</tr>
<tr>
<td><strong>Arterial Roadways – Valley Region</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

County of San Bernardino
2007 General Plan
IV-166
Final Environmental Impact Report
## North-South Facilities

<table>
<thead>
<tr>
<th>Facility</th>
<th>Location</th>
<th>Roadway Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedar Avenue</td>
<td>Rialto, San Bernardino</td>
<td>Baseline Road to I-10</td>
</tr>
<tr>
<td>Central Avenue</td>
<td>Montclair</td>
<td>I-10 to Moreno Street</td>
</tr>
<tr>
<td>Etiwanda Avenue</td>
<td>Fontana, Ontario</td>
<td>I-10 to Slover Avenue</td>
</tr>
<tr>
<td>Milliken Avenue</td>
<td>Rancho Cucamonga, Ontario</td>
<td>Foothill Boulevard to 4th Street</td>
</tr>
<tr>
<td>Orange Avenue (SR-30)</td>
<td>Redlands</td>
<td>I-10 to San Bernardino Avenue</td>
</tr>
<tr>
<td>Rancho Avenue</td>
<td>Colton</td>
<td>I-10 to Agua Mansa Road</td>
</tr>
<tr>
<td>Reche Canyon Road</td>
<td>Colton, San Bernardino County</td>
<td>Washington Street to Riverside County Line</td>
</tr>
<tr>
<td>Sierra Avenue</td>
<td>Fontana</td>
<td>Valley Boulevard to I-10</td>
</tr>
</tbody>
</table>

## Arterial Roadways – Desert Region

<table>
<thead>
<tr>
<th>Location</th>
<th>Roadway Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterman Avenue</td>
<td>San Bernardino</td>
</tr>
</tbody>
</table>

## East-West Facilities

<table>
<thead>
<tr>
<th>Location</th>
<th>Roadway Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>19th Street (SR-30)</td>
<td>Upland, Rancho Cucamonga</td>
</tr>
<tr>
<td>Barton Road/Washington Street</td>
<td>Colton, Grand Terrace, San Bernardino, Loma Linda</td>
</tr>
<tr>
<td>Carbon Canyon Road (SR-142)</td>
<td>Chino Hills</td>
</tr>
<tr>
<td>Foothill Boulevard (SR-66)</td>
<td>Rancho Cucamonga</td>
</tr>
<tr>
<td>Highland Avenue (SR-30)</td>
<td>Fontana, Rialto, San Bernardino, Highland</td>
</tr>
<tr>
<td>Palmdale Road (SR-18)</td>
<td>Victorville</td>
</tr>
</tbody>
</table>


## Public Transportation

There are seven public transit agencies that operate within San Bernardino County. These provide approximately 17.5 million passengers per year with access to a vast majority of the Valley and Mountain Regions of the County and to the more developed areas of the Desert Region. Of the seven transit operators, six are located almost entirely within the County and are provided funds and received oversight from San Bernardino Associated Governments (SANBAG), the County’s transportation planning agency. SANBAG does not provide funding or have oversight over Foothill Transit Agency.

San Bernardino County also maintains a service directory for organizations and agencies that provide specialized transportation for seniors and persons with disabilities. This directory created and maintained by the Public and Specialized Transportation Advisory and Coordination Council, currently lists approximately 200 public transit operators and social service transportation providers that have been registered by the County to provide access to seniors, disabled persons and persons of limited means.

Greyhound offers regional and nationwide bus service to San Bernardino County residents through seven stations located in these communities – Baker, Barstow, Fontana, Needles, a limited station in Redlands, San Bernardino and Victorville. From these stations, Greyhound offers connections to locations such as Los Angeles, Las Vegas, Phoenix, Tucson and points beyond. In 2002, San Bernardino was the tenth busiest terminal for Greyhound patrons in the United States.
Railroads

Commuter Service

Commuter rail service in San Bernardino County is currently provided by Metrolink. Metrolink is the regional commuter rail system operated by the Southern California Regional Rail Authority (SCRRRA), a joint powers authority created by the transportation commissions of the counties of Los Angeles, Orange, Riverside and San Bernardino, as mandated by the California Legislature through Senate Bill 1402, Chapter Four of Division 12 of the Public Utilities Code. Metrolink operates seven lines throughout the Los Angeles Metropolitan Area, three of which provide direct service to San Bernardino County; the San Bernardino Line, the Riverside Line and the Inland Empire Orange County Line. More details on commuter service in the County are provided in the Circulation and Infrastructure Background Report.

Amtrak

Amtrak has two routes that travel through San Bernardino County. The Southwest Chief operates daily between Los Angeles and Chicago and stops in four cities in San Bernardino County - San Bernardino, Victorville, Barstow and Needles. The Sunset Limited operates three times per week between Los Angeles and Orlando, Florida, and makes one stop in San Bernardino County, in the City of Ontario.

High-Speed Rail / Maglev

- The Southern California Association of Governments (SCAG) has been studying the feasibility of constructing four magnetic levitation (Maglev) high-speed transportation system corridors within the region. The intent of this project would be to create an integrated regional airport system by connecting all significant airport facilities as well as major activity centers and multi-modal transportation centers using a high-speed transportation system.

After this initial network is constructed and shown to be a feasible alternative to the automobile, further expansion could include travel between such destinations as Los Angeles and San Diego, San Bernardino and Palmdale and possibly Los Angeles and Las Vegas.

SCAG’s Regional Council approved the deployment of a 56-mile “Initial Operating Segment” in December 2002 that would extend from West Los Angeles via Los Angeles Union Passenger Terminal to Ontario International Airport. Additionally, advanced planning was approved for the Los Angeles International Airport to Palmdale and Los Angeles to Orange County corridors. However, no segment has been constructed to date.

A second, privately funded, high-speed rail project is currently in the preliminary stages of development. The proposed DesertXpress high-speed train project includes passenger stations, a maintenance facility, and a new railroad line along the I-15 corridor between Victorville and Las Vegas. The project would involve construction of a fully grade separated, dedicated double track passenger-only railroad along an approximately 200-mile corridor within or adjacent to the I-15 freeway for about 170 miles and adjacent to existing railroad lines for about 30 miles.
Aviation

Currently, there are 44 public and private airports operating throughout the County. The County manages, operates and maintains six of these facilities. San Bernardino County also has a total of 25 heliports; 4 are publicly operated, 11 for private medical use and 10 for private general use.

Ontario International Airport (ONT) is operated by Los Angeles World Airports, a branch of the City of Los Angeles. It is currently equipped to accommodate international flights. ONT is one of the fastest growing commercial airports in Southern California and is one of the top 100 busiest airports in the United States for both commercial and cargo services.

San Bernardino International Airport (SBD) is operated by the San Bernardino International Airport Authority (SBIAA), a joint powers authority comprised of the County of San Bernardino, Colton, Loma Linda and Highland. are currently equipped to accommodate international flights. San Bernardino International has been converted to a commercial airport from its previous use as Norton Air Force Base and is seeking to establish itself as an alternative destination for both passenger and cargo carriers.

The former George Air Force Base, located in Victorville, is one of the five federally-owned airports in the County and is also being converted to civilian use and has been renamed as the SCLA. This facility is currently operating as a staging area for military personnel stationed at National Training Center in Fort Irwin. The final proposed use of this facility is to act as an intermodal gateway to southern California through which a large portion of the freight being carried along the I-15 corridor can be distributed. The remaining four facilities are being maintained and operated by the respective government agencies by which they are owned.

Four municipal airports are located within San Bernardino County and are widely utilized for recreational and educational purposes with the number of annual operations at these facilities ranging from 12,500 to 125,000.

The remaining 27 airports are privately owned and can be found throughout the County. Cable Airport is considered to be the largest privately-owned airport in the United States and conducts 88,000 operations per year. The Hesperia and the Roy Williams (formerly Hi–Desert) Airports are also greatly utilized.

The 44 airports and 25 heliports are spread across the three planning areas: the Valley, the Mountains and the Desert. The locations of these facilities are presented on Figures O-7 through O-13 of the Circulation Background Report prepared for the update to the County’s General Plan. Table IV-O-6 provides details of the airports in the county and Table IV-O-7 provides details of the County’s heliports.

Goods Movement

Due to the County’s location at the eastern edge of the Los Angeles Metropolitan Area, the transportation and distribution of goods is a very important industry in San Bernardino County. Millions of tons of freight are distributed to destinations across the United States utilizing County roadways, rail lines and airports. Below are descriptions of each mode of transportation as it relates to goods movement.
Trucking

According to U.S. Census Bureau Nonemployer Statistics, 2001 Warehousing & Transportation, there were 4,022 trucking entities operating in San Bernardino County. Of this total, 1,566 engaged in local delivery routes and another 2,184 conducted long-distance deliveries. A local trip generally occurs in the same metropolitan area and only requires a single day to complete. Long-distance trips are those trips that occur between metropolitan areas and require greater periods of time to complete. An additional 272 firms concentrate on goods that require specialized delivery due to inherent characteristics of the product (i.e., size, weight, etc.) regardless of trip length. These entities generated a total of $337,747,000 in total receipts for 2001.

Rail Freight

Class I Railroads: There are two Class I freight railroads that operate lines in San Bernardino County: the BNSF Railway (owned by the Burlington Northern Santa Fe Corporation) and the Union Pacific (UP) Railroad.

Class II Railroads: There are currently no Class II railroads in San Bernardino County.

Class III Railroads: Two Class III railroads are currently operating in San Bernardino County. Traffic along the Trona Railway, operating near the Town of Trona in the northwestern portion of the County, only consists of railcars loaded with borax destined for overseas markets. This railroad’s activity level is near 5 million gross ton-miles and occurs over 31 total miles of track. The Arizona & California Railroad operates along a branch line from the main BNSF Railway line and carries cargo to the Phoenix metropolitan area. This railroad operates 134 miles of track and carries approximately 5 million gross ton-miles of cargo per year.

Table IV-O-6. San Bernardino County Airports

<table>
<thead>
<tr>
<th>Airport Location</th>
<th>Location</th>
<th>Size (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valley Region Airport(s)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable</td>
<td>2 miles northwest of Upland</td>
<td>95</td>
</tr>
<tr>
<td>Chino</td>
<td>3 miles southeast of Chino</td>
<td>1,097</td>
</tr>
<tr>
<td>Ontario International</td>
<td>2 miles east of Ontario</td>
<td>1,700</td>
</tr>
<tr>
<td>Redlands Municipal</td>
<td>2 miles northeast of Redlands</td>
<td>194</td>
</tr>
<tr>
<td>Rialto Municipal / Art Scholl Memorial</td>
<td>3 miles northwest of Rialto</td>
<td>600</td>
</tr>
<tr>
<td>San Bernardino International</td>
<td>2 miles southeast of San Bernardino</td>
<td>1,329</td>
</tr>
<tr>
<td><strong>Mountain Region Airport(s)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big Bear City</td>
<td>Immediately west of Big Bear City</td>
<td>117</td>
</tr>
<tr>
<td><strong>Desert Region Airport(s)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abraham Ranch</td>
<td>16 miles southeast of Lucerne Valley</td>
<td>na</td>
</tr>
<tr>
<td>Adelanto</td>
<td>4 miles southwest of Adelanto</td>
<td>350</td>
</tr>
<tr>
<td>Apple Valley</td>
<td>3 miles north of Apple Valley</td>
<td>456</td>
</tr>
<tr>
<td>B &amp; E Ranch</td>
<td>10 miles northwest of Yucca Valley</td>
<td>160</td>
</tr>
<tr>
<td>Baker</td>
<td>2 miles northwest of Baker</td>
<td>240</td>
</tr>
<tr>
<td>Barstow – Daggett</td>
<td>4 miles east of Barstow</td>
<td>1,087</td>
</tr>
<tr>
<td>Bauer</td>
<td>Near Twentynine Palms</td>
<td>na</td>
</tr>
<tr>
<td>Bicycle Lake AAF</td>
<td>3 miles northeast of Barstow</td>
<td>na</td>
</tr>
<tr>
<td>Cadiz Airstrip</td>
<td>1 miles south of Cadiz</td>
<td>na</td>
</tr>
</tbody>
</table>
### Chapter IV

**Project Analysis**

#### Table IV-O-7. San Bernardino County Heliports

<table>
<thead>
<tr>
<th>Heliport</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valley Region Heliport(s)</strong></td>
<td></td>
</tr>
<tr>
<td>Arrowhead Regional Medical Center</td>
<td>1 mile west of Colton</td>
</tr>
<tr>
<td>County</td>
<td>2 miles southeast of San Bernardino</td>
</tr>
<tr>
<td>Fontana Police</td>
<td>Immediately north of Fontana</td>
</tr>
<tr>
<td>Kaiser Hospital</td>
<td>2 miles south of Fontana</td>
</tr>
<tr>
<td>Loma Linda University Medical Center</td>
<td>Immediately north of Loma Linda</td>
</tr>
<tr>
<td>R.I. San Bernardino G/L Helistop</td>
<td>4 miles northeast of San Bernardino</td>
</tr>
<tr>
<td>San Bernardino Community Hospital</td>
<td>Immediately southeast of San Bernardino</td>
</tr>
<tr>
<td>San Bernardino County Medical Center</td>
<td>2 miles west of San Bernardino</td>
</tr>
<tr>
<td>SCE Eastern Division</td>
<td>3 miles southwest of San Bernardino</td>
</tr>
<tr>
<td><strong>Mountain Region Heliport(s)</strong></td>
<td></td>
</tr>
<tr>
<td>Bear Valley Hospital</td>
<td>Immediately north of Big Bear Lake</td>
</tr>
<tr>
<td>M H 15 Heaps Peak USFS</td>
<td>3 miles southeast of Lake Arrowhead</td>
</tr>
<tr>
<td>Mountains Community Hospital</td>
<td>2 miles northeast of Lake Arrowhead</td>
</tr>
<tr>
<td><strong>Desert Region Heliport(s)</strong></td>
<td></td>
</tr>
<tr>
<td>Barstow Community Hospital</td>
<td>1 mile east of Barstow</td>
</tr>
<tr>
<td>Barstow Service Center</td>
<td>1 mile southeast of Barstow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Airport</th>
<th>Location</th>
<th>Size (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camino Airstrip</td>
<td>7 miles southeast of Goffs</td>
<td>na</td>
</tr>
<tr>
<td>Cones Field</td>
<td>2 miles north of Twentynine Palms</td>
<td>30</td>
</tr>
<tr>
<td>Conner</td>
<td>13 miles northwest of Goffs</td>
<td>40</td>
</tr>
<tr>
<td>Crosswinds</td>
<td>4 miles northeast of Twentynine Palms</td>
<td>78</td>
</tr>
<tr>
<td>Depue</td>
<td>2 miles southwest of Lenwood</td>
<td>na</td>
</tr>
<tr>
<td>Dick Dale Skyranch</td>
<td>5 miles northeast of Twentynine Palms</td>
<td>80</td>
</tr>
<tr>
<td>Dick Taylor Airstrip</td>
<td>8 miles southwest of Kelso</td>
<td>na</td>
</tr>
<tr>
<td>Gene Wash Reservoir</td>
<td>3 miles northwest of Parker Dam</td>
<td>na</td>
</tr>
<tr>
<td>Goldstone / GTS</td>
<td>28 miles north of Barstow</td>
<td>na</td>
</tr>
<tr>
<td>Hansen</td>
<td>12 miles southwest of Adelanto</td>
<td>370</td>
</tr>
<tr>
<td>Hart Mine</td>
<td>7 miles southeast of Ivanpah</td>
<td>na</td>
</tr>
<tr>
<td>Harvard</td>
<td>8 miles east of Yermo</td>
<td>na</td>
</tr>
<tr>
<td>Hesperia</td>
<td>3 miles south of Hesperia</td>
<td>26</td>
</tr>
<tr>
<td>Holiday Ranch</td>
<td>7 miles northeast of Apple Valley</td>
<td>70</td>
</tr>
<tr>
<td>Kelly</td>
<td>17 miles east of Lucerne Valley</td>
<td>120</td>
</tr>
<tr>
<td>Krey Field</td>
<td>9 miles southwest of Adelanto</td>
<td>140</td>
</tr>
<tr>
<td>Ludlow</td>
<td>50 miles east of Barstow</td>
<td>na</td>
</tr>
<tr>
<td>Needles</td>
<td>5 miles south of Needles</td>
<td>796</td>
</tr>
<tr>
<td>Osborne Private</td>
<td>4 miles northeast of Victorville</td>
<td>na</td>
</tr>
<tr>
<td>Palisades Ranch</td>
<td>3 miles southwest of Helendale</td>
<td>240</td>
</tr>
<tr>
<td>Roy Williams</td>
<td>3 miles northeast of Joshua Tree</td>
<td>115</td>
</tr>
<tr>
<td>Southern California Logistics</td>
<td>5 miles northwest of Victorville</td>
<td>2,300</td>
</tr>
<tr>
<td>Sun Hill Ranch</td>
<td>10 miles west of Helendale</td>
<td>215</td>
</tr>
<tr>
<td>Trona</td>
<td>4 miles north of Trona</td>
<td>150</td>
</tr>
<tr>
<td>Twentynine Palms</td>
<td>6 miles east of Twentynine Palms</td>
<td>480</td>
</tr>
<tr>
<td>Twentynine Palms EAF</td>
<td>9 miles northwest of Twentynine Palms</td>
<td>na</td>
</tr>
<tr>
<td>Valley Vista</td>
<td>16 miles northwest of Yucca Valley</td>
<td>na</td>
</tr>
<tr>
<td>Yucca Valley</td>
<td>3 miles east of Yucca Valley</td>
<td>35</td>
</tr>
</tbody>
</table>
### Heliport Location

<table>
<thead>
<tr>
<th>Heliport</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi-Desert Memorial Hospital</td>
<td>2 miles west of Joshua Tree</td>
</tr>
<tr>
<td>IPP Adelanto</td>
<td>2 miles southwest of Adelanto</td>
</tr>
<tr>
<td>Lugo Substation</td>
<td>4 miles southwest of Hesperia</td>
</tr>
<tr>
<td>Morongo Basin CHP</td>
<td>2 miles east of Joshua Tree</td>
</tr>
<tr>
<td>Ord Mountain</td>
<td>17 miles southeast of Barstow</td>
</tr>
<tr>
<td>SCE High Desert District</td>
<td>Immediately north of Victorville</td>
</tr>
<tr>
<td>SCE Solar I</td>
<td>3 miles south of Yermo</td>
</tr>
<tr>
<td>St. Mary Desert Valley Hospital</td>
<td>1 mile northwest of Apple Valley</td>
</tr>
<tr>
<td>Victor Valley Community Hospital</td>
<td>Immediately north of Victorville</td>
</tr>
<tr>
<td>William E. Poole</td>
<td>6 miles northwest of Apple Valley</td>
</tr>
<tr>
<td>Yucca Valley Service Center</td>
<td>1 mile east of Yucca Valley</td>
</tr>
</tbody>
</table>

### Air Freight

Ontario International Airport (ONT) is currently served by nine major U.S. airfreight carriers. These carriers processed 575,369 tons of cargo through the facility in 2005. The freight movement system surrounding ONT also includes two Class I railroads, four major freeways and an expanding network of freight forwarders.

The airfreight carriers operating from ONT include Airborne Express, Ameriflight, DHL, Empire Airways, Express Net, Federal Express, West Air, Union Flights and United Parcel Service (UPS). UPS is the largest airfreight carrier operating at ONT, consisting of approximately 70% of the airport’s cargo, and began four weekly flights to China using Boeing 747 cargo aircraft, creating a direct link to the Pacific Rim’s largest and fastest growing market.

There are two other facilities in San Bernardino County that are currently developing operating plans and infrastructure to begin processing large quantities of cargo: San Bernardino International Airport (the former Norton Air Force Base in the City of San Bernardino) and SCLA (the former George Air Force Base in Victorville). At completion, SCLA is expected to have the capacity to handle nearly four million tons of air cargo annually and grow from three to nine million tons per year for the next 20 years. San Bernardino International Airport currently has three airfreight carriers, Custom Air Transport, Heavylift and Kitty Hawk, operating at the facility and is located within two miles of the state-of-the-art BNSF Intermodal Rail Facility and is in close proximity to six major freeways.

More details on goods movement facilities in the County are provided in the Circulation and Infrastructure Background Report.

### Transportation Demand Measures

#### Park and Ride Facilities

Within San Bernardino County, there are 11 Park & Ride facilities located across the southwestern portion of the County. Currently, there are five facilities located in the Valley Region, four in the Desert Region and two in the Mountain Region. Each Park & Ride lot is free of charge and open for public use 24 hours a day, seven days a week. The Circulation and Infrastructure Background Report contains descriptions of each facility, operating agency, average daily usage of each facility and transit connections.
High Occupancy Vehicle Carpool Lanes

San Bernardino County has approximately 43 miles of carpool lanes along four separate freeways (i.e., I-10, SR-60, SR-210 and SR-71). All of the existing facilities are located in the western portion of the Valley Region. Construction of an additional 18 miles is scheduled to occur in the next several years and will located in the eastern portion. A list of the existing and planned carpool lanes is provided below:

Existing

- An 8.5-mile facility along SR-71 in Chino was completed in 1997.
- A 10-mile segment of SR-60 in Chino, Ontario and an unincorporated portion of San Bernardino County also opened in 1997.
- A 9.9-mile segment of I-10 through Ontario and Montclair was opened in January 2000.
- A 6-mile portion of SR-210 in Rancho Cucamonga and Fontana was completed in 2001.
- A 9-mile segment along SR-210 in Rancho Cucamonga and Upland opened in 2002.

Planned

- An 8-mile segment of SR-210 in Rialto and San Bernardino is expected to open in 2007;
- A 6-mile segment on I-215 is under development and will travel through downtown San Bernardino and is scheduled for completion in 2008; and
- A 4-mile section of I-215 extending from the Riverside County line to I-10 through Grand Terrace and Colton. An EIR is currently being prepared for this project and will continue until 2009.

Ridesharing

SANBAG operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Option Rideshare is a program that offers commuters financial incentives of up to $2.00 per day when they use a rideshare mode for three consecutive months. Team Ride is an extension of the initial program that provides discounts and special offers to participants at restaurants and events in both San Bernardino and Riverside Counties. The final program is the Inland Empire Commuter Services Program. This program is designed to help employers develop and maintain a rideshare program through continuing education and assistance from SANBAG free of charge.

Non-Motorized Facilities

San Bernardino County has a Non-Motorized Transportation Plan that deals primarily with bicycle and pedestrian use by residents for recreational and commuting purposes. This plan was most recently updated in 2001 and is an attempt to develop a more comprehensive approach toward future planning and construction activities in regards to bicycle and pedestrian infrastructure. More details on non-motorized facilities in the County are provided in the Circulation and Infrastructure Background Report.
Trails

Trails are an important part of the non-motorized transportation system that currently exists within San Bernardino County. These facilities provide public access to open space lands and fulfill an increasingly important role as recreational amenities. Within the San Bernardino County government, the Department of Regional Parks is responsible for maintaining all County-designated regional trails. All of the County-designated trail facilities are multi-use trails that allow pedestrian, bicycle and equestrian use. More details on trails in the County are provided in the Circulation and Infrastructure Background Report.

Intelligent Transportation Systems Applications

Intelligent Transportation Systems constitute a wide spectrum of techniques and applications that are currently being applied to existing roadways, highways and transit systems to increase their efficiency, safety and ability to relieve congestion. San Bernardino County is currently employing several types of Intelligent Transportation Systems applications.

- 1-800-COMMUTE telephone line, which provides travel information for highways, transit, rideshare and other commuting alternatives;
- Closed-circuit television cameras to help in identifying and responding to accidents more quickly;
- Electronic sensors placed in freeways that transmit vehicle counts to a traffic management center and can be used for real-time traffic conditions;
- Traffic signal control systems that are synchronized through computer software specifically designed to better monitor and respond to local traffic congestion;
- Changeable message signs that alert drivers to possible delays due to accident or congestion and allow for route diversion;
- Traffic signals, or ramp meters, placed at freeway entrance ramps to provide a more consistent flow of entering traffic onto the freeway, resulting in less congestion and potential accidents due to crowded conditions; and
- Smart call boxes that gather traffic count data and transmit this information to traffic management centers and the CHP.

Measure I/Nexus Study

Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. San Bernardino County voters approved the measure in November 1989 to ensure that needed transportation projects were implemented countywide.

The San Bernardino Association of Governments (SANBAG) administers Measure I revenue and is responsible for determining which projects receive Measure I funding, and ensuring that transportation projects are implemented. In 2004, Measure I was extended by a vote of the people from 2010 to 2040. It is expected to generate an additional $6 billion in revenue for transportation improvements.

Requirements from Measure I apply to the San Bernardino Valley and Victor Valley cities and sphere areas. Local jurisdictions in these areas must implement development mitigation programs that achieve development contribution requirements are established by the Nexus
Study for regional transportation improvements, including freeway interchanges, railroad grade separations, and regional arterial highways on the Nexus Study network.

Implementation of a development mitigation program is required of each local jurisdiction in the Valley and Victor Valley to maintain conformance with the SANBAG Land Use/Transportation Analysis Program of the Congestion Management Program (CMP). In addition, the CMP requires SANBAG to make an annual finding of local jurisdiction conformance to the provisions of the CMP. To support this finding, each jurisdiction must prepare a brief annual report demonstrating its continued compliance with the provisions of the CMP.

2. SIGNIFICANCE CRITERIA

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Transportation/Traffic, if the project would cause any of the following effects:

- **Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)**
- **Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways**
- **Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks**
- **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)**
- **Result in inadequate emergency access**
- **Result in inadequate parking capacity**
- **Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

3. IMPACT ANALYSIS

The land uses permitted by the Land Use Element of the General Plan will generate additional traffic on the County’s roadway network. This traffic has the potential to result in significant impacts if it results in a substantial increase in vehicle trips, volume to capacity ratio on roads, or congestion at intersections, or if it exceeds a level of service standard established by the County congestion management agency.

**Impact TR- 1**

SANBAG, the County’s congestion management agency, has established level of service (LOS) E as the standard for roadway operations within the County. However, SANBAG also permits each jurisdiction to set its own, more stringent standard. The proposed 2007 update to the General Plan establishes LOS D as the standard in the Valley and Mountain Regions and LOS C as the standard in the Desert Region. Therefore, a significant impact would occur if
the General Plan were to result in roadway operations at LOS E or F in the Valley or Mountain Regions, or at LOS D, E, or F in the Desert Region.

As is standard practice for General Plan level analyses, roadway segment ADT volumes have been used as the primary performance measure and indicator of level of service (LOS) and operating conditions. The General Plan adopts volume thresholds published in the 2002 Florida Quality/Level of Service Handbook. For the analysis of impacts of the General Plan, the volume thresholds for “Major City/County Roadways” have been utilized. Since the General Plan also adopts the LOS standard of D in the Valley and Mountain Regions and C in the Desert region, the relevant volume thresholds are as shown in Table IV-O-8.

### Table IV-O-8. Roadway Daily Volume Thresholds

<table>
<thead>
<tr>
<th># of Lanes</th>
<th>Valley(^1)</th>
<th>Mountain(^2)</th>
<th>Desert(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>14,600</td>
<td>13,600</td>
<td>7,000</td>
</tr>
<tr>
<td>4</td>
<td>31,100</td>
<td>29,300</td>
<td>16,400</td>
</tr>
<tr>
<td>6</td>
<td>46,800</td>
<td>44,100</td>
<td>25,700</td>
</tr>
</tbody>
</table>

\(^1\)Major City/County Roadway, Urbanized Area, LOS D  
\(^2\)Major City/County Roadway, Transitioning and Non-Urbanized Area, LOS D  
\(^3\)Major City/County Roadway, Areas over 5,000 not in Urbanized Area, LOS C  

Source: Meyer, Mohaddes Associates / County of San Bernardino

Table IV-O-9 presents the roadway segments under County jurisdiction that are projected to operate at unsatisfactory levels of service under year 2030 conditions, without mitigation.
## Table IV-O-9. Roadway Segments Deficient in 2030 Without Mitigation

<table>
<thead>
<tr>
<th>Roadway</th>
<th>From</th>
<th>To</th>
<th>General Plan Classification</th>
<th>On Nexus Study Project List</th>
<th>Deficient when Fully Built</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th St</td>
<td>Cooley St</td>
<td>Highland City Limits</td>
<td>Major Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cedar</td>
<td>Bloomington</td>
<td>Riverside County Line</td>
<td>Major Arterial Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Central</td>
<td>Montclair City Limits</td>
<td>Chino City Limits</td>
<td>Major Arterial Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cherry</td>
<td>I-10</td>
<td>Rosemary</td>
<td>Major Divided Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Citrus</td>
<td>I-10</td>
<td>Valley</td>
<td>Secondary Hwy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Monte Vista</td>
<td>Mission</td>
<td>Chino City Limits</td>
<td>Secondary Hwy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Ramona</td>
<td>Montclair City Limits</td>
<td>Chino City Limits</td>
<td>Major Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Desert</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baldy Mesa Rd</td>
<td>Duncan Rd</td>
<td>Victorville City Limits</td>
<td>Major Arterial Hwy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Phelan Rd</td>
<td>Caughlin</td>
<td>Baldy Mesa Rd</td>
<td>Major Arterial Hwy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rock Springs Rd</td>
<td>Hesperia City Limits</td>
<td>Deep Creek Rd</td>
<td>Major Hwy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Old Hwy 58</td>
<td>Community Bl</td>
<td>Barstow City Limits</td>
<td>Major Hwy</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Mountains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are no deficient Roadway Segments projected in the Mountain Region
To perform the analyses presented below, the land uses permitted by the Land Use Element were converted into socioeconomic data (e.g., population, housing, employment, and income) based on factors approved by SCAG. Socioeconomic data were developed for each traffic analysis zone (TAZ) in SCAG’s Regional Transportation Plan (RTP) travel demand model. These data reflect build out of the General Plan Land Use Element for the unincorporated areas of the County. For zones representing the incorporated cities, socioeconomic data approved by SCAG for 2030 conditions was used. Thus, the traffic forecasts in this section represent build out of the unincorporated County areas with 2030 background volumes. These forecasts are referred to as year 2030 traffic volumes.

Before performing the initial year 2030 model runs, the RTP model network was updated to incorporate all projects in the County that are included in the 2004 RTP constrained project list. The RTP model was then used to generate average daily traffic (ADT) volume projections on the County’s roadway system. Thus, these initial model runs represent the impact of build out of the County’s General Plan land uses on the existing roadway network, including only RTP constrained projects. They do not include implementation of the General Plan circulation system illustrated in the Circulation Map.

No roadway segments under county jurisdiction in the Mountain Region are projected to operate at unsatisfactory levels of service. To assess the extent to which implementation of the General Plan circulation system will mitigate the identified impacts additional model runs were conducted in which the model network was modified to reflect each roadway segment under the County’s jurisdiction as constructed to its ultimate General Plan classification. The final column of Table IV-O-9 indicates whether each roadway segment that is projected to be deficient without mitigation will remain deficient with implementation of the General Plan circulation system. As shown, with implementation of the General Plan circulation system, no roadways under County jurisdiction will remain deficient.

In addition to the countywide traffic analysis provided in this EIR, certain roadway segments of limited length may experience congestion and deficient levels of service in the future. For example, Tables 4 and 5 in the Crest Forest Community Plan Text, Tables 4 and 5 in the Lake Arrowhead Community Plan Text and Tables 4 and 5 in the Hilltop Community Plan Text display certain roadway segments with existing and/or projected levels of service “E” and “F”. It is anticipated that congestion from these deficient segments are relatively localized in nature, and as such are not considered significant environmental impacts in the context of the countywide traffic analysis. Furthermore, these localized deficiencies may ultimately be resolved through certain operational solutions such as signalization, lane striping, access control, additional road widening, etc. Overall, the impact is not considered significant on a countywide basis.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

**Impact TR- 2**

Implementation of the county’s Circulation Map will mitigate the potential traffic impacts that may be created by the buildout of the General Plan land uses on roadways under the jurisdiction of San Bernardino County. However, mobility conditions will be limited and many capacity deficiencies will be apparent on roadways not under the county’s jurisdiction, such as freeways and State highways, as well as arterials in incorporated cities within the county as well as in adjacent areas of the southern California region.
It should be emphasized that the projected freeway and arterial deficiencies are as a result of forecast cumulative socioeconomic (housing, population and employment) growth in the entire southern California region by 2030, which also includes the projected buildout of the land uses in San Bernardino County General Plan. Many of the trips expected to be generated by the growth in unincorporated San Bernardino County also have an origin or a destination in either incorporated cities in the county or adjacent areas in other counties. The deficient highway segments that are described below are as a result of overall growth in southern California, and a large part of the deficiencies are unrelated to trips generated by current or projected land uses in unincorporated San Bernardino County.

The following sections summarize and highlight the projected deficiencies on roadways not under the county’s jurisdiction in each of the San Bernardino County subregions.

**San Bernardino Valley Planning Area:**

- Most of the freeways in the Valley region are expected to operate at LOS F with the exception of the following segments:
  - SR-71 from SR-60 to Central Ave
  - I-15 from Arrow Blvd to I-215
  - I-215 from SR-259 to I-15
  - SR-210 from I-215 to Fifth St
- The west Valley area exhibits significantly more segments with unacceptable LOS than the east Valley.
- The west Valley’s congested highway segments are highly continuous and persistent, while in the east Valley the deficient segments are more isolated, discontinuous and sporadic.
- Also, it is apparent that in the west Valley, north-south arterials are more congested than the east-west roadways. One reason for this can be the fact that there are three parallel east-west freeways that share the load of the heavy east-west travel, whereas I-15, as the only one north-south freeway on the west side, carries the bulk of long distance trips.
- In the west Valley, the most notable north-south facilities with long segments of continuous capacity deficiency are as follows:
  - Haven Avenue from Riverside Dr to 8th St
  - Archibald Avenue from Schleisman Rd to Riverside Dr
  - Archibald Avenue from Airport Dr to Foothill Blvd
  - Vineyard Avenue from Holt Ave to Arrow Route
  - Campus Avenue from Mission Blvd to SR-210
  - Euclid Avenue (SR-83) from Eucalyptus Ave to Mission Blvd
- There are also a few east-west arterials with long segments that are expected to be over capacity. These include:
  - Foothill Boulevard from Milliken Ave to Hickory Ave
o D Street in Ontario from Mountain Ave to Holt Ave
o Mission Boulevard from Euclid Ave to Archibald Ave
o Pine Avenue from Butterfield Ranch Rd to Hellman Ave
o Carbon Canyon Road (SR-142) from Chino Hills Parkway to the Orange County line

- In the east Valley, the most notable capacity deficiencies are also in the north-south direction. Virtually all north-south surface roads connecting San Bernardino and Riverside counties from the I-15 to the I-215 and beyond are expected to operate at LOS F conditions between I-10 and SR-60. These roadways include from west to east:
  o Etiwanda Avenue
  o Sierra Avenue
  o Riverside Avenue/Main Street
  o Mount Vernon Avenue/Pigeon Pass Road
  o Reche Canyon Road
  o San Timoteo Canyon Road

- Other north-south streets in the east Valley that are expected to operate at an unacceptable LOS are as follows:
  o Several segments of Rancho Avenue
  o Tippecanoe Avenue and Waterman Avenue in San Bernardino
  o Live Oak Canyon Road and 5th Street in Calimesa and Yucaipa

- Most notable capacity deficiencies on the east Valley’s east-west streets are expected to be on the following roadway segments:
  o Base Line Road—from Alder Ave to Cactus Ave
  o Fifth Street—from I-215 to SR-210 (SR-30)

In summary, the heaviest concentration of capacity deficiencies on highways is expected to be in the west Valley, generally in the Chino/Ontario/Upland area, and the north-south arterials south of I-10 serving the San Bernardino/Riverside County connections.

Mountain Planning Area:

In the Mountain region, the most notable capacity deficiencies are expected to occur on the highways connecting the Mountain areas with the San Bernardino east valley. These facilities, which are for the most part comprised of two-lane state highways, are as follows:

- SR-18 from SR-30 to SR-189 near Lake Arrowhead
- SR-138 from SR-18 to Lake Dr
- SR-189 from SR-18 to Grass Valley Rd
- SR-330 from Highland Ave to SR-18
- SR-38 from Bryant Rd to south of Big Bear Lake
Desert Planning Area:

In the Desert Planning area the freeways are generally expected to operate under acceptable conditions with the exception of the following segments:

- I-15 from I-215 to Ranchero Rd in Hesperia
- I-15 north of I-40 in Barstow

Arterial roadway segments in the Desert area that are expected to operate under unacceptable conditions of LOS E and F are mostly concentrated in the central portions of the Victor Valley and generally the cities of Victorville and Hesperia. East-west and north-south roadways appear to be equally impacted by capacity deficiencies at the buildout of the County General Plan land uses. Specific roadway segments with expected capacity deficiencies are as follows:

- SR-138 from I-15 to the Los Angeles County line
- Palmdale Road (SR-18) from Sheep Canyon Road to I-15
- Bear Valley Road from Bellflower Rd to I-15
- Bear Valley Road from I Avenue to Apple Valley Rd
- SR-247 from Rimrock Rd to I-15
- Rimrock Road from SR-247 to Monterey Ave

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact TR-3

The following sections summarize and highlight the projected deficiencies on roadways in the adjacent counties and surrounding areas. It is important to emphasize that roadway deficiencies in the adjacent counties are largely the result of growth in those counties, and that growth in San Bernardino County contributes only incrementally to these deficiencies, particularly on those roadway segments at a greater distance from the county.

Riverside County:

All freeways in Riverside County are expected to operate at LOS F, with the exception of I-10 east of the SR-111 junction in the Coachella Valley. Other access controlled facilities, which will operate acceptably, include the planned Mid-County Parkway and the Orange County Connection (expected toll facility).

As noted earlier, heavy congestion and capacity deficiencies can be expected on all key north-south surface roads connecting Riverside and San Bernardino counties between I-10 and SR-60. Other notable LOS E and F conditions can be expected on the following:

- The entire length of Van Buren Boulevard, from I-15 to I-215, with the exception of a short segment from Cypress to California in Riverside
- Limonite Avenue from Archibald Ave to Van Buren Blvd
- Arlington Avenue from Tyler St to Magnolia Ave
Mockingbird Canyon Road and El Sobrante Road from Van Buren to the Mid-County Parkway
Central Avenue and Alessandro Boulevard, from Van Buren to I-215, with the exception of a few short segments
Perris Boulevard from SR-60 to Nuevo Road
Cactus Avenue from I-215 to Perris Blvd
Gilman Springs Road from Alessandro Blvd to State St
Lamb Canyon Road from SR-60 to Gilman Springs Rd
Redlands Boulevard from San Timoteo Canyon Rd to Alessandro Blvd

Los Angeles County:
All freeways in adjacent areas in Los Angeles County are expected to operate at LOS F conditions, with no exceptions.

Much like the western San Bernardino Valley, it appears that capacity deficiencies are more pronounced on north-south arterials than on east-west facilities. Notable surface streets that are expected to operate at LOS E and F in adjacent areas of Los Angeles County are as follows:

North Grand Avenue from I-210 to SR-60/57, with the exception of one segment from Amar Rd to Valley Blvd
Temple Avenue/Amar Road from SR-57 to Nogales Ave
Azusa Avenue (SR-39) from W. San Bernardino Rd to SR-60
Fullerton Road from Valley Blvd to Orange County line
Glendora Avenue/Hacienda Boulevard from Merced Ave to Orange County line
Colima Road from Stimson Ave to Whittier Blvd
Santa Anita Road from Duarte Rd to Lower Azusa Rd
Rosemead Boulevard (SR-19) from I-210 to Whittier Blvd, with the exception of one segment between SR-60 and San Gabriel Blvd

Orange County:
All freeways in adjacent areas are projected to operate at LOS F with the exception of the Eastern Corridor Toll Road (SR-241).

In contrast to surface streets in Los Angeles County, the Orange County arterials in the adjacent areas do not exhibit long, sustained segments with unacceptable LOS E and F conditions. Most notable segments expected to be deficient are as follows:

La Mirada Boulevard from Leffingwell Rd to Beach Blvd
Beach Boulevard (SR-39) from Rosecrans Ave to Lincoln Ave
Beach Boulevard (SR-39) from Katella Ave to SR-22
• Knott Avenue from SR-91 to Ball Road
• Valley View Street from SR-91 to SR-22
• Westminster Avenue from Bolsa Chica Rd to Pacific Coast Hwy (SR-1)
• Euclid Avenue from Chapman Ave to Lincoln Ave

Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be mitigated to a level below significance.

Impact TR-4
Implementation of the General Plan will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The land uses permitted by the Land Use Element of the General Plan will generate additional demand for air travel to and from San Bernardino County. The increased demand for passenger air travel will likely result in increased air traffic levels at Ontario International Airport and, to a lesser extent, at the general aviation airports within the County. The increased demand for air freight services will likely result in increased air traffic levels at Southern California Logistics Airport and San Bernardino International Airport. The major airports each have their own aviation master plans to accommodate anticipated growth. In addition, all of the airports in the County must comply with Federal Aviation Administration regulations governing flight safety. Therefore, the increased traffic levels will not result in substantial safety risks.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-5
Implementation of the General Plan will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The implementation of the General Plan circulation network will result in an increasing portion of the County’s roadway system being constructed in accordance with General Plan roadway standards. These standards require right-of-way adequate for roadway design consistent with Caltrans’ Highway Design Manual. In addition, all roadway plans will be reviewed by the County Department of Public Works to ensure that there are no unsafe design features.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-6
Implementation of the General Plan will not result in inadequate emergency access. All development under the General Plan will be subject to review by the County Department of Public Works and by emergency service agencies to ensure that adequate emergency access is provided.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.
Impact TR-7
Implementation of the General Plan will not result in inadequate parking capacity. All development under the General Plan will be subject to review by the County Department Planning to ensure that adequate parking provided.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

Impact TR-8
Implementation of the General Plan will not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The General Plan policies support alternative transportation.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

4. Mitigation Measures
Implementation of the General Plan circulation system illustrated in the Circulation Map will mitigate some of the traffic impacts of the General Plan land uses. Implementation of the full circulation system will be achieved through a variety of mechanisms, including the following:

- Requirements that developers fully improve their street frontage at the time of development
- Collection of fees through a fee program consistent with SANBAG’s “Nexus Study” requirements implementing the Measure I sales tax program
- Measure I sales tax funds that are allocated by SANBAG to supplement fees collected directly by the County.

Table IV-O-9 above indicates which of the deficient segments are included on the Nexus Study project list and are therefore eligible for Measure I funding. This indication is provided for informational purposes and is not meant to suggest that Measure I funding will fully mitigate impacts on these roadway segments.

Mitigation TR-1
The County shall provide a transportation system, including public transit, that is safe, functional and convenient, that meets the public’s needs and enhances the lifestyles of County residents.

Mitigation TR-2
The County shall strive to achieve Level of Service “D” on all County roadways in the Valley and Mountain Regions and LOS “C” on all County roadways in the Desert region. Through the review of new development proposals, traffic impacts, including cumulative impacts, will be properly addressed and mitigated to maintain these Level of Service standards on the County’s circulation system.

Mitigation TR-3
In the Valley and Mountain Regions, the County shall approve development proposals only when they are consistent with the County’s objective of achieving Level of Service “D” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “D” objective through incorporating design
measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “D” objective.

In the Desert Region, the County shall approve development proposals only when they are consistent with the County's objective of achieving Level of Service “C” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “C” objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “C” objective.

Mitigation TR-4
The County shall work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries.

Mitigation TR-5
The County shall work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on state highways.

Mitigation TR-6
The County shall have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternate modes of transportation, in order to minimize the adverse impacts of automobile use on the environment.

Mitigation TR-7
The County shall promote and encourage land use patterns, such as the development of local retail uses near residential uses, consistent with Smart Growth and New Urbanism Concepts in new development that will reduce the number of automobile trips by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths.

Mitigation TR-8
The County shall promote and encourage the design and implementation of land uses, development standards and capital improvement programs that maximize the use of public transit facilities and programs, and the availability of local retail uses accessible to local residents by walking or biking to reduce dependence on the automobile.

Mitigation TR-9
The County shall work with regional agencies (i.e., SCAG, Caltrans, SANBAG) to develop ridesharing programs, facilities and various modes of public transit (i.e., local and rapid bus, Metrolink and high-speed trains).

Mitigation TR-10
The County shall work with the cities, Omnitrans and other transit agencies to integrate local transit service routes and schedules into a linked and well-coordinated (through schedules) Valley-wide system throughout the Valley area.

Mitigation TR-11
The County shall extend public transit between residential areas and industrial/urban employment centers, continue and expand transportation services and public transit between Ontario Airport; Orange County Airport; and Los Angeles International Airport; and consider
promotion of future high-speed train and Maglev systems for better long-range airport connectivity.

Mitigation TR-12
The County’s comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal (i.e., non-motorized, highway, and transit) system to accommodate the County’s mobility needs and provides the County’s objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County.

Mitigation TR-13
The County’s comprehensive transportation system shall operate at regional, county-wide, community and neighborhood scales providing connectors between communities, and mobility between jobs, residences and recreational opportunities.

Mitigation TR-14
The County shall ensure that applicants, subdividers and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off site mitigation.

Mitigation TR-15
The County shall use current innovative traffic engineering practices to increase roadway capacity and safety such as:

- A raised median on Major Arterial highways in urban areas;
- Limiting access to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors from intersecting streets; direct access from abutting properties shall be allowed only where no reasonable alternatives exist;
- Obtaining additional right-of-way to accommodate right and left turn lanes at major intersections;
- Developing special urban interchanges utilizing flyovers in areas requiring high-flow arterial highways;
- Providing signal synchronization;
- Maximizing the use of Intelligent Transportation Systems;
- Coordination with SANBAG and local cities the development of traffic management centers (TMC) and traffic operation centers (TOCs);
- Establishing of no-parking zones;
- Limiting peak hour turning movements;
- Blocking or dead-ending of existing access roads to main highways;
- Establishing of one way streets;
- Limiting truck traffic on certain roads and at specified hours;
- Requiring all residential development proposals adjacent to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors to be designed so that direct access from the private property to the roadway will not be needed;
- Controlling lot size frontage to limit access;
- Developing minimum separation distances between access points;
- Accommodating exclusive transit facilities within new roads or those planned for improvement; and
- Developing design standards that will establish a minimum distance from intersections to any curb-cut.

**Mitigation TR-16**
The County shall limit, where feasible, access along all roads intersecting Major and Secondary Highways for a distance of 600 feet from the centerline of said Highways to the maximum extent possible.

**Mitigation TR-17**
The County shall require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Bicycle lanes and sidewalks shall be installed on existing and future roadways, where appropriate and as funding is available.

**Mitigation TR-18**
The County shall ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

**Mitigation TR-19**
The County shall adopt a fee program consistent with the requirements of SANBAG’s Nexus Study and Measure I. The County shall work with SANBAG to allocate Measure I funds to projects in the County on the Nexus Study project list and the Measure I expenditure plan.

5. **Significant Unmitigated Impacts**

Development of the land uses permitted by the General Plan will result in additional traffic volume on roadways not under County jurisdiction. Together with existing traffic and traffic resulting from growth elsewhere in Southern California, this traffic will result in operating conditions that do not meet the standards of the responsible jurisdictions. The County will work with regional agencies to mitigate the traffic impacts of growth, but it is not able to ensure the mitigation of traffic impacts outside its jurisdiction. Therefore, these impacts remain significant and unmitigated.
P. UTILITIES AND SERVICE SYSTEMS

1. SETTING

Water

The county’s domestic water sources are supplied through both local and imported water. The county’s geographic challenges, which have impacts on elements throughout the updated General Plan, also impact water sourcing and distribution. For the entire county it is estimated that, on average, 85% of the domestic water is supplied by local sources with the balance of 15% is imported purchased water. There are supply percentage differences depending on geographic area.

Imported water is primarily purchased from the Metropolitan Water District of Southern California and the State Water Project (the California Aqueduct) as a supplemental source to local water supplies. While Metropolitan Water District of Southern California distributes their water through local pipelines, there are also three state Water Project contractors and one sub-contractor in the county. They are:

- Crestline – Lake Arrowhead Water Agency;
- Mojave Water Agency;
- San Bernardino Valley Municipal Water District (SBVMWD); and
- Inland Empire Utilities Agency, which is a member agency or subcontractor of Metropolitan Water District of Southern California.

These four agencies are the largest of the water supplier/distribution agencies. Table IV-P-1 shows the sources of these wholesalers. There are also approximately 400 small source providers including County Service Areas and Districts, private mutual water companies and single use water sources. The information from these smaller agencies and districts is especially significant for the Community Plans. Table IV-P-2 lists the major service purveyors by cities and Community Plan areas. It should be noted, however, that this list is not comprehensive in that there are many small private water suppliers throughout the county that are not assessed in this FEIR.

The factors that are used to compare use and supply are not consistent throughout the county. Each of the three regions --- Valley, Mountains and Desert --- has varying uses and supplies that are specific to that portion of the county.

Table IV-P-2 lists San Bernardino County water providers known at the time of this report. The status of Urban Water Management Plans (URMP) are shown for water providers which, at the time of the year 2000 summary report to the legislature, had approved URMPs. Water providers which were not listed in the year 2000 report are shown as “No Status Reported”. The most recent URMP summary report for 2005 was not available at the time of this report.

According to the Metropolitan Water District of Southern California, total water consumption by customers in the county increased approximately 15% from 1990 to 2000; during the same period, the county’s resident population increased from 1,418,380 to 1,709,434 or 20.5%. For the same period, agriculture water use increased by approximately 28% (switching from dry land farming to specialty irrigated crops), and municipal and industrial use increased by 13%. The service area is primarily the urban portion of the county. Also see the Circulation and Infrastructure Background Report (Appendix D).
There are also three other types of water supplier/distributors in the county: the CSAs and Special Districts and the Southern California Water Company (SCWC). There are eight SCWC systems within San Bernardino County focusing on the Mountain and Desert Regions.

a) Valley Region

The Valley Region is serviced by 35 water purveyors (suppliers and distribution) and approximately 20 small single sources. There are three primary water suppliers for this region including SBVMWD, Inland Empire Utilities Agency, and the Metropolitan Water District. For more details regarding water supply in the Valley Region refer to Circulation and Infrastructure Background Report prepared for this project.

b) Mountain Region

In the Mountain Region, there are approximately 20 water purveyors. This number does not include approximately 60 single use water sources in this region, many of which are resident church and youth camps. The primary water wholesalers include Crestline – Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power. Working in conjunction with these agencies are three large retail supplier/distributors including Crestline Village Water District, Lake Arrowhead Community Services District (CSD) and Running Springs Water District. Each of these agencies has documented a steady growth in water usage and is involved with programs for both water supply and conservation. There are also many other small to moderate sized water companies that provide services for various mountain communities. For more details regarding water supply in the Mountain Region, refer to Circulation and Infrastructure Background Report prepared for the update of the County General Plan.

c) Desert Region

The Desert Region is comprised of 41 water purveyors and approximately 120 privately owned single sources. Most of the single sources in the rural portions of the Desert Region are for commercial businesses or private properties. The Mojave Water Agency is the primary water basin agency, but there are also water districts and CSDs that provide distribution services for water supplies. For more details regarding water supply in the Desert Region, refer to Circulation and Infrastructure Background Report.

Wastewater

Table IV-P-3 provides a list of sewer agencies present in San Bernardino County that offer wastewater treatment for residents.

a) Valley Region

The Valley Region of the County is the location for most of the public wastewater collection/treatment facilities. These facilities are all within the Santa Ana Regional Water Board jurisdiction. These facilities include: Inland Empire Utilities Agency (various locations), Rialto, Colton, San Bernardino, Redlands, Yucaipa Valley Water District facilities, and Lytle Creek.
b) Mountain Region

In the Mountain Region, regional treatment facilities include Crestline Sanitation District, Running Springs County Water District, Lake Arrowhead CSA, Lytle Creek CSA, and the Big Bear Area Regional Wastewater Agency. The sewer agencies that provide the infrastructure to these treatment facilities include: Big Bear Regional Wastewater Agency, Crestline Sanitation District, Lake Arrowhead CSD, Lytle Creek CSA, and CSA 79 (Green Valley Lake).

c) Desert Region

Most residential properties in the Desert Region are on private sewage treatment systems (septic tanks). However, there are limited service sewer agencies in the region including: Victor Valley Regional Wastewater Agency, City of Adelanto, and the City of Barstow.

Solid Waste

The County of San Bernardino Solid Waste Management Division (SWMD) is responsible for the operation and management of the County of San Bernardino’s solid waste disposal system, which consists of six regional landfills, eight transfer stations, and five community collection centers. The County contracts with Burrtec Waste Industries for disposal site operations and maintenance. The County is responsible for solid waste management in the unincorporated County areas.

San Bernardino County generated approximately 1.9 million tons (5,200 tons each day) of solid waste in 2002 (see Table IV-P-4). Diversion rates for the 25 jurisdictions within San Bernardino County ranged from 33% to 65% in 2000; the unincorporated San Bernardino County had a diversion rate of 43%. While the diversion rate for the state has consistently increased over the years, diversion rate for the unincorporated San Bernardino County shows a cyclical pattern. The rate was high in the years 1995 and 1996; dropping in 1997 and 1998, and rising back to its original levels in the year 2000. San Bernardino County has nine permitted landfills located in the Valley and the Desert Regions (six of which are County-owned), and 21 transfer stations. All nine landfills and 13 transfer stations owned and operated by the County have drop-off sites for recyclable materials. Permitted disposal capacity is available at the Barstow, California Street, Colton, Fort Irwin, Landers, Marine Corps Air Ground Combat Center, Mid-Valley, San Timoteo, and Victorville Landfills.

The County of San Bernardino Solid Waste Management Division is currently working on the expansion of both the Barstow and Victorville Landfills. These landfill expansion projects will provide the County with an additional 59.7 million tons of solid waste disposal capacity. Also, the City of Redlands is in the process of expanding the California Street Landfill by 4.6 million tons.

The combined effect of the additional disposal capacity from the Barstow and Victorville expansions, plus additional capacity from the expansion the City of Redlands has undertaken at the California Street Landfill, will give the County a minimum of 20 additional years of capacity.
Recycling Market Development Zones


Natural Gas

The Southern California Gas Company (SCG) provides natural gas service to the Valley region, the Morongo Basin, and portions of the Mountains region. According to SCG, the service provider supplied approximately 6% more gas over the past 10 years, mostly from an increase in demand from industrial users within the County. Southwest Gas Corporation (Southwest) provides natural gas service to the High Desert area, Victor Valley, Barstow, portions of the North Desert area, and the Bear Valley communities. Southwest reports natural gas supplied to the County increased by approximately 50% from 1993 to 2002, mostly from an increase in demand from the transportation sector.

Electricity

The major electricity service provider to San Bernardino County is the Southern California Edison (SCE) which is part of the Pacific Intertie system (Figure 2-27 of the Circulation and Infrastructure Background Report). The Pacific Intertie system generates electricity throughout 10 western states and supplies electricity to the County, and distributes electricity generated by the County anywhere throughout the system. SCE provides electricity service to almost all of San Bernardino County, except for a few small pockets of County land. SCE’s transmission system includes 500 kilovolts (kV) and 230 kV facilities that operate as a network and have been transferred to the Independent System Operator for operational control. Although a limited number of SCE’s 115 kV, 66 kV, and 55 kV submission facilities also operate as a network and have been transferred, most of these facilities are radial in nature and remain outside the Independent System Operator’s operational control. Transmission and subtransmission lines feed into the distribution network serving businesses, homes, and other electric power consumers. The distribution facilities encompass lines below 55 kV. The 115-12 kV and 66-12 kV substations provide a source for distribution lines and the smaller 12-4 kV substations. The electric power is distributed from the substations to individual customers through 33 kV and lower voltage distribution lines.

The City of Needles, Bear Valley Electric Service, and the City of Colton are the electricity service providers to the pockets of County land SCE does not service (Figure 2-27 of the Circulation and Infrastructure Background Report). The City of Needles provides electricity service to more than 4,000 customers. The City of Needles provides a total of more than 79,000 megawatts per hour of electricity to its customers. The Bear Valley Electric Service...
provides electric power to more than 20,000 customers in the communities surrounding Big Bear Lake. These communities are City of Big Bear Lake, Big Bear City, Fawnskin, Erwin Lake, Moonridge, Sugarloaf, Lake Williams, Baldwin Lake, and Camp Radford.

The City of Colton provides electricity service to more than 17,500 customers. The City of Colton supplied approximately 299,000 megawatts per hour of electricity to its customers in the year 2001. Other electricity utilities for the County of San Bernardino include Southern California Water and Electric and the Los Angeles Department of Water and Power.

**Electricity Consumption and Customers**

Rapid growth in the County of San Bernardino has resulted in an increase in the demand for and development of energy services. Table IV-P-5 shows the electricity consumption for San Bernardino County in the year 2000. Residential customer accounts form approximately 90% of the customer base, while non-residential customers form the remaining 10%. However, non-residential customers consume 70% of the total supplied electricity and residential customers consume 30% of electricity.

**Renewable Energy Sources**

There are many power resources available to San Bernardino County including Wind, Geothermal, Biomass, Solar and Landfill Gas. Wind and solar are the two renewable energy resources identified by the California Energy Commission for San Bernardino County.

San Bernardino County is home to most of the concentrating solar power plants currently installed in California. These plants are located in one general area — the Southeast desert. The proposed concentrating solar power projects are also located in San Bernardino County. There are few other existing renewable sources of power in the County at this time, but there are many proposed projects. Table IV-P-6 provides a list of the installed renewable capacity locations in San Bernardino County.

The Hydroelectric Sites located in San Bernardino County include:

- WFA Station 1;
- Ontario 2;
- Sierra;
- Lytle Creek;
- Ontario 1;
- Mill Creek 1;
- Monte Vista WD;
- Fontana;
- Mill Creek 3;
- Santa Ana 3; and
- Santa Ana 1 Etiwanda.
- Solar
- SEGS I, II, IX, and VIII (Sunray Energy Inc and Luz Solar Partners Ltd.).
- San Bernardino Metropolitan Water District Sites 2100, 1913, and 1720;
Telecommunications

San Bernardino County has oversight for landline telephone service providers through an application process that is required prior to approval. Based on information from the San Bernardino County Planning Department, major telecommunication facilities currently serving San Bernardino County include the following (personal communication 2003):

- Air Touch Cellular;
- American Tower Corp.;
- AT&T;
- Cingular Wireless;
- Cox Communications;
- MCI;
- Nextel Communications;
- Sprint Wireless; and
- Verizon Wireless.

2. Significance Criteria

The following information is provided in accordance with Section 15126.2 of the CEQA Guidelines. Appendix G of the CEQA Guidelines suggests that a development project could have a significant impact on Utility/Service System, if the project would cause any of the following effects:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments
- Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs
- Comply with federal, state, and local statutes and regulations related to solid waste
3. IMPACT ANALYSIS

Water

The critical water resource issues facing the County of San Bernardino, as a whole, are a reflection of those facing each individual water agency, albeit in varying degrees. These issues will only intensify as the County’s population increases.

a) Valley Region

Impact UT-1
Direct use water supply sources include groundwater, imported water, surface water and recycled water. In general, the water supply under the Metropolitan Water District’s apportionment of Colorado River has been available in every year since 1939, and can reasonably be expected to be available over the next 20 years. By the year 2050, reclaimed water is expected to surpass surface water and represent the most significant water source for recharge purposes.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

b) Mountain Region

Impact UT-2
Both the Crestline – Lake Arrowhead Water District and the Big Bear Lake Department of Water and Power have documented a steady growth in water usage and are involved with programs for both supply and conservation. The two primary challenges for this region are periodic drought and the population growth due to the shift from a higher percentage of part-time residents to full-time residents. The Lake Arrowhead Community Services District currently has a capital improvement program of $7.5 million planned in the next five years for water treatment and supply facilities.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in section 4, below.

c) Desert Region

Impact UT-3
With an increase in municipal consumption, golf courses, and industrial consumption, water demands will increase in the Desert Region. Agricultural consumptive use in the Mojave Basin can either stay consistent, or, under the Mojave Basin Area Judgment, decrease by 5% each year until balance is achieved between production rights and available supply as required by the Judgment.

This impact can be mitigated to a level below significance by the adoption of certain mitigation measures presented in Section 4, below.
Wastewater

a) Valley Region

Impact UT-4
With most of the population centralized in the Valley Region, sewer mainlines will continually need to be installed and dedicated to the District as the population increases.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

b) Mountain Region

Impact UT-5
Capacity for the Mountain Region varies. Lytle Creek and Lake Arrowhead CSD’s treatment plants have capacity for growth. With the change in population due to part-time residents becoming full-time residents, other sewering agencies will need to move forward with improvement projects for increased capacity.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

c) Desert Region

Impact UT-6
A large percentage of the homes in the Desert Region rely heavily on private sewage treatment systems (i.e., septic tanks). These septic systems can pollute groundwater or surface waters with pathogens and nitrates, particularly if improperly maintained or operated. Also, the Water Quality Control Boards prohibit the installation of new septic tanks and leach fields in some areas of the County.

Proceeds from the sale of recycled water will be used to offset the monthly cost of wastewater treatment. By 2020, the flow of wastewater from the area is expected to more than double from today’s 9.1 million gallons per day to a total of 18.6 million gallons per day. The development of subregional reclamation facilities will also significantly reduce the need to expand the main sewer system connecting Victor Valley Water Reclamation Agency (VVWRA) with the Victor Valley. The Hi-Desert Water District also has plans to build a wastewater treatment plant with related transport infrastructure.

*This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.*

Solid Waste

Impact UT-7
Development will increase the amount of waste requiring disposal at landfills. Estimates show that San Bernardino County has sufficient disposal capacity for the next 29 years. The County can further optimize on this capacity by increasing its diversion rate and reducing the per capita waste generation. Solid waste management is essential for the
COUNTY OF SAN BERNARDINO

CHAPTER IV

Project Analysis

This impact can be mitigated to a level below significance though the adoption of certain mitigation measures presented in Section 4, below.

Natural Gas

Impact UT-8
With the forecasted rise in population in the County of San Bernardino, the need for additional or extended natural gas providers will increase.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Electricity

Impact UT-9
With the forecasted rise in population in the County of San Bernardino, the need for additional or extended electricity service providers will increase.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

Telecommunications

Impact UT-10
With the forecasted rise in population in the County of San Bernardino, the need for additional telecommunication infrastructures will increase.

This impact can be mitigated to a level below significance through the adoption of certain mitigation measures presented in Section 4, below.

4. MITIGATION MEASURES

The following goals, policies, and programs are provided in the update to the County General Plan to reduce the impact of future growth of the County on utility and service systems.

Mitigation UT-1
The County shall ensure the quality of life by pacing future growth with the availability of public infrastructure.

Mitigation UT-2
The County shall ensure that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development. If an applicant is required to pay more than a proportional share, reimbursement agreements may be used.

Mitigation UT-3
The County shall utilize Fiscal Impact Analysis to determine the County’s ability to provide adequate services and facilities through the imposition of conditions of approval, fees, special taxes, financing mechanisms, etc., on new development. The Fiscal Impact Analysis will
provide guidance to County staff and County decision-makers on the project-specific requirements that may be placed on that individual development project.

**Mitigation UT-4**
The County shall ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.

**Mitigation UT-5**
The County shall ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.

**Mitigation UT-6**
The County shall equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.

**Water**

**Mitigation UT-7**
The County shall coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and groundwater pollution.

**Mitigation UT-8**
The County shall apply federal and state water quality standards and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project, for surface and groundwater to safeguard public health.

**Mitigation UT-9**
The County shall assist in the development of additional conveyance facilities and use of groundwater basins to store surplus of imported water.

**Mitigation UT-10**
County approval of new development will be contingent on the availability of adequate and reliable water supplies and conveyance systems, consistent with coordination between land use planning and water system planning.

**Mitigation UT-11**
The County shall monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided.

**Wastewater**

**Mitigation UT-12**
The County shall ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

**Mitigation UT-13**
The County shall support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate RWQCB and County Department of Environmental Health and Safety.
Mitigation UT-14
In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plans or connection to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and treatment facilities.

Mitigation UT-15
Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek to direct urban development in areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support septic tank/leach field systems.

Solid Waste

Mitigation UT-17
The County shall ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within the County, including, agriculture, residential, commercial and industrial wastes, while recognizing the relationship between disposal issues and the conservation of natural resources.

Mitigation UT-18
The County shall utilize a variety of feasible processes, including source reduction, transfer, recycling, landfilling, composting and resource recovery to achieve an integrated and balanced approach to solid waste management.

Mitigation UT-19
The County shall seek federal and state funds for projects utilizing resource and material recovery processes.

Mitigation UT-20
The County shall continue recycling operations at County landfills; expand recycling operations to other landfills or resource recovery facilities.

Mitigation UT-21
Where feasible, the County shall explore the feasibility and environmental impacts of reopening inactive landfills where there is useful capability remaining.

Mitigation UT-22
The County shall assist the private sector wherever possible in developing methods for the reuse of inert materials (concrete, asphalt and other building wastes) that currently use valuable landfill space.

Mitigation UT-23
The County shall continue to map the precise location of all waste sites (existing, inactive and closed) on the County’s automated mapping system and create a database with information on air, soil and water contamination and the type of wastes disposed of at each site.

Mitigation UT-24
The County shall carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County, and protect the viability of waste disposal sites from encroaching on incompatible land uses.
Natural Gas

Mitigation UT-25
The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.

Electricity

Mitigation UT-26
The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.

Telecommunications

Mitigation UT-27
The County shall improve its telecommunications infrastructure and expand access to communications technology and network resources to improve personal convenience, reduce dependency on non-renewable resources, take advantage of the ecological and financial efficiencies of new technologies, maintain the County’s economic competitiveness, and develop a better-informed citizenry.

Mitigation UT-28
The County shall work with telecommunications industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.

5. **SIGNIFICANT UNMITIGATED IMPACTS**

All utility and service system impacts are mitigated to a level below significance.

Table IV-P-1. Primary Water Wholesalers in San Bernardino County

<table>
<thead>
<tr>
<th>Agency</th>
<th>Source of Water</th>
<th>% of Total Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Water District of Southern California (MWDSC)</td>
<td>Colorado State Water Project River</td>
<td>50% 50%</td>
</tr>
<tr>
<td>Crestline – Lake Arrowhead Water Agency</td>
<td>State Water Project</td>
<td>100%</td>
</tr>
<tr>
<td>San Bernardino Valley Municipal Water District</td>
<td>State Water Project Surface Local Wells</td>
<td>19% 23% 58%</td>
</tr>
<tr>
<td>Inland Empire Utility Agency</td>
<td>MWDSC Local Recycled / Treated Water Wells</td>
<td>30% 65% 5%</td>
</tr>
</tbody>
</table>
### Table IV-P-2 San Bernardino County Water Providers

<table>
<thead>
<tr>
<th>City/Community</th>
<th>Water District</th>
<th>Approved UWMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelanto</td>
<td>City of Adelanto</td>
<td>Approved</td>
</tr>
<tr>
<td>Apple Valley</td>
<td>Apple Valley Ranchos Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Juniper Riveria Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Southern California Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Apple Valley Foothill County Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Apple Valley Heights County Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Mariana Ranchos County Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Thunderbird County Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Arrowbear</td>
<td>Arrowbear Park County Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Baldy Mesa</td>
<td>Baldy Mesa Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Baker</td>
<td>Community Services District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Barstow</td>
<td>Southern California Water Company</td>
<td>Approved</td>
</tr>
<tr>
<td>City of Big Bear Lake</td>
<td>City of Big Bear Lake DWP</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Big Bear City Community Services District</td>
<td>Approved</td>
</tr>
<tr>
<td>Big River</td>
<td>West Valley Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Bloomington</td>
<td>Fontana Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Marigold Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>West Valley Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Cedar Glen</td>
<td>Cedar Pines Park Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Cedar Pines</td>
<td>City of Chino Water Department</td>
<td>Approved</td>
</tr>
<tr>
<td>Chino</td>
<td>Chino Basin Water Conservation District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>City Utilities Department</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Chino Hills</td>
<td>City of Chino Hills</td>
<td>Approved</td>
</tr>
<tr>
<td>Colton</td>
<td>Terrace Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>City of Colton Water</td>
<td>Approved</td>
</tr>
<tr>
<td>Crestline</td>
<td>Crestline Village Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Valley of Enchantment Mutual Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Crestline – Lake Arrowhead Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Cedar Pines Park Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Daggett</td>
<td>Daggett Comm. Service District Water Service</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Fontana</td>
<td>Fontana Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Crawford Canyon Water</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Forest Falls</td>
<td>Fallsvale Service Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Grand Terrace</td>
<td>Riverside Highland Water Company</td>
<td>Approved</td>
</tr>
<tr>
<td>Green Valley</td>
<td>Green Valley Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Hesperia</td>
<td>Hesperia Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Highland</td>
<td>East Valley Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Southern California Water</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Homestead Valley</td>
<td>Hi- Desert Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Bighorn-Desert View Water Agency</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Joshua Tree</td>
<td>Joshua Basin Water District</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Joshua Tree Lake RV and Campground</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Landers</td>
<td>Bighorn Desert View Water Agency</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Lake Arrowhead</td>
<td>Lake Arrowhead Community Services District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Arrowhead Villas Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Alpine Water Users Association</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Sky Forest Municipal Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Strawberry Lodge Mutual Water</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>City of Big Bear – Rim Forest</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Loma Linda</td>
<td>City of Loma Linda</td>
<td>Approved</td>
</tr>
</tbody>
</table>
# Project Analysis

## Chapter IV

<table>
<thead>
<tr>
<th>City/Community</th>
<th>Water District</th>
<th>Approved UWMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucerne Valley</td>
<td>Community Service Area 29</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Stewart Water Company, Inc.</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Lylle Creek</td>
<td>Lylle Creek Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>West Valley Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Montclair</td>
<td>Monte Vista Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Morongo Valley</td>
<td>Morongo Valley Community Service District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>CSA 70 W-3, 70-4, 70F</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Needles</td>
<td>City of Needles</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Muscay</td>
<td>Muscay Mutual Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Newberry Springs</td>
<td>Newberry Springs CSD</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Ontario</td>
<td>City of Ontario Power and Water</td>
<td>Approved</td>
</tr>
<tr>
<td>Oak Glen</td>
<td>Oak Glen Domestic Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Oak Hills</td>
<td>County Service Area 70L</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Phelan</td>
<td>Sheep Creek Water</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>County Service Area 70L</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Pinon Hills</td>
<td>County Service Area 70L</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Rancho Cucamonga</td>
<td>Cucamonga County Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Redlands</td>
<td>Redlands Municipal Water</td>
<td>Approved</td>
</tr>
<tr>
<td>Rialto</td>
<td>City of Rialto</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Running Springs</td>
<td>Running Springs Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Rim Forest Water</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>San Bernardino City Municipal Water</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>San Bernardino Valley Conservation District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Trona</td>
<td>Searles Domestic Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>Indian Wells Valley Conservation Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Twentynine Palms</td>
<td>Twentynine Palms Water District</td>
<td>Approved</td>
</tr>
<tr>
<td>Twin Peaks</td>
<td>Alpine Water Users Association</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Upland</td>
<td>City Water Department</td>
<td>Approved</td>
</tr>
<tr>
<td>Victorville</td>
<td>Victor Valley County Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Victorville Water District</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Yermo</td>
<td>Yermo Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Yucaipa</td>
<td>Yucaipa Valley Water District</td>
<td>Approved</td>
</tr>
<tr>
<td></td>
<td>Western Heights Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td></td>
<td>South Mesa Water Company</td>
<td>No Status Reported</td>
</tr>
<tr>
<td><strong>Other Purveyors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crestline Lake Arrowhead Water Agency</td>
<td>Water Wholesaler (limited retail sale)</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>Inland Empire Utilities District</td>
<td>Water Wholesaler</td>
<td>Approved</td>
</tr>
<tr>
<td>Metropolitan Water District of Southern California</td>
<td>Water Wholesaler</td>
<td>Approved</td>
</tr>
<tr>
<td>San Bernardino Valley Municipal Water District</td>
<td>Water Wholesaler</td>
<td>No Status Reported</td>
</tr>
<tr>
<td>City/Community</td>
<td>Sewer District</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Adelanto</td>
<td>Victor Valley Water Reclamation Agency</td>
<td></td>
</tr>
<tr>
<td>Apple Valley</td>
<td>Victor Valley Water Reclamation Agency</td>
<td></td>
</tr>
<tr>
<td>Arrowbear</td>
<td>Lake Arrowhead Community Services District</td>
<td></td>
</tr>
<tr>
<td>Barstow</td>
<td>City of Barstow - sewer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barstow Heights CSD</td>
<td></td>
</tr>
<tr>
<td>Big River</td>
<td>Big River CSD</td>
<td></td>
</tr>
<tr>
<td>Chino</td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>Chino Hills</td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>City of Big Bear Lake</td>
<td>Big Bear Area Regional Wastewater Agency</td>
<td></td>
</tr>
<tr>
<td>City of Big Bear Valley</td>
<td>Big Bear Area Regional Wastewater Agency</td>
<td></td>
</tr>
<tr>
<td>Colton</td>
<td>City of Colton</td>
<td></td>
</tr>
<tr>
<td>Crestline</td>
<td>Crestline Sanitation District</td>
<td></td>
</tr>
<tr>
<td>Fontana</td>
<td>City of Fontana - sewer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>Grand Terrace</td>
<td>City of Grand Terrace - sewer</td>
<td></td>
</tr>
<tr>
<td>Green Valley</td>
<td>Green Valley Service Area 79 - sewer</td>
<td></td>
</tr>
<tr>
<td>Hesperia</td>
<td>City of Hesperia</td>
<td></td>
</tr>
<tr>
<td>Highland</td>
<td>East Valley Water District</td>
<td></td>
</tr>
<tr>
<td>Lake Arrowhead</td>
<td>Lake Arrowhead Community Services District</td>
<td></td>
</tr>
<tr>
<td>Loma Linda</td>
<td>City of Loma Linda</td>
<td></td>
</tr>
<tr>
<td>Lytle Creek</td>
<td>Lytle Creek CSA</td>
<td></td>
</tr>
<tr>
<td>Montclair</td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>Newberry</td>
<td>Newberry Springs CSD</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>Rancho Cucamonga</td>
<td>City of Rancho Cucamonga</td>
<td></td>
</tr>
<tr>
<td>Redlands</td>
<td>City of Redlands Municipal Utilities</td>
<td></td>
</tr>
<tr>
<td>Rialto</td>
<td>City of Rialto - sewer</td>
<td></td>
</tr>
<tr>
<td>Running Springs</td>
<td>Running Springs Water District</td>
<td></td>
</tr>
<tr>
<td>San Bernardino</td>
<td>SB City Water Reclamation - sewer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>East Valley Water District - SD</td>
<td></td>
</tr>
<tr>
<td>Upland</td>
<td>Chino Basin Water District - sewer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inland Empire Utilities - sewer</td>
<td></td>
</tr>
<tr>
<td>Valley of Enchantment</td>
<td>Crestline Sanitation District</td>
<td></td>
</tr>
<tr>
<td>Victorville</td>
<td>Victor Valley Sanitation District - sewer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Baldy Mesa Water District - SD</td>
<td></td>
</tr>
<tr>
<td>Yucaipa</td>
<td>Yucaipa Valley Water District - sewer</td>
<td></td>
</tr>
</tbody>
</table>

Source: Circulation and Infrastructure Background Report prepared for the update of the County General Plan.
Table IV-P-4. Solid Waste Disposal Trend 1995-2002, San Bernardino County

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Waste Produced</th>
<th>Total Waste Disposed</th>
<th>%</th>
<th>In-State Disposal</th>
<th>Exported Out-of-State</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>1,634,484</td>
<td>1,406,397</td>
<td>96.05</td>
<td>1,628,696</td>
<td>5,788</td>
<td>0.4</td>
</tr>
<tr>
<td>1996</td>
<td>1,662,884</td>
<td>1,373,608</td>
<td>82.60</td>
<td>1,657,569</td>
<td>5,316</td>
<td>0.3</td>
</tr>
<tr>
<td>1997</td>
<td>1,614,192</td>
<td>1,362,641</td>
<td>94.42</td>
<td>1,607,678</td>
<td>6,514</td>
<td>0.4</td>
</tr>
<tr>
<td>1998</td>
<td>1,691,378</td>
<td>1,230,977</td>
<td>72.78</td>
<td>1,684,567</td>
<td>6,810</td>
<td>0.4</td>
</tr>
<tr>
<td>1999</td>
<td>1,686,062</td>
<td>1,033,066</td>
<td>61.20</td>
<td>1,682,080</td>
<td>5,981</td>
<td>0.4</td>
</tr>
<tr>
<td>2000</td>
<td>1,768,527</td>
<td>1,099,425</td>
<td>62.17</td>
<td>1,762,422</td>
<td>6,104</td>
<td>0.3</td>
</tr>
<tr>
<td>2001</td>
<td>1,896,484</td>
<td>1,188,700</td>
<td>62.71</td>
<td>1,888,590</td>
<td>6,894</td>
<td>0.4</td>
</tr>
<tr>
<td>2002</td>
<td>1,937,805</td>
<td>1,412,050</td>
<td>72.87</td>
<td>1,931,579</td>
<td>6,226</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Source: California Integrated Waste Management Board (www.ciwmb.ca.gov)

Table IV-P-5. 2000 Electricity Consumption, San Bernardino County

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Number of Accounts</th>
<th>%</th>
<th>Annual Average Kilowatt Hours (million)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>547,654</td>
<td>89.1</td>
<td>3,774</td>
<td>31.8</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>67,131</td>
<td>10.9</td>
<td>8,093</td>
<td>68.2</td>
</tr>
<tr>
<td>Total</td>
<td>614,785</td>
<td>100.0</td>
<td>11,867</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: California Energy Commission, www.energy.ca.gov

Table IV-P-6. Renewable Capacity in San Bernardino County in Megawatts (MW)

<table>
<thead>
<tr>
<th></th>
<th>Biomass</th>
<th>Digester gas</th>
<th>Geothermal</th>
<th>Hydro</th>
<th>Landfill gas</th>
<th>MSW</th>
<th>Solar</th>
<th>Wind</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Bernardino County</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>204</td>
<td>-</td>
<td>244</td>
</tr>
</tbody>
</table>

Source: URS Corporation
CHAPTER V.
ALTERNATIVES TO THE PROPOSED PROJECT

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
CHAPTER V

Alternatives to the Proposed Project

Section 15126.6 of the CEQA Guidelines states that "an EIR shall describe a range of reasonable alternatives to the project...which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives...there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

This Chapter presents the comparative evaluation required by CEQA. Following is a qualitative comparison of environmental impacts between each alternative, as compared to the Preferred Project that is analyzed in Section IV of this EIR.

A. ALTERNATIVE NO. 1 – NO PROJECT ALTERNATIVE (1989 GENERAL PLAN AS AMENDED)

This Alternative would retain the 1989 General Plan, as amended but would not include the Community Plans developed as part of the proposed project, nor would the County Development Code be updated. This Alternative would allow for a population of about 415,000 people in County unincorporated territory.

While the current 1989 County General Plan is not projected to 2030 as the Proposed General Plan Update is, the assumption is made that the SCAG Trend Projection represents the local city general plans, including the County’s General Plan. The overall San Bernardino County projections have been provided by Meyer Mohaddes Associates at a Traffic Analysis Zone (TAZ) level that includes both the incorporated and unincorporated areas of the County. While it makes only a small difference in the overall projections, it should be noted that the SCAG TAZ projections do not include the outlying Desert Planning Area that encompasses the City of Needles. Further, the projections based on the city general plans were provided by SANBAG and these projections were used to guide the development of the Congestion Management Program (CMP) for the region.

In summary, the No-Project Alternative would delay the significant physical environmental effect of the proposed update of the County General Plan, but the anticipated significant effect on air quality, noise and circulation and traffic would likely occur at a greater pace with about the same magnitude as the County continues to grow under the 1989 General Plan. For this reason, the No Project Alternative is not superior to the proposed project from an environmental perspective.

B. ALTERNATIVE NO. 2 – REDUCED DEVELOPMENT ALTERNATIVE

Under Alternative No. 2 the County General Plan would only be updated to provide for the growth of the County by 200,000 people, not the approximately 415,000 people that would be accommodated by the proposed update of the General Plan. General Plan goals and policies would also be updated as they would as part of the proposed project. For example, the land use intensities (densities and floor area ratios) of the Land Use/Zoning Districts would be reduced, with a corresponding reduction in the Maximum Population Density Averages. This Alternative would also include the adoption of the 13 Community Plans prepared as part of the update to the General Plan. The County’s Development Code would also be updated as part of this Alternative to implement the updated General Plan.

Generally, the impacts created by this Alternative would be less than the proposed update of the General Plan since only half the future population would be accommodated within the County by the Alternative.

In summary, when comparing the significant effects of the proposed project to Alternative No. 2, impacts to agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, noise, population and
CHAPTER V

Alternatives to the Proposed Project

housing services and utilities, recreation, and traffic and circulation are expected to be reduced given the overall reduction in the scale of the growth provided by the updated General Plan. Traffic and related impacts would be approximately half of those under the proposed update of the General Plan. Although these impacts would be less than the impacts from the proposed project, the traffic increase that would occur with this Alternative would still require the installation of traffic improvements throughout the County. Also, the vehicle emissions would still surpass the threshold set by the SCAQMD and would still be considered a significant air quality impact, although to a lesser degree than the proposed project. For the above reasons, the Reduced Intensity Alternative is superior to the proposed project from an environmental perspective.

C. ALTERNATIVE NO. 3 – FUTURE GROWTH IN CITIES SPHERE-OF-INFLUENCE ALTERNATIVE

Under Alternative No. 3 the County General Plan would be updated to accommodate the growth in the County by approximately 409,000 people. However, all the new growth in the County would only occur within the adopted spheres-of-influence of the cities within the County. This Alternative includes the revision to the General Plan goals and policies, although the goals and policies would be somewhat different than the goals and policies included as part of the proposed update to the General Plan since all new growth in the County would only occur within city spheres-of-influence. For example, Goals LU-6 and LU-9 and their implementing policies would probably be strengthened to direct virtually all new urban growth into the Spheres of Influence of existing cities. Similarly, many of the Land Use Goals and Policies would need to be rewritten to discourage most, if not all, new urban growth from occurring in the Mountain and Desert Regions, unless they were located within existing Spheres of Influence. This Alternative would also include the Community Plans developed as part of the proposed update of the County General Plan. This Alternative also includes the update of the County Development Code, as would the proposed update of the General Plan.

Generally, the impacts created by this Alternative would be different that all the other proposed alternatives to the General Plan, since accommodating an additional 414,000 people in the County would only occur within the sphere-of-influence in the cities in the County, which would greatly increase the building densities in these areas with attendant impacts that would be created by increasing density in an area. This alternative would create greater aesthetic, biological resource, land use, noise services and utility, recreation and transportation and traffic impacts than the proposed update of the General Plan would. For these reasons, the Future Growth in Cities Sphere-of-Influence Alternative is not superior to the proposed update of the General Plan.

D. COMPARISON OF THE ALTERNATIVES

Table V-1 compares, in a qualitative relative manner, the environmental impacts of each of the three alternatives to the preferred project, which is the 2007 General Plan.

The coding is as follows:

+ Impacts are more adverse compared to the proposed General Plan Update Project.
— Impacts are less adverse compared to the proposed General Plan Update Project.
O Impacts are the same as the proposed General Plan Update Project.
Table V-1. Relative Comparison of Environmental Impacts Among General Plan Alternatives

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>ALT #1 EXISTING GENERAL PLAN</th>
<th>ALT #2 REDUCED POPULATION PROJECT</th>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Aesthetic Impacts</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>Alternatives No. 1 and 3 would create greater impacts on aesthetics than the proposed project or Alternative 2 would since these Alternatives would provide for more development in the unincorporated County area, impacting more scenic highways and vistas. Alternative No. 2 could create fewer aesthetic impacts since slightly less than half the development would be allowed by this Alternative which would only occur within city sphere-of-influence areas, adjacent to exiting land uses in these areas.</td>
</tr>
<tr>
<td>Loss of Agricultural Resources</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td>Alternatives No. 1 and 3 would create similar impacts on agricultural resources since these Alternatives would allow for similar amounts of development as the proposed project. Alternative No. 2 would create less of an impact on these resources since less than half of the amount of development would occur than would if the proposed General Plan update were approved. Also, new land uses would only be developed in city’s sphere-of-influence areas that are generally located close to existing cities in the County and away from areas used for agricultural production.</td>
</tr>
<tr>
<td>Degradation of Air Quality</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>Alternative No. 1 and 3 would create emissions that would degrade the air quality in the County by about the same amount as the proposed project would since these alternatives would allow similar amounts of new development as the proposed project. Alternative No. 2 would degrade the air quality of the County less than Alternatives No. 1 and 3 since less than half the new development would be allowed by this Alternative, reducing the amount of air emissions created by development allowed under this Alternative. Development allowed by Alternative No. 2 would still exceed state and federal air standards since the County is in currently in non-compliance for ozone and PM10 and any new development would make compliance with these standards more difficult.</td>
</tr>
<tr>
<td>Loss of Biological Resources</td>
<td>+</td>
<td>—</td>
<td>+</td>
<td>Alternative No. 1 would create the greatest impact on biological resources since this Alternative allows for more development in the County than the proposed project would. Alternative No. 3 would allow slightly less development than Alternative No. 1 so fewer biological resources would be impacted by new development allowed by this Alternative. Alternative No. 2 would create the least amount of impact on these resources since less than half the development would occur under this Alternative. Also, development that would occur as part of Alternative 2 would occur in city’s sphere-of-influence areas that are close to existing cities where biological resources are not as abundant as they would be if development were to occur throughout the County.</td>
</tr>
<tr>
<td>Potential Disturbance of Cultural Resources</td>
<td>+</td>
<td>—</td>
<td>—</td>
<td>Alternative No. 1 would result in disturbing more cultural resources (archeological, historic and paleontological resources) since more development would occur under this Alternative that potentially could disturb these resources than would under the proposed project. Development allowed by Alternative No. 3 would disturb slightly less land than the development allowed by Alternative 1 so there is a potential that fewer cultural resources being disturbed by Alternative 3. Alternative No. 2 would disturb the fewest cultural resources since less than half the development would occur than allowed by the proposed project.</td>
</tr>
</tbody>
</table>
### Alternatives to the Proposed Project

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>ALT #1 EXISTING GENERAL PLAN</th>
<th>ALT #2 REDUCED POPULATION PROJECT</th>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology and Soil Concerns</td>
<td>+</td>
<td>-</td>
<td>O</td>
<td>Also, new development allowed by Alternative 3 would only occur within city’s spheres-of-influence closer to existing cities where it is anticipated that there would be fewer undiscovered cultural resources. Alternative No. 1 would result in more development than the proposed project would and would expose more new development and residents to exiting geology and soil conditions in the County. Alternative No. 3 would expose the same amount of new development to existing geology and soils conditions as the proposed project would since this Alternative would provide for the same amount of new development as the proposed project. Alternative No. 2 would result in the least amount of new development so it would expose the least amount of development and new residents to existing County geology and soil conditions.</td>
</tr>
<tr>
<td>Hazards and the potential Generation of Hazardous Materials</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>Alternatives 1 and 3 would expose the most new development allowed by these Alternatives to existing hazards since they would both allow almost the same amount of development as the proposed project. Alternatives No. 1 would also result in the transport, use and storage of more hazardous materials as this Alternative would allow more new development than the propose project. Alternative No. 2 would expose the least amount of new development to existing hazards in the County and generate the least amount of hazardous materials since less than half of the amount of new development would be allowed by this Alternative than by the proposed project.</td>
</tr>
<tr>
<td>Hydrology and Water Quality Concerns</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>Alternative No.1 would expose the greatest amount of new development to existing hydrology concerns in the County since this Alternative would allow more new development than the proposed project would. Alternative No. 3 would allow the same amount of new development as the proposed project would, although this development would be limited to city’s spheres of influence where hydrology conditions may not be as significant as in other areas of the County. Alternatives No 1 and 3 would generate the most water quality concerns since they would allow as much new development as the proposed project would. Alternative No 2 would generate the fewest hydrology and water quality concerns because less than half of the new development would be allowed as would be by the proposed project.</td>
</tr>
<tr>
<td>Potential Changes in Land Use</td>
<td>0</td>
<td>-</td>
<td>O</td>
<td>Alternative No. 1 and 3 will create the same impacts on land uses as they would provide for about the same amount of new land use development as the proposed project would. Since Alternative No. 3 would require that new land uses be built only in city’s sphere-of- influence areas, new development would have to be denser to fit in these areas than if these uses could be built throughout the County as would be the case with Alternative 1 and the proposed project. Alternative No. 2 would create the least amount of change in County land uses as this Alternative would allow less than half the new development as the proposed project would.</td>
</tr>
<tr>
<td>Loss of Mineral Resources</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>Alternative No. 1 has the greatest potential to result in impacts on mineral resources as it would allow the most new development in the County that could impact these resources. Alternative No. 3 would also impact mineral resources, although the impact would be less since new development would only occur within city’s sphere-of-influence areas where it is anticipated that there would be fewer mineral resources.</td>
</tr>
</tbody>
</table>
### CHAPTER V

**Alternatives to the Proposed Project**

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>ALT #1 EXISTING GENERAL PLAN</th>
<th>ALT #2 REDUCED POPULATION PROJECT</th>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation of Noise</td>
<td>O</td>
<td>—</td>
<td>O</td>
<td>since most mineral resources are located in the Desert Planning Area and there are few cities in the desert areas where new development could occur. Alternative No. 2 would have the least impact on mineral resources since less than half the new development could take place under this Alternative as would take place as allowed by the proposed project. Since fewer areas would be developed there would be fewer impact on existing mineral resources.</td>
</tr>
<tr>
<td>Increase in Population and Housing</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td>Alternative No. 1 would allow the County to grow by approximately 415,000 new residents, with the attendant increase in housing. This is more than would be allowed by the proposed project which would allow the County to grow by approximately 409,000 new residents and housing. Alternative No. 3 would also allow the County to grow by 409,000 new residents, but this growth would be restricted to existing city’s sphere-of-influence areas, creating denser population and housing in these areas. Alternative No. 2 would create about half the amount of noise as the proposed project since slightly less than half the new development could be built under this Alternative than would be by the proposed project.</td>
</tr>
<tr>
<td>Increased Need for Public Services</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td>Alternative No. 1 would result in the greatest need for new public services in the County as it would allow for the greatest amount of new development which will require more public services than are currently being provided in the County. Alternative No. 3 would create a similar need for new public services as it would allow for the same amount of new growth as the proposed project would. However, under this Alternative, new development would only be developed in city’s sphere-of-influence areas that would concentrate where new services are needed. Alternative No. 2 would create the need for half the amount of new services in the County because this Alternative would only allow for half the growth in the County as the proposed project would.</td>
</tr>
<tr>
<td>Increased Demand for New Recreational Facilities</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td>Alternative No. 1 would create the greatest demand on existing recreational facilities and for new recreational facilities since it would allow for the most growth in the County. Alternative No. 3 would create the same demand on existing recreational facilities and for new recreational facilities as the proposed project would, except new development would occur in city’s sphere-of-influence areas, concentrating demand on existing facilities in the cities next to these areas and requiring that new recreational facilities be developed near these sphere areas. Alternative No. 2 would create the least demand on existing and new recreational facilities since this Alternative would only provide for the slightly less than half the new development in the County as the proposed project would.</td>
</tr>
</tbody>
</table>
### CHAPTER V

**Alternatives to the Proposed Project**

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>ALT #1 EXISTING GENERAL PLAN</th>
<th>ALT #2 REDUCED POPULATION PROJECT</th>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Transportation &amp; Traffic Impacts</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Increased Need for Utilities &amp; Service Systems</td>
<td>+</td>
<td>—</td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>

Alternative No. 1 would create the biggest impacts on transportation systems and traffic within the County as this Alternative would allow for more growth in the County than the proposed project. Alternative No. 3 would also impact County transportation systems and traffic in the County at about the same extent as the proposed project would, although new growth would be concentrated in city sphere-of-influence areas which would make traffic worse in these areas of the County. Alternative No. 2 would create the least amount of impact on County transportation systems and traffic since this Alternative would allow about half the growth in the County as the proposed project would. This Alternative would also require traffic improvements throughout the County, but there would only be a need for about half the improvements as would be required for the proposed project.

Alternative No. 1 would create a greatest need for new utility and service systems as it would allow for more growth in the County than the proposed project would. Alternative No. 3 would create about the same amount of need for new utility and services systems as the proposed project would, although the need for these utilities and services would be concentrated in existing city sphere-of-influence areas that could put more of a strain on utility and service providers to provide needed additional capacity/treatment services in these areas. Alternative No. 2 would create the least need for new utilities and service systems as the County would only grow by half as much as it would if the proposed project were selected by the County.

Source: URS Corporation

+ Impacts are relatively **more adverse** compared to the proposed 2007 General Plan Update Project.

— Impacts are relatively **less adverse** compared to the proposed 2007 General Plan Update Project.

O Impacts are relatively **the same** as the proposed 2007 General Plan Update Project.
CHAPTER VI.
CUMULATIVE IMPACTS

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
According to Section 15130(a) of the CEQA Guidelines, “An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable, as defined in Section 15065(c). Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable,’ a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.” In addition, “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as provided for the effects attributable to the project alone” (Section 15130(b) of the CEQA Guidelines). The following is a summary of the proposed Project’s Cumulative Impacts. Included in this discussion is a conclusion of the impact, and the basis or rationale for that conclusion.

A. POTENTIAL AESTHETIC IMPACTS

Conclusion: Cumulative Impact is not considerable.

Rationale: It is the County’s standard practice to evaluate projects, as required by CEQA, for their environmental effects, including light and glare. In addition, the update to the San Bernardino County’s General Plan includes policies related to designating certain streets as scenic corridors and boulevards.

B. LOSS OF PRODUCTIVE AGRICULTURAL RESOURCES

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: Implementation of the County General Plan will result in a loss of agricultural land currently producing food and fiber. The loss of agricultural land caused by the update to the San Bernardino County’s General Plan and has concluded that such a loss of agricultural lands will be significant and unavoidable.

C. DEGRADATION OF AIR QUALITY

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: The update to the San Bernardino County’s General Plan contains goals, policies, and programs to moderate effects to air quality. The update to the San Bernardino County’s General Plan also calls for an increase in the densities of certain parcels, mixed land uses, and a refocus on existing neighborhoods. These policies work to reduce dependence on the private automobile and to reduce vehicle miles traveled through supporting multiple centers. Although these measures will result in positive air quality effects, they will not offset the effects caused by increased population in the County.

D. LOSS OF BIOLOGICAL RESOURCES

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: The expected increase in population addressed in the General Plan is considered cause a significant unmitigated irreversible impact to biological resources. Land and habitat resources within the County are finite. The addition of population will require the loss of native habitat, additional resource acquisition, and indirect effects based on residential and commercial actions. While the County cannot control population growth, efforts should be made to restrict residential and commercial land use conversion of natural
areas. Unrestricted growth and urban sprawl will result in a significant adverse impact that cannot be mitigated. The increase in population will require the loss of resources and habitat that currently support native plants, animals, and habitat within the County and in areas that provide the County with resources such as electricity, water, and fuel.

E. POTENTIAL DISTURBANCE OF CULTURAL RESOURCES

Conclusion: Cumulative Impact is not considerable.

Rationale: Development in the update to the San Bernardino County’s General Plan area has the potential to affect historic buildings and cultural resources. However, the goals, objectives and programs proposed in the update to the San Bernardino County’s General Plan work to strengthen historic resource protection and conservation.

F. GEOLOGY AND SOILS IMPACTS

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2007 General Plan carries forward policies from the 1989 General Plan which minimize Geology and Soils impacts.

G. HAZARDS AND POTENTIAL GENERATION OF HAZARDOUS MATERIALS

Conclusion: Cumulative Impact is not considerable.

Rationale: All generation, transport, and treatment of hazardous materials shall be in full compliance with federal, state, and local requirements.

H. IMPACTS TO HYDROLOGY AND WATER QUALITY

Conclusion: Cumulative Impact is not considerable.

Rationale: The proposed goals, policies and programs in the update to the San Bernardino County’s General Plan adequately address hydrology, water quality, and water supply issues. The County continues to cooperate with the San Bernardino County Flood Control District in reviewing projects to conform with NPDES permit requirements, as well as the District’s Stormwater Management Plan.

I. IMPACTS TO LAND USE AND PLANNING

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2007 General Plan does not divide existing communities nor does it conflict with policies of the 1989 General Plan, As Amended.

J. POTENTIAL LOSS OF MINERAL RESOURCES

Conclusion: Cumulative Impact is not considerable.

Rationale: The 2007 General Plan carries forward policies from the 1989 General Plan that protect Mineral Resources.
K. GENERATION OF NOISE

Conclusion: Cumulative Impact is not considerable.

Rationale: Noise impacts from increased traffic levels will be contained within the boundaries of the update to the San Bernardino County’s General Plan area.

L. POPULATION AND HOUSING

Conclusion: Cumulative Impact is not considerable.

Rationale: The update to the San Bernardino County’s General Plan was developed to accommodate the County’s fair share of the region’s growth forecast.

M. INCREASED DEMAND FOR PUBLIC SERVICES

Conclusion: Cumulative Impact is not considerable.

Rationale: Growth and development called for by the update to the San Bernardino County’s General Plan will increase the demand for police, fire protection, and other services. However, these services for the most part will be adequate to serve the development proposed under the update to the San Bernardino County’s General Plan.

N. INCREASED DEMAND FOR RECREATIONAL OPPORTUNITIES

Conclusion: Cumulative Impact is not considerable.

Rationale: Growth and development called for by the update to the San Bernardino County’s General Plan will increase the demand for recreational opportunities. However, these opportunities for the most part will be adequate to serve the development proposed under the update to the San Bernardino County’s General Plan.

O. INCREASED TRANSPORTATION AND TRAFFIC

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: Future development in accordance with the update to the San Bernardino County’s General Plan will contribute to the present and projected adverse traffic congestion on urban and arterial streets under the jurisdiction of the County. There are no mitigation measures available to reduce these impacts below a level of significance.

P. INCREASED DEMAND FOR UTILITIES AND SERVICE SYSTEMS

Conclusion: Cumulative Impact is not considerable.

Rationale: Adequate capacity can be provided for all utility and service systems within the County, upon development.
CHAPTER VII.
GROWTH-INDUCING IMPACTS

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
A. BACKGROUND

In accordance with Section 15126.2(d) of the CEQA Guidelines, “an EIR must discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” In addition, when discussing growth-inducing impacts of a proposed project, “it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment” (Section 15126.2(d) of the CEQA Guidelines). Two issues must be considered when assessing the growth-inducing impacts of a project:

- **Elimination of Obstacles to Population Growth:** The extent to which additional infrastructure capacity or a change in regulatory structure will allow additional development in the County and region.

- **Promotion of Economic Growth:** The extent to which the San Bernardino County General Plan and 13 Community Plans can cause managed activity in the local or regional economy. Economic impacts can include direct effects, such as the direction and strategies implemented within the County’s redevelopment area, and indirect or secondary impacts, such as increased commercial activity needed to serve the SCAG’s population growth forecast for the County or transportation need forecast for the County by the San Bernardino Council of Governments.

B. ELIMINATION OF OBSTACLES TO POPULATION GROWTH

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing impact. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services is expected to support new development. Similarly, the elimination of change in a regulatory obstacle, including existing growth and development policies, can result in new population growth.

The San Bernardino County General Plan and Community Plan policies provide for the expansion of infrastructure to accommodate new growth within the County and SOI within the cities within the County. To the extent that new infrastructure will be sized to serve only existing and planned development (including growth related to the updated San Bernardino County General Plan), growth inducement will not be considered detrimental to the environment.

C. PROMOTION OF ECONOMIC GROWTH

Increased industrial, commercial, and residential development typically generates a secondary or indirect demand for other services. The County’s growing population will require additional goods and services, such as groceries, entertainment, and medical services that will stimulate economic activity.

Because the update to the San Bernardino County General Plan will not alter SCAG’s population projections, the secondary effects of increased residential demand for goods and services is independent of the project. The update to the San Bernardino County General Plan will result in greater employment-generating uses that could generate a secondary demand for goods and services to support new and expanding business.
D. SUMMARY/CONCLUSIONS

Based on population forecasts approved by SCAG, the population will increase by a maximum of 436,500 by the year 2030. In addition, the update to the San Bernardino County General Plan will increase the amount of economic activity resulting from the direction and strategies within the County. Therefore, the update to the San Bernardino County General Plan will be growth inducing, but the growth will be consistent with the regional growth forecasts adopted by SCAG. The environmental impacts of growth resulting from the update to the San Bernardino County General Plan are discussed in Chapter IV of this FEIR.
CHAPTER VIII.
PREPARERS OF THE FEIR,
PERSONS AND AGENCIES CONTACTED,
REFERENCE DOCUMENTS

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
CHAPTER IX

Preparers of the FEIR, Persons and Agencies Contacted, Reference Documents

A. PREPARERS OF THE FEIR

County of San Bernardino, Land Use Services Department
   Randy Scott, Advance Planning Chief
   Jim Squire, Supervising Planner
   Terri Rahhal, Senior Planner
   Dave Prusch, Senior Associate Planner

URS Corporation
   Brian R. Smith, AICP, EIR Project Manager
   Dennis Papilion, Principal in Charge
   Frank Wein, DPDS, FAICP, General Plan Project Director
   Jeffry Rice, AICP, Assistant General Plan Project Director
   Bob Rusby, AICP, Senior Environmental Planner
   Angela Leiba, Visual Resource Specialist
   Chris Chavez, Environmental Planner
   Darryl Taylor, Environmental Planner
   Diane Douglas, PhD. RPA, Cultural Resources
   Grant Limberg, Noise Specialist
   John Larson, Senior Project Scientist (Noise)
   Juan Villalobos, Senior Environmental Planner
   Kathy C. Stevens, Environmental Compliance & Air Services
   Kavita Mehta, AICP, Senior Environmental Planner
   Ken McDonald, Botanist/Restoration Ecologist
   Kevin Martin, Natural Resources Manager
   Leonard Malo, Natural Resources Manager
   Kevin Mock, Senior Archaeologist
   Lindsay Patterson, Project Administrative Coordinator
   Mark Molinari, PG, CEG, Senior Project Geologist
   Rob Greene, INCE BD. CERT. Noise and Vibration Scientist
   Tom Herzog, Biologist

Meyer, Mohaddes Associates, Inc. (Transportation)
   Viggen Davidian, P.E. Principal
   Mahmoud Ahmadi, Ph.D. Senior Transportation Engineer

Stanley R. Hoffman Associates, Inc. (Socioeconomics)
   Stanley R. Hoffman, Principal
B. REFERENCE DOCUMENTS/PERSONS AND AGENCIES CONSULTED

California Air Resources Board. 2005 Almanac. Reference for most available air quality and emissions inventory information in South Coast and Mojave Desert Air Basins.
California Department of Conservation. http://www.consrv.ca.gov/index
California Department of Finance. www.dof.ca.gov
California Land Use Planning Information Network (LUPIN). http://ceres.ca.gov/planning/
California State Parks. http://www.parks.ca.gov/
Center for Biological Diversity. http://www.sw-center.org/swcbd
Environmental Protection Agency (EPA). www.epa.gov
San Bernardino Associated Governments (SANBAG). http://www.sanbag.ca.gov/
San Bernardino LAFCO. http://www.sbclafco.org
Smart Communities Network. http://www.sustainable.doe.gov
Smart Growth Online. http://www.smartgrowth.org

Southern California Association of Governments (SCAG). http://www.scag.ca.gov


Waste Management Division, County of San Bernardino.
## C. LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAQS</td>
<td>Ambient Air Quality Standards</td>
</tr>
<tr>
<td>ACEC</td>
<td>Area of Critical Environmental Concern</td>
</tr>
<tr>
<td>ACLUP</td>
<td>Airport Comprehensive Land Use Plan</td>
</tr>
<tr>
<td>ASBI</td>
<td>Area of Special Biological Importance</td>
</tr>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>CAA</td>
<td>1970 Clean Air Act</td>
</tr>
<tr>
<td>CAAQS</td>
<td>California Ambient Air Quality Standards</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>CARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CCAA</td>
<td>1988 California Clean Air Act</td>
</tr>
<tr>
<td>CCR</td>
<td>California Code of Regulations</td>
</tr>
<tr>
<td>CDFG</td>
<td>California Department of Fish and Game</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CGS</td>
<td>California Geological Survey</td>
</tr>
<tr>
<td>CHP</td>
<td>California Highway Patrol</td>
</tr>
<tr>
<td>CNPS</td>
<td>California Native Plant Society</td>
</tr>
<tr>
<td>CO</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>CSA</td>
<td>County Service Area</td>
</tr>
<tr>
<td>CSD</td>
<td>Community Service District</td>
</tr>
<tr>
<td>CUPA</td>
<td>Certified Unified Program Agency</td>
</tr>
<tr>
<td>dB</td>
<td>Decibel</td>
</tr>
<tr>
<td>DEIR</td>
<td>Draft Environmental Impact Report</td>
</tr>
<tr>
<td>DOT</td>
<td>U.S. Department of Transportation</td>
</tr>
<tr>
<td>DWMA</td>
<td>Desert Wildlife Management Area</td>
</tr>
<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
</tr>
<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>FMMP</td>
<td>Farmland Mapping and Monitoring Program</td>
</tr>
<tr>
<td>K-12</td>
<td>Kindergarten – 12th grade</td>
</tr>
<tr>
<td>MDAB</td>
<td>Mojave Desert Air Basin</td>
</tr>
<tr>
<td>MDAQMD</td>
<td>Mojave Desert Air Quality Management District</td>
</tr>
<tr>
<td>mi</td>
<td>miles</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td>NFIP</td>
<td>Natural Flood Insurance Program</td>
</tr>
<tr>
<td>NO₂</td>
<td>nitrogen dioxide</td>
</tr>
<tr>
<td>NOₓ</td>
<td>oxides of nitrogen</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>O₃</td>
<td>ozone</td>
</tr>
<tr>
<td>OES</td>
<td>Office of Emergency Services</td>
</tr>
<tr>
<td>ONT</td>
<td>Ontario International Airport</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>PCT</td>
<td>Pacific Crest Trail</td>
</tr>
<tr>
<td>PG&amp;E</td>
<td>Pacific Gas and Electric</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>particulate matter less than 10 microns in size</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>particulate matter less than 2.5 microns in size</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million parts, by volume</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>ROG</td>
<td>Reactive Organic Gases</td>
</tr>
<tr>
<td>RSA</td>
<td>Regional Statistical Area</td>
</tr>
<tr>
<td>RTP</td>
<td>Regional Transportation Plan</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>SANBAG</td>
<td>San Bernardino Associated Governments</td>
</tr>
<tr>
<td>SBNHM</td>
<td>San Bernardino Natural History Museum</td>
</tr>
<tr>
<td>SBVMWD</td>
<td>San Bernardino Valley Municipal Water District</td>
</tr>
<tr>
<td>SCAB</td>
<td>South Coast Air Basin</td>
</tr>
<tr>
<td>SCAG</td>
<td>Southern California Association of Governments</td>
</tr>
<tr>
<td>SCAQMD</td>
<td>South Coast Air Quality Management District</td>
</tr>
<tr>
<td>SCAQMP</td>
<td>South Coast Air Quality Management Plan</td>
</tr>
<tr>
<td>SCRRRA</td>
<td>Southern California Regional Rail Authority</td>
</tr>
<tr>
<td>SCWC</td>
<td>Southern California Water Company</td>
</tr>
<tr>
<td>SMARA</td>
<td>Surface Mining and Reclamation Act</td>
</tr>
<tr>
<td>SO$_{2}$</td>
<td>sulfur dioxide</td>
</tr>
<tr>
<td>SOCs</td>
<td>Statement of Overriding Considerations</td>
</tr>
<tr>
<td>SOI</td>
<td>Sphere of Influence</td>
</tr>
<tr>
<td>SOx</td>
<td>oxides of sulfur</td>
</tr>
<tr>
<td>SPCC</td>
<td>Spill Prevention Control and Countermeasure</td>
</tr>
<tr>
<td>SR</td>
<td>State Route</td>
</tr>
<tr>
<td>SRAs</td>
<td>state responsibility areas</td>
</tr>
<tr>
<td>SWMD</td>
<td>Solid Waste Management Division</td>
</tr>
<tr>
<td>SWRCB</td>
<td>State Water Resources Control Board</td>
</tr>
<tr>
<td>TAZ</td>
<td>Traffic Analysis Zone</td>
</tr>
<tr>
<td>TCPs</td>
<td>traditional cultural properties</td>
</tr>
<tr>
<td>TMC</td>
<td>traffic management centers</td>
</tr>
<tr>
<td>TOCs</td>
<td>traffic operations centers</td>
</tr>
<tr>
<td>TODs</td>
<td>Transit-oriented development</td>
</tr>
<tr>
<td>UBC</td>
<td>Uniform Building Code</td>
</tr>
<tr>
<td>UP</td>
<td>Union Pacific Railroad</td>
</tr>
<tr>
<td>UPS</td>
<td>United Parcel Service</td>
</tr>
<tr>
<td>USACOE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>USDA</td>
<td>U.S. Department of Agriculture</td>
</tr>
<tr>
<td>USFS</td>
<td>United States Forest Service</td>
</tr>
<tr>
<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
</tr>
<tr>
<td>USGS</td>
<td>U.S. Geological Survey</td>
</tr>
<tr>
<td>USTs</td>
<td>Underground Storage Tanks</td>
</tr>
<tr>
<td>VOCs</td>
<td>volatile organic compounds</td>
</tr>
<tr>
<td>VVWRA</td>
<td>Victor Valley Water Reclamation Agency</td>
</tr>
</tbody>
</table>
APPENDIX A
INITIAL STUDY / NOTICE OF PREPARATION AND EIR SCOPING PROCESS

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
APPENDIX L

COMMENTS ON THE DRAFT EIR/RESPONSES TO COMMENTS ON THE DRAFT EIR

SAN BERNARDINO COUNTY
2007 GENERAL PLAN PROGRAM
SCH# 2005101038
SECTION A. BACKGROUND AND PURPOSE
BACKGROUND AND PURPOSE

Appendix L presents revisions made to the Draft EIR for the 2007 General Plan based upon comments received during public review of the Draft EIR. The County of San Bernardino is the Lead Agency for this EIR. This Appendix also presents nineteen letters of comment received on the Draft EIR, as well as the County of San Bernardino’s response to those comments.

The Draft EIR for this project was distributed for 45-day public review and comment in accordance with Section 21091 of the Public Resources Code. Once the review period concluded, comments on the Draft EIR submitted to the County of San Bernardino within that period, were reviewed, and responses were prepared by the County for inclusion in the Final EIR.
SECTION B. CEQA REQUIREMENTS FOR THE CONTENTS OF THE FINAL EIR
CEQA REQUIREMENTS FOR THE CONTENTS OF THE FINAL EIR

Section 15132 of the CEQA Guidelines specifies the required contents of a Final EIR. The Final EIR, when combined with the Draft EIR, responds to those requirements. This Final EIR consists of:

1. “Draft EIR or a revision of the draft.”

The Draft EIR text has been revised in this Final EIR through the addition of the text language presented in Section D of this Appendix and through incorporation of this language throughout the EIR text.

2. “Comments and recommendations received on the Draft EIR, either verbatim or in summary.”

Nineteen comment letters were received by the County of San Bernardino during the 45-day public review period. These letters are presented in Section C of this Appendix.

3. “A list of persons, organizations, and public agencies commenting on the Draft EIR.”

The following persons, organizations, and public agencies submitted written comments on the Draft EIR:

Federal Agencies

F.1 Navy Region Southwest, October 19, 2006
Key Issue(s): Impacts of wind generated facilities on military bases.

F.2 Bureau of Land Management, October 27, 2006
Key Issue(s): Biological and recreation resource protection

F.3 US Forest Service, October 20, 2006
Key Issue(s): Biological resources, hydrology, and water quality, and recreation

F.4 National Park Service, October 23, 2006
Key Issue(s): Light pollution, scenic travel corridors

State Agencies

S.1 Native American Heritage Commission, September 13, 2006
Key Issue(s): Cultural resources

S.2 Office of Planning and Research – State Clearinghouse, October 23, 2006
Key Issue(s): None

S.3 California Department of Fish and Game, October 23, 2006
Key Issue(s): Biological resources, water resources and hydrology

S.4 California Department of Justice, October 23, 2006
Key Issue(s): Greenhouse gases and climate change

S.5 Regional Water Quality Control Board, October 30, 2006
Key Issue(s): Water Quality and Hydrology

Local Agencies

L.1 City of Fontana, October 12, 2006
Key Issue(s): Interjurisdictional coordination
Organizations

O.1 The Wilderness Society, October 23, 2006
  Key Issue(s): Fire hazards
O.2 Sierra Club, San Bernardino Mountains Group, October 23, 2006
  Key Issue(s): General Plan alternatives analysis, fire protection, evacuation routes, water supply
O.3 San Bernardino Valley Audubon Society, October 23, 2006
  Key Issue(s): Biological and habitat resources
O.4 Friends of Fawnskin, October 22, 2006
  Key Issue(s): Evacuation routes, water supply, and development
O.5 Center for Biological Diversity, October 20, 2006
  Key Issue(s): Biological resources, air quality, fire evacuation routes, water supply and aesthetics

Native American Indian Tribes

N.1 San Manuel Band of Mission Indians, October 22, 2006
  Key Issue(s): Cultural Resources

Individuals

I.1 Melinda Hedley, September 30, 2006
  Key Issue(s): Biology and habitat resources
I.2 Bradley and Cathy Winch, October 23, 2006
  Key Issue(s): Fire protection, setbacks/buffers, biotic resource and air quality
I.3 Iona Chelette, Joshua Tree Community Advocates
  Key Issue(s): Analysis of Community Plan, General Plan and development code policies

“The responses of the Lead Agency to significant environmental points raised in the review and consultation process.”

Recognizing the requirements of Section 15088 of the CEQA Guidelines, the County of San Bernardino’s responses to the public comments are provided in Section C of this Appendix.

“No other information has been added by the Lead Agency.”
SECTION C. LETTERS OF COMMENT RECEIVED ON THE DRAFT EIR AND LEAD AGENCY’S RESPONSE TO LETTERS OF COMMENT
LETTERS OF COMMENT RECEIVED ON THE DRAFT EIR AND LEAD AGENCY’S RESPONSE TO LETTERS OF COMMENT

This section presents the nineteen comment letters received by the County of San Bernardino during the public review period of the Draft EIR. All of the written comments submitted to the County of San Bernardino within the 45-day public comment period were reviewed, and written responses have been prepared.

Responses were developed by the Lead Agency (County of San Bernardino) in accordance with Section 15088 of the CEQA Guidelines. The comments and the Lead Agency responses provide detail on the environmental issues raised by the comments. Some of the responses include changes in the text of the EIR making it different from the language presented in the Draft EIR. Those text changes, presented in Section D of this Appendix, are now part of the Final EIR for the County of San Bernardino General Plan Update, along with the Draft EIR, comment letters and Lead Agency responses.

There were several common issues raised in different letters, and within these common issues many of the questions or concerns dealt with the programmatic nature of the EIR. In order to provide a more comprehensive explanation and response to these common issues, they are addressed initially below as “Categorical Discussions.” There are seven of these Categorical Discussions:

1. Programmatic Nature of the EIR’s Analysis and Mitigation
2. Programmatic Nature of the Air Quality Analysis and Mitigation
3. Greenhouse Gases, Global Warming, and Implementation of Assembly Bill 32
4. Wildland Fire Safety and Emergency Evacuation Routes
5. Mitigation Monitoring and Reporting Program
6. Recirculation of the Draft EIR
7. Programmatic Nature of the Biological Analysis and Mitigation

Following these Categorical Discussions, individual letters are presented—each followed by specific responses to the issues raised in the letter. Some of the responses refer to the Categorical Discussions, and others refer to specific changes that have been made in the text of the EIR (presented in Section D).

CATEGORICAL DISCUSSION 1: PROGRAMMATIC NATURE OF THE EIR’S ANALYSIS AND MITIGATION.

Summary:
This EIR is a "Program EIR," which evaluates the broad-scale impacts of the proposed General Plan. Although the legally required contents of a Program EIR are the same as those of a Project EIR, in practice there are considerable differences in level of detail. Program EIRs are typically more conceptual and abstract. They contain a more general discussion of impacts, alternatives, and mitigation measures. In accordance with the CEQA Guidelines, the mitigation measures proposed are feasible and are roughly proportional to the impacts of implementing the General Plan.

The County received a number of comments requesting that the County provide additional details regarding the impacts of the proposed project. In many instances, the request is appropriate for a programmatic level EIR and the County has responded to these comments by providing the additional information. In other instances, however, the request for project level detailed analysis is inappropriate for
Discussion:
The reason for this approach is that the project consists of a General Plan for the entire County, not a specific development proposal. Similarly, the Draft EIR is a Program EIR addressing the impacts of the General Plan as a whole, rather than a project-specific EIR. Additional environmental review will be performed in connection with specific development proposals as they come forward. The General Plan does not address specific development proposals. Rather, the General Plan establishes an overall policy framework the County will use as a means of evaluating such proposals.

"The Program EIR prepared for a general plan examines broad policy alternatives, considers the cumulative effects and alternatives to later individual activities, where known, and contains plan level mitigation measures. Later activities that have been adequately described under the program EIR will not require additional environmental documents. When necessary, new environmental documents such as a subsequent or supplemental EIR or negative declaration will focus on the project-specific impacts of later activities, filling in the information and analysis missing from the program EIR." (Governor's Office of Planning and Research, General Plan Guidelines (1998), p. 108.)

CEQA provides that the programmatic environmental analysis for such large-scale planning efforts differs from the sort of environmental analysis performed about a specific development project. According to the CEQA Guidelines, "[a] program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways." (CEQA Guidelines, § 15168, subd. (a).)

"The Program EIR can be used effectively with a decision to carry out a new governmental program or to adopt a new body of regulations in a regulatory program. The program EIR enables the agency to examine the overall effects of the proposed course of action and to take steps to avoid unnecessary adverse environmental effects. Use of the program EIR also enables the Lead Agency to characterize the overall program as the project being approved at that time. Following this approach when individual activities within the program are proposed, the agency would be required to examine the individual activities to determine whether their effects were fully analyzed in the program EIR...." (Discussion following CEQA Guidelines, § 15168.)

In Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners (1993) 18 Cal.App.4th 729, 741-746, the Court of Appeal stated that, in preparing a "first tier EIR" for a plan-level decision, an agency may permissibly defer until later project-specific EIRs analysis that might otherwise be required in a stand-alone project EIR. In upholding the alternatives analysis in the program EIR, the Court stated:

"No ironclad rules can be imposed regarding the level of detail required in the consideration of alternatives. EIR requirements must be 'sufficiently flexible to encompass vastly different projects with varying levels of specificity.' (Rio Vista Farm Bureau Center v. County of Solano (1992) 5 Cal.App.4th 351, 374.) The degree of specificity required in an EIR 'will correspond to the degree of specificity involved in the underlying activity which is described in the EIR' (Guidelines, § 15146.) Thus, 'an EIR on the adoption of a general plan ... must focus on secondary effects of adoption, but need not be as precise as an EIR on the specific projects which
might follow. [Citations.]' (Rio Vista, supra, 5 Cal.App.4th at p. 374.) The consideration of alternatives in this FEIR was adequate for its purposes." (18 Cal.App.4th at pp. 741-742, 745-746.)

The Larson court also addressed the extent to which an agency, in preparing a first tier EIR, can defer the identification of environmental impacts and the formulation of specific mitigation measures until later "project EIRs":

"While a Final EIR cannot defer all consideration of cumulative impacts to a later time, it may legitimately indicate that more detailed information may be considered in future project EIR's.

"A Final EIR need only conform with the general rule if reason in analyzing the impact of future projects, and may reasonably leave many specifics of future EIR's. 'CEQA recognizes that environmental studies in connection with amendments to a general plan will be, on balance, general' (Schaeffer Land Trust v. San Jose City Council (1989) 215 Cal.App.3d, 612, 625.)

"Deferral of more detailed analysis to a project EIR is legitimate. It has been held that 'where practical considerations prohibit devising such measures early in the planning process (e.g., at the general plan amendment or rezone stage), the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval....[Citation.]' (Sacramento Old City Association v. City Council of Sacramento (1991) 229 Cal.App.3d 1011, 1029.)" (18 Cal.App.4th at pp. 746-747.)

A similar approach was upheld by the Court in Rio Vista Farm Bureau Center v. County of Solano (1992) 5 Cal.App.4th 351. In that case, the County prepared a hazardous waste management plan representing an initial assessment of the County's hazardous waste management needs. The Plan contained criteria for siting future facilities and designated generally acceptable locations; site-specific analysis, however, was deferred to subsequent "project EIRs." The petitioners argued that the County "piecemealed" it's environmental review. The Court disagreed, stating:

"The omission of any description of specific potential future facilities ... does not, in our view, render the FEIR deficient....The Plan does not propose a single project divided into parts; it merely serves as a hazardous waste management assessment and overview, with any separate future projects ... to be accompanied by additional EIRs. Repeated commitments are made in both the Plan and the FEIR for preparation of future CEQA documents prior to approval, upon a finding of consistency with the Plan, of any hazardous waste management facilities." (5 Cal.App.4th at 371-371.)

As these cases make clear, the EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, its to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 ("[w]hile detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted"); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where "devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will satisfy specific performance standards articulated at the time of project approval" (internal quotations omitted.).)
The programmatic level approach is taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of their General Plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a Table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists, the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their General Plan Update.

CATEGORICAL DISCUSSION 2: PROGRAMMATIC NATURE OF THE AIR QUALITY ANALYSIS AND MITIGATION.

The Draft EIR for the County of San Bernardino General Plan Update is a Program EIR as explained above in Categorical Discussion 1. As a result, the technical analyses within the document were also conducted at a program level. Program EIRs, and the respective analyses, focus on an overall policy rather than project-specific issues. They contain a more general discussion of impacts, alternatives and mitigation measures. The project consists of a General Plan for the entire County, not a specific development proposal. Similarly, the Draft EIR addresses the impacts of the General Plan as a whole, rather than a project-specific EIR. The Draft EIR evaluated the large-scale impacts associated with the adoption of a General Plan, not the site-specific impacts associated with the many individual development projects that will follow and be implemented by the General Plan.

In accordance with California Code of Regulations (CCR) Title 14, Section 15060, all future development in the County of San Bernardino will undergo an application review for completeness. At that time the County will also determine if the project is subject to CEQA (CCR, Title 14, Section 15061). CEQA requires that each subsequent development project be evaluated for their particular site-specific impacts. These site-specific analyses may be encompassed in second-tier documents, such as Project EIRs, Focused EIRs, or Negative Declarations. Pursuant to CEQA Guidelines, Section 15168(c) subsequent activities [development] in the program [General Plan] must be examined in light of the program EIR to determine whether an additional environmental document must be prepared.

The air quality analysis for the update of the General Plan for the County of San Bernardino was sufficiently prepared pursuant to the requirements outlined in the CEQA statutes beginning at Section 21000 of the California Public Resources Code, and also pursuant to the CEQA Guidelines at the California Code of Regulations, Title 14, beginning at Section 15000. Therefore, the proper analysis, evaluation of impacts, and identification of feasible mitigation measures has been accomplished in accordance with the appropriate state regulations.

CEQA Guidelines, §15125 require that an EIR include a description of the environment [such as air quality] within the vicinity of a proposed project as it exists at the time the NOP/IS is published, or if no NOP/IS is published, at the time the environmental analyses commences from both a local and regional perspective. The air quality analysis in the Draft EIR was prepared at a programmatic level based on data that was the most accurate at the time the NOP/IS was published. Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

CATEGORICAL DISCUSSION 3: GREENHOUSE GASES AND CALIFORNIA GLOBAL WARMING SOLUTIONS ACT (ASSEMBLY BILL 32).

Comments related to this topic refer to the recent passage of Assembly Bill 32, the “California Global Warming Solutions Act of 2006,” which was signed into law by Governor Schwarzenegger in late September 2006, after the Draft EIR was released for public review. This new law requires the California
The California Air Resources Board (CARB) to develop regulations to establish a reporting system that identifies current emissions of greenhouse gases, and to establish a reduction system. As discussed below, based on the County’s consultation with air quality regulatory agencies, there is no regulation or protocol or guidance for evaluating greenhouse gas emissions in CEQA documents.

The CARB is required to determine the level of statewide greenhouse gas emissions in 1990, and the new regulations must reduce greenhouse gas emissions to this level. The program will regulate not only utilities, but the entire range of public and private entities that produce greenhouse gases, including manufacturers and other companies in the chemical, life sciences, technology, oil and gas, waste management, agriculture, and health care industries, among others. The details of the program will be elaborated through rule making by the California Air Resources Board. The bill makes no mention of local governments or how cities and counties may be affected by future regulations. The regulations developed by CARB in response to AB 32 will address point sources of greenhouse gas emissions, and they may also address mobile sources such as automobiles. The latter, however, have already been addressed through a new regulatory program pursuant to AB 1493 (Pavley 2002). The following paragraph summarizes the CARB “Climate Change Program for Mobile Sources.”

The California legislature passed AB 1493 in 2002, calling on the CARB to develop new regulations to reduce greenhouse gas emissions from mobile sources. CARB conducted research and public outreach activities over the next year, and developed the regulations, which were approved in late 2004. The regulations are intended to phase in over a period of years, to give automobile manufacturers the opportunity to incorporate improved emission control systems as new models are developed. The CARB estimates that the near term standards (2009-2012) will reduce greenhouse gas emissions from vehicles by 23% when compared to the 2002 vehicle fleet in California and that the mid-term standards (2013-2016) will result in a 30% reduction (California Air Resources Board. December 2004. Report to the Legislature and the Governor on Regulations to Control Greenhouse Gas Emissions from Motor Vehicles. California Environmental Protection Agency, Air Resources Board, Sacramento, CA. [page ii]).

In December, 2004, after approval of the new emissions standards, the Alliance of Automobile Manufacturers (and several car dealerships in California) filed suit against California in federal court to block implementation of the regulations (Central Valley Chrysler Jeep, Inc. v. Witherspoon, No. 1:04-CV-06663). In part, the suit argues that federal law pre-empts California’s ability to regulate automobile emission standards. In December 2005, the CARB requested the U.S. EPA to issue a waiver from pre-emption, as allowed by the federal Clean Air Act.

In September 2006, Attorney General Lockyer filed suit against automobile manufacturers, arguing that greenhouse gases constitute a public nuisance and that the manufacturers should be held liable for damages caused by their substantial contribution towards global warming. The outcome of California’s attempts to reduce vehicle greenhouse gas emissions at their source is uncertain, and it is clear that the history of this issue is complex. This history defines the context in which the pending regulations proposed by AB 32 must be viewed. Motor vehicles emit a significant portion of all greenhouse gases, and the greatest potential for reduction lies in improved fuel economy and emissions control systems. Some additional reductions may be possible through improvements in land use planning, trip reduction strategies, and similar measures that have been incorporated into Clean Air Plans and local planning procedures over the last 20 years. AB 32 makes no specific mention of how to reduce greenhouse gas emissions, or of what entities—public or private—might become subject to any future regulations.

The California Global Warming Solutions Act defines “greenhouse gases” as carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The Act is set up to establish limits based on annual emissions “expressed in tons of carbon dioxide equivalence,” with every other gas evaluated for the amount necessary to have the same impact as one unit of carbon dioxide. The
Act has three main parts: (1) emissions reporting requirements, (2) adoption of enforceable emission limits, and (3) development of the State scoping plan.

EMISSIONS REPORTING: The California Air Resources Board is required to adopt regulations for reporting and verification of emissions by January 1, 2008. Under the Act, any entity that has voluntarily participated in the emissions reporting program of the California Climate Action Registry by December 31, 2006, will be grandfathered under that program and will not be required to “significantly alter” its program when new or different requirements are later adopted by the California Air Resources Board. In addition, companies will receive “early action” credit for their efforts after specific emission reduction regulations are implemented.

ENFORCEABLE EMISSIONS LIMITS: By January 1, 2008, the California Air Resources Board is required to determine what California’s statewide greenhouse gas emission level was in 1990, and to approve that level as the statewide limit that will be achieved by 2020. While the bill does not specify the 1990 level, lawmakers supporting the bill have claimed that this will result in a 25% reduction from current emissions. Before these levels are set, the Board must hold at least one public workshop and provide an “opportunity for all interested parties to comment.”

With respect to individual sources, by June 30, 2007, the California Air Resources Board will publish a list of discrete “early action” greenhouse gas emission reduction measures that can be implemented within the next three years. Formal regulations adopting those early action measures must be promulgated by January 1, 2010, and must be enforceable as of that date.

DEVELOPMENT OF THE STATE PLAN: Following the initial publication of the early action measures, the act directs the California Air Resources Board to develop a “scoping plan” by January 1, 2009, to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from specific sources or categories of sources by 2020. To develop the plan, the California Air Resources Board must consult with agencies with authority over greenhouse gas emissions (including the California Public Utilities Commission and California Energy Commission), conduct public workshops, and consider economic and non-economic costs and benefits of any proposed programs. In addition, the California Air Resources Board must convene both an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee to assist in the development and implementation of the plan. The Economic and Technology Advancement Committee will be dedicated to identifying investment and funding opportunities for research and development of technologies that will help reduce greenhouse gases.

The Act describes numerous other factors that must be considered in the development of the plan, including national and international practices for greenhouse gas emissions reduction, effectiveness of voluntary reduction practices, relative emission contributions of various sources, and potential effects on small businesses.

After the plan is published, the California Air Resources Board is directed to implement the identified emissions reduction measures through formal regulation before January 1, 2011; the regulations will go into effect one year later. Like the provision describing the various issues that must be considered in development of the scoping plan, the emissions reduction regulations must also consider a list of potential impacts on California’s economy and the public health. Notably, the act permits the 2011 regulations to include market-based declining annual aggregate emissions limits beginning in 2012. In other words, the California Air Resources Board is authorized to create a regulatory mechanism for a cap-and-trade program. Any market-based program must be designed not to increase emissions of criteria air pollutants and must consider localized and cumulative emissions impacts.
In response to industry’s concern about the inflexibility of the reduction to 1990 levels, the bill includes an economic “safety valve,” which allows the Governor to suspend the emission reduction measures for one year in the event of “extraordinary circumstances, catastrophic events or the threat of extreme economic disruption.” The bill also explicitly states that the authority of the California Public Utilities Commission is not affected by the Act.

In summary, Assembly Bill 32 will create a new regulatory program intended to reduce statewide greenhouse gas emissions to their 1990 level. It is not yet clear how, or if, these future regulations would affect local governments or how they might influence local land use planning decisions. From the background discussion above, it is clear that the issue of greenhouse gas reductions extends well beyond the scope of local government actions incorporated in general plans. Nevertheless, the County of San Bernardino recognizes the importance of this issue. Goals and policies already incorporated into the General Plan will serve to reduce vehicle trip generation when compared to existing conditions. Briefly, these Goals and Policies include:

**GOAL CO 4.** The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy.

**Policies**

**CO 4.1** Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the county will require either as mitigation measures in the appropriate environmental analysis required by the county for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:

1. Grading restrictions and/or controls on the basis of soil types, topography or season.
   a. Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.
   b. Dust-control measures during grading, heavy truck travel, and other dust generating activities.

**CO 4.2** Coordinate air quality improvement technologies with the South Coast Air Quality Management District (SCAQMD) and the Mojave Air Quality Management District (MAQMD) to improve air quality through reductions in pollutants from the region.

**CO 4.3** The County will continue to ensure through coordination and cooperation with all airport operators a diverse and efficient ground and air transportation system, which generates the minimum feasible pollutants.

**Programs**

1. Establish incentives and/or regulations to eliminate work trips including such actions as:
a. Implementing staggered, flexible and compressed work schedules in public agencies.

b. Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time and to new businesses at project approval or permit stage

2. Participate with public transit providers serving San Bernardino County in a cooperative program to increase transit services with existing equipment and expand services through transit facility improvements.

3. Coordinate with public transit providers to increase funding for transit improvements to supplement other means of travel.

4. Support public transit providers in efforts to increase funding for transit improvements to supplement other means of travels.

**CO 4.4** Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the county may manage growth by insuring the timely provision of infrastructure to serve new development.

**Programs**

1. Consistent with the land use designations in the Land Use Policy Map (see the Land Use element) that will improve growth management at a subregional level in relation to major activity centers, review new development to encourage new intensified development around transit nodes and along transit corridors.

2. Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants through such means as:
   
a. Promoting mixed-use development to reduce the length and frequency of vehicle trips;

b. Providing for increased intensity of development along existing and proposed transit corridors; and

c. Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

3. Incorporate phasing policies and requirements in the General Plan and development plans to achieve timely provision of infrastructure (particularly transportation facilities) to serve development through:
   
a. Tying growth to Level of Service (LOS) standards; and

b. Using phasing areas to manage growth.
CO 4.5 Reduce emissions through reduced energy consumption.

Programs

1. Implement programs to phase in energy conservation improvements through the annual budget process.

CO 4.6 Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

CO 4.7 Encourage special event center operators to provide discounted transit passes with event tickets or offer discounted on-site parking for carpooling patrons (for or more persons per vehicle).

CO 4.8 Replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-effective and meet the vehicle use needs.

CO 4.9 Manage the County’s transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet.

CO 4.10 Support the development of alternative fuel infrastructure that is publicly accessible.

CO 4.11 Establish programs for priority or free parking on County streets or in County parking lots for alternative fuel vehicles.

CO 4.12 Provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

Some of the comments on this topic suggested that the EIR must include a quantified analysis of greenhouse gas emissions and must specify mitigation measures such as the purchase of carbon sequestration credits for certain types of projects. These comments were not raised by any agencies in response to the Notice of Preparation but have now been raised some commenters following the release of the Draft EIR. The County, in responding to these comments, has consulted with staff at the California Air Resources Board (CARB) and at the South Coast Air Quality Management District (SCAQMD), and conducted its own independent analysis in responding to this comment. This consultation included November 2006 telephonic consultations with Bob Jenne, legal counsel with the CARB, who indicated in response to a question from the County’s legal counsel that CARB had not issued any guidance to counties or other agencies on the evaluation of greenhouse gases in EIRs or the implementation of AB32 through the CEQA process. Consultation with SCAQMD included November 2006 and January 2007 telephonic consultations with James Koizumi, Air Quality Specialist, who indicated that SCAQMD had not received any guidance from CARB and subsequently has not issued any guidance on the evaluation of greenhouse gases in EIRs or the implementation of AB32 through the CEQA process. Based on that independent review, the County has determined that, at this general plan level of analysis and given the absence of any guidance or implementation from CARB on implementing AB 32, the EIR includes sufficient general disclosure of the project’s air quality impacts, including emissions of greenhouse gases. That disclosure is included in the EIR’s analysis of emission impacts and mitigation measures to reduce those impacts. Even though CARB and other agencies with jurisdiction have not yet formulated any
specific greenhouse gas mitigation recommendations to be adopted through general plan processes, the EIR recommends and the general plan includes numerous policies that will reduce greenhouse gas emissions. Finally, the County and businesses within the County will be subject to AB 32 and the regulations that will be implemented by CARB to achieve the emissions reductions goals of AB 32.

The South Coast Air Quality Management District (SCAQMD) adopted a “Policy on Global Warming and Stratospheric Ozone Depletion” on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the AQMP.

In March of 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons (CFCs), methyl chloroform (1,1,1-trichloroethane), carbon tetrachloride, and halons by December 1995
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons (HCFCs) by the year 2000
- Develop recycling regulations for HCFCs
- Develop an emissions inventory and control strategy for methyl bromide
- Support the adoption of a California greenhouse gas emission reduction goal

In support of these policies, the SCAQMD Governing Board has adopted several rules to reduce ozone depleting compounds. Several other rules concurrently reduce criteria pollutants and global warming gases, where the VOCs being controlled are also global warming gases; for example, Rule 1171 (Solvent Cleaning Operations) and Rule 1151 (Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations. Brief summaries of the topics of stratospheric ozone depletion and global warming are provided below.

“Stratospheric ozone depletion” refers to the slow destruction of naturally occurring ozone in the upper atmosphere (called the stratosphere), which protects Earth from the damaging effects of solar ultraviolet radiation. Certain compounds, including chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop and fish damage, and further degrade air quality.

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases in the atmosphere functions much the same as glass in a greenhouse (i.e., both prevent the escape of heat). This is why global warming is also known as the “greenhouse effect.” Gases responsible for global warming and their relative contribution to the overall warming effect are carbon dioxide (55 percent), CFCs (24 percent), methane (15 percent), and nitrous oxide (6 percent). It is widely accepted that continued increases in greenhouse gases will contribute to global warming although there is uncertainty concerning the magnitude, causes and timing of the warming trend.

Global warming gases and ozone-depleting gases include, but are not limited to, the following:

- **Carbon dioxide.** Carbon dioxide is caused by fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In the Basin, approximately 48 percent of carbon dioxide emissions come from transportation, with residential and utility sources contributing approximately 13 percent each, 20 percent come from industry, and the remainder comes from a variety of other sources.
**Chlorofluorocarbons (CFCs).** CFCs are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global warming. Sixty-three percent of CFC emissions in the Basin come from the industrial sector (SCAQMD 1991).

**Halons.** Halons are bromine-containing hydrocarbons used in fire extinguishers and behave as both ozone-depleting and greenhouse gases.

**Hydro-chlorofluorocarbons (HCFCs).** HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere. Thus, they have less ozone depletion potential than CFCs.

**Methane.** Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, and leaks in natural gas pipelines. It is a greenhouse gas and traps heat 40 to 70 times more effectively than carbon dioxide. In the Basin, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent.

**Nitrous oxide.** Nitrous oxide is a greenhouse gas. It is produced by both natural and human-related sources. Primary human-related sources are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production.

**Perfluorocarbons.** Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of primary aluminum production. While they are used as substitutes for ozone-depleting substances, they are potent greenhouse gases with a global warming potential several thousand times that of carbon dioxide, depending on the specific perfluorocarbon.

**Sulfur hexafluoride.** Sulfur hexafluoride is colorless, odorless, non-toxic non-flammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. It has a high global warming potential, 22,200 times that of carbon dioxide.

**1,1,1-trichloroethane.** 1,1,1-trichloroethane or methyl chloroform is a solvent and cleaning agent commonly used by manufacturers. It is less destructive of the environment than CFCs or HCFCs, but its continued use will contribute to global warming and ozone depletion.

In addition to the efforts by the SCAQMD, additional measures have been adopted at the state level to reduce emissions of global warming gases. As result of AB 1493, CARB adopted standards in September 2004 to reduce greenhouse gas emissions from motor vehicles. These standards are intended to reduce emissions of carbon dioxide and other greenhouse gases (e.g., nitrous oxide, methane). The new standards would phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009-2012) standards will result in about a 22 percent reduction in greenhouse gas emissions compared to the emissions from the 2002 fleet, while the mid-term (2013-2016) standards will result in a reduction of about 30 percent.

In September 2006, California enacted Assembly Bill 32 (AB 32) to cap carbon dioxide emissions given concerns of global warming. AB 32 added Division 25.5 (commencing with Section 38500) to the California Health and Safety Code. AB 32 requires CARB to gauge the current level of greenhouse gas
emissions by requiring statewide reporting and verification of greenhouse gas emissions (defined as carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) from emitters. CARB must also reconstruct the 1990 levels of California greenhouse gas emissions. Finally, CARB must adopt a statewide greenhouse gas emissions limit equal to the approved 1990 emissions levels and set a reduction schedule and adopted regulatory programs to achieve the target levels by 2020. The law focuses on reducing emissions to “maximum technologically feasible and cost-effective levels” (H&S Section 38560).

AB 32 authorizes, but does not mandate, the Board to adopt market-based compliance mechanisms, defined as a “cap and trade” system, whereby emitters may purchase, bank or trade additional greenhouse gas “allowances” from third parties and/or to adopt a declining annual aggregate emissions limitation (reduced emissions over time). The regulations adopted pursuant to the greenhouse gas emissions reduction must become enforceable no later than January 1, 2010. In the event of a catastrophe, or to prevent undue economic harm, the Governor is given a “safety valve” whereby he may suspend the requirements of AB 32 for up to one year. The primary targets of the new law are the major sources of greenhouse gases, which included electrical power generation, oil refining and cement plants.

As of the writing of this Final EIR, the agencies with jurisdiction over air quality regulation and greenhouse gas emissions (CARB, the South Coast AQMD, and the Mojave Desert AQMD) have not established regulations, guidance, methodologies, significance thresholds, standards, CEQA protocols or mitigation measures that specify the type of analysis, or mitigation measures, that can be included in a program EIR, or other CEQA document. In addition, no emission inventories or emissions baseline have been established that would allow for an appropriate analysis to evaluate an existing setting and impact analysis for the proposed implementation of the San Bernardino General Plan due to climate changes. The County of San Bernardino will adhere to the rules and guidelines currently in place at the local, state and federal level, and will also adhere to any future regulations regarding global warming resulting from the legislative approval of AB 32.

Finally, some commenters asserted that the EIR should be recirculated based on the passage of AB 32 or the need to evaluate greenhouse gas emissions. Under CEQA, recirculation is required if information added to the Final EIR demonstrates that there is a new significant environmental impact or a substantial increase in the severity of an environmental impact (CEQA Guideline 15088.5.) The Draft EIR disclosed that overall emissions may increase, however, set forth mitigation measures which will reduce those emissions, and concluded that despite the imposition of those mitigation measures the impact cannot be reduced to a less than significant level. These conclusions remain unchanged, and the County has determined that recirculation of the Draft EIR is not required based on the comments about greenhouse gas emissions and the County’s response to those comments.

CATEGORICAL DISCUSSION 4: WILDLAND FIRE SAFETY AND EMERGENCY EVACUATION ROUTES.

Several comments raised questions about fire safety, wildland fire risk, and the adequacy of evaluation routes. The proposed goals and policies, the Fire Safety Overlay, and the MAST program are clear indications of the comprehensive and responsiveness of the County to these issues.

The County’s Fire Safety Overlay is a provision in the County Development Code. An Update to the Development Code is a component of the General Plan Update (GPU). As explained in the Draft EIR, the Development Code is the primary tool for implementing the policies of the General Plan. The Updated Development Code is a part of the program being evaluated in the GPU EIR. The Development Code Update includes a recent revision to the Fire Safety Overlay that was adopted by the County Board of Supervisors in 2004. In response to the catastrophic fire damage of the Grand Prix and Old Fires, the County Board of Supervisors formed a Post-Disaster Reconstruction Task Force in 2003 to outline reconstruction procedures for fire victims in an effort to assist affected residents in rebuilding as
expeditiously as possible. A separate sub-committee of the Task Force was established to focus specifically on changes to the County’s fire safety building and development requirements to enhance fire safe communities in the future. This sub-committee, consisted of staff from the County Fire Department, the Building and Safety Division, and the Advance Planning Division, California Division of Forestry, U.S. Forest Service, Crest Forest Fire District, Running Springs Fire Department and Big Bear City Fire District and various interested individuals, groups, and agencies to examine the County’s current fire safety related building and development design standards in order to incorporate “lessons learned” from the recent fires. The sub-committee met several times with Fire Chiefs and/or Fire Prevention Officers from the affected fire districts, affected residents, and representatives of mountain Fire Safe Councils, the building industry and mountain building associations. The feedback provided at the meetings resulted in an ordinance that had broad support.

Based on the recommended changes, the Board of Supervisors adopted a Development Code Amendment that revised the existing Fire Safety Overlay provisions, and a General Plan Amendment to reflect changes to the hazard overlay maps delineating the revised Fire Safety Areas. The Development Code Amendment included new standards that required the use of noncombustible and/or fire-resistant materials and other building requirements so as to mitigate the potential for future conflagrations. The City of San Bernardino (City) was also severely impacted by the Old Fire, and, as a result, adopted an ordinance to establish enhanced building standards for the areas of the City affected by the fire. The County’s changes to its Fire Safety Overlay incorporated standards similar to those adopted by the City and applied them to the Del Rosa area and other unincorporated areas along the valley foothills.

A summary of the revisions is as follows:

Fire Safety Designations and Organizational Changes: In order to emphasize the new standards implemented with the proposed changes, the designation for the Fire Safety Overlay District has been changed from Fire Safety Review Areas (FR) to Fire Safety Areas (FS). The building standards and project design requirements have been completely restructured to make them easier to understand and locate in the Code.

Redefining Fire Safety Areas:

a. Fire Safety Area 1 (FS1). Fire Safety Area 1 includes those areas within the mountains and valley foothills. It includes all the land generally within the National Forest boundary and is characterized by areas with moderate and steep terrain and moderate to heavy fuel loading contributing to high fire hazard conditions.

b. Fire Safety Area 2 (FS2). Fire Safety Area 2 includes those lands just to the north and east of the mountain FS1 area in the mountain-desert interface. These areas have gentle to moderate sloping terrain and contain light to moderate fuel loading. These areas are periodically subject to high wind conditions, which have the potential of dramatically spreading wildland fires.

c. Fire Safety Area 3 (FS3). Fire Safety Area 3 includes lands just to the south of the mountain FS1 area. These lands are primarily within the wildland-urban interface of the Valley Region and consist of varying terrain from relatively flat to steeply sloping hillside areas. Present and future development within FS3 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FS1. These areas are subject to Santa Ana wind conditions, which have the potential of dramatically spreading wildland fires during extreme fire behavior conditions.
**Roof Covering**: All three areas within the Fire Safety Overlay District require that roof coverings shall be either noncombustible or shall be fire retardant material not composed of organic fiber with a minimum Class A rating, as defined in the California Building Code. This means that wood shake or shingle roofs are now prohibited within all three areas.

**Exterior Walls**: Exterior wall separation standards are designed to reduce the exposure and risk from adjacent structural fires and to reduce the potential spread of fire from structure to structure.

a. For FS1 and FS2: All residential structures shall have interior side yard setbacks of 20% of the lot width. Interior side yards shall not be less than five feet and need not exceed 15 feet. Wherever possible, exterior wall separations shall not be less than ten feet for all buildings, including those on adjoining parcels.

When exterior walls of residential and accessory buildings or portions thereof are within 15 feet of interior side or rear lot lines, or the exterior wall separation is less than 30 feet, the outside of all such exterior walls or portions thereof shall be constructed with the modified one-hour construction. Where building separations are less than ten feet, additional mitigation measures may be required by the responsible fire authority.

b. For FS3: Exterior walls shall be constructed of noncombustible materials or shall provide the equivalent one-hour fire-resistance-rated construction on the exterior side. Interior side yards shall not be less than five feet. Within the Mountain Planning Area, building separation and side yard setbacks shall be as described in FS1/FS2 areas.

**Eaves**: In FS1 and FS2, eaves shall be solidly filled with tight-fitting wood blocks at least one and one-half inches thick. In FR3, eaves shall be enclosed with a minimum 7/8-inch stucco or equivalent protection.

**Exterior Glazing**: Exterior windows, window walls and glazed doors, and windows within exterior doors, shall be multi-layered glass panels (dual- or triple-paned), tempered glass, or other assemblies approved by the Building Official. Vinyl window frame assemblies shall be prohibited, except when they comply with specific construction characteristics.

**Exterior Doors**: All exterior doors made of wood or wood portions shall be solid core wood.

**Insulation**: Paper-faced insulation shall be allowed in attics or ventilated spaces only if the paper is not exposed to the attic open space. Cellulose insulation is required to be fire retardant.

**Additional Requirements**: Dependent upon specific conditions of the site, such as fire flow, building separation, road conditions, slope, vegetation, etc., or combination thereof, the responsible fire authority may require all structures to meet more stringent construction standards as additional mitigation to the fire threat. Such standards include, but are not limited to, full perimeter exterior walls to be constructed to the modified or full one-hour construction standards, sprinklers, soffitted eaves, etc.

**Fences**: Where wood or vinyl fencing is used, there shall be a minimum of five-foot separation between the wood or vinyl fencing and the wall of the nearest structure except on those properties where previous construction occurred pursuant to a previous code. Fencing within the five-foot separation area shall be of noncombustible material or modified one-hour fire-resistance-rated construction. All fences or walls required adjacent to fuel modification areas or wildland areas as conditions of approval for a development project shall be constructed of noncombustible materials as defined in the California Building Code.
Residential Density in Sloped Terrain: Reinstates standards from community plans designed to reduce fire hazards and prevent erosion. The density of development in sloping hillside areas shall be in accordance with the following criteria: One to four dwelling units per gross acre on slopes of 0-<15%, two dwelling units per gross acre on slopes of 15-<30%, one dwelling unit per three gross acres on slopes of greater than 30% gradient. In the West Valley Foothills Planning Area, residential development on slopes of greater than 30% gradient is prohibited.

Fuel Modification Areas/Plans: A permanent fuel modification area shall be required around development projects that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. The recommended width of the fuel modification area shall be determined based on the Fuel Modification Plan, but in no case shall it be less than 100 feet. All final plans shall be reviewed and approved by the responsible fire authority in conjunction with the County Fire Marshall. A preliminary or final plan shall be submitted concurrently with the development application to the Land Use Services Department for review in conjunction with the project design review. Fuel Modification Plans shall address the following factors, including, but not limited to:

a. The natural ungraded slope of the land within and adjacent to the project;
b. Fuel loading;
c. Access to the project and to the fuel modified area;
d. The on-site availability of water that can be used for fire fighting purposes;
e. The continual maintenance of such areas;
f. The soil erosion and sediment control measures to alleviate permanent loss of top soil and accelerated erosion; and
  g. A list of recommended landscape plant materials that are fire resistant.

The issue of evacuation routes is addressed in the Draft EIR. The Draft EIR considers the evacuation routes that have been identified in General Plan Regional Goals V/S 1, M/S 1, and D/S 1 and Policies V/S 1.1, M/S 1.1, and D/S 1.1. The topic of wildland fire as a public safety hazard is addressed in Chapter IV, Topic G., Hazards and Hazardous Materials beginning at page IV-71 of the Draft EIR. Impact HAZ-6 specifically evaluates safety hazards to the public residing in and visiting the mountain region of the County. Mitigation Measure HAZ-18 calls for the use of the Fire Safety Overlay requirements contained in the County Development Code as the primary method of reducing impacts of wildland fires on future development within the mountain region. The significance conclusion for impacts related to safety hazards at page IV-83 provide disclosure to decision-makers and the public that, in spite of extensive fire safety development requirements, there still remains a significant unavoidable safety impact due to the inherent risks associated with residing in high fire hazard areas. Evacuation routes were evaluated more directly as a traffic circulation issue in the Transportation/Traffic impact discussion in Chapter 4, Topic O beginning on page IV-141. The specific issue of evacuation routes is addressed in Impact TR-6 at page IV-177. Transportation Mitigation Measure TR-18 specifically addresses programmatic mitigation to reduce potential safety impacts related to adequate evacuation routes. Mitigation Measures TR-1, TR-12, TR-13, TR-14, and TR-16 all contribute collectively to creating and maintaining a safe and efficient circulation network that, in turn, provides for safe and effective evacuation routes.

The issue of evacuation routes is not an isolated issue that can be considered independent of the entire fire safety approach taken by the County. Evacuation routes are part of the physical infrastructure that, in turn, supports the institutional infrastructure of fire safety and evacuation planning. The pre-planned evacuation strategy prepared by the Mountain Area Safety Task Force (MAST) in early 2003, prior to the occurrence of the Grand Prix and Old Fires, was instrumental in the successful evacuation program for these two catastrophic wildland fires. Various evacuation scenarios were considered in the strategy and incorporated pre-planned routes that facilitated the successful evacuation of the affected mountain areas.
MAST was formed in late 2002 to promote fire safety in the mountain communities. MAST is comprised of seven local, state and federal agencies consisting of San Bernardino County Fire Department, California Division of Forestry and Fire Protection, U.S. Forest Service, State & Local Office of Emergency Services, San Bernardino County Sheriff’s Department, California Highway Patrol and MAST was utilized for critical, strategic, and tactical decisions throughout the Grand Prix and Old Fires pre-planning and post-fire evaluation process in 2003. The MAST effort proved critical to a successful evacuation effort when winds shifted and blew the fire into the mountain communities. 70,000 citizens from the communities of Arrowhead Springs, San Bernardino, Del Rosa, Devore, Crestline, Crest Forest, Rim Forest, Running Springs, Highland, Skyforest, Cedarpines Park, Valley of Enchantment, Twin Peaks, Summit Valley, Lake Arrowhead, Los Flores Ranch, Holcomb Valley, Oak Springs Ranch, Blue Jay, Cedar Glen, Hook Creek, Green Valley Lake, Arrowbear, Lucerne Valley, Apple Valley, Squint’s Ranch, Silverwood Lake, Baldy Mesa, Oak Hills, and South Hesperia were evacuated. At the height of the fire over 4,000 firefighters were assigned to the fire and they were successful in protecting over $7.5 billion in residential and commercial infrastructure.

MAST has since evolved and is addressing not only the emergency caused by the drought and the bark beetle epidemic, but several other issues both tactical and strategic that are critical to public safety and forest health. It is important to note that MAST was created in large part in response to the initiative of community-based Fire Safe Councils. As the emergency grew in magnitude and there was no central coordinating agency for all of the issues associated with the emergency. Each individual agency had its own mission, obligations, and authority and with that, it’s administrative restrictions and geographic limitations. Without a single agency to address these issues, the grass roots Fire Safe Councils became the focal point for community involvement and citizen input. The Fire Safe Councils then became the rally points for the various agencies and the leadership of those agencies determined that a central administrative structure, designed around collaboration must be created. MAST was the result. There are several functional groups within the MAST structure that are addressing short term and long term issues that directly relate to public safety and forest health. One component is addressing immediate fuels reduction. There is another component that is addressing future long-term forest health. There is also a public education component that will work to educate residents and change human behavior so that the messages of fire safety and forest health will continue. The Board of Supervisors recently authorized the issuance of a Request for Proposals for consultant services to prepare the public education program. In addition, MAST has continued to support the efforts of local Fire Safe Councils. Three Fire Safe Councils have produced Community Wildfire Protection Plans (CWPP) for their respective communities. The complete plans are for Arrowhead Communities, Mill Creek Canyon and Wrightwood. These plans were accepted by the Board of Supervisors earlier this year. These plans provide additional guidance and specific fire strategies for their specific communities.

In order to provide enhanced attention and focus on evacuation planning to that currently included in the General Plan, the County is adding an additional Program 5 to implement Safety Element Policy S 9.1. This program will institutionalize, and carry forward into the future, the evacuation planning that has been preformed by MAST, which has been thoroughly described above. Program 5 to Policy S 9.1 is added to the EIR as mitigation measure HAZ- 20.

**Mitigation HAZ-20**

*The Office of Emergency Service (OES)s, County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to*
prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

CATEGORICAL DISCUSSION 5: MITIGATION MONITORING AND REPORTING PROGRAM.

Section 21081.6 of the California Public Resources Code (CEQA) requires a Lead Agency to, “adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.” One of the methods allowed by the Public Resources Code to implement this requirement is to, “provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other public project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.” [Section 21081.6(b), with emphasis added]. The County of San Bernardino, as Lead Agency, has elected to implement the mitigation monitoring requirements of CEQA by incorporating all mitigation measures presented in this FEIR directly into the San Bernardino General Plan as General Plan policies and the County Development Code as development regulations.

Regarding the timing of preparation and adoption of the Mitigation Monitoring Program, Section 21081.1(a) of the Public Resources Code clearly specifies that the Program be adopted “when making the findings required by …Section 21081” (in other words, prior to certification of the Final EIR). The Lead Agency can prepare the Mitigation Monitoring Program sooner than that timeframe, but it is not required to do so by the Public Resources Code.

CATEGORICAL DISCUSSION 6: RECIRCULATION OF THE DRAFT EIR.

When considering whether to recirculate this EIR, the County Board of Supervisors will be guided by Section 15088.5 of the CEQA Guidelines. Briefly stated, the Lead Agency is required to recirculate the Draft EIR when “significant new information” is added to the EIR. According to Section 15088.5(a) of the CEQA Guidelines, "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043)

Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.
CATEGORICAL DISCUSSION 7: PROGRAMMATIC NATURE OF THE BIOLOGICAL ANALYSIS AND MITIGATION.

The Biology section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal (e.g., raptor protection measures, compensatory mitigation ratios to offset impacts, and so forth). Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, the Biology Section focuses on the broad policy implications of implementing the General Plan as a whole. Nonetheless, the Valley, Mountain, and Desert Regions of the study area include:

- Sensitive riparian areas;
- Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features;
- Areas identified as an important landscape linkage in southern California;
- Areas that facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 5 and 6 in Attachment 1); and
- Large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Table 9 in Attachment 1).

As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys, and may, in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned protected wildlife/plant species, sensitive riparian or important landscape linkages, and CWA / CDFG jurisdictional features.

To address this, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Furthermore, the referenced framework within the updated General Plan is consistent with other regional and comprehensive planning documents that the County has supported or participated in (e.g., City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Glen Helen Specific Plan Natural Resource Management Plan, Carbonate Habitat Management Strategy, West Mojave Plan, California Desert Conservation Area Plan, and so forth).

Additionally, the County has recognized that the current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence. Nonetheless, these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other salient graphic references (e.g., designated Critical Habitat, California Natural Diversity Data Base records, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys, or specific mitigation programs to avoid, minimize, and compensate for adverse impacts to biological resources. As a result, the County has included an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important biological resources and natural open space areas. The County has added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for the updated General Plan and subsequent development project CEQA review.
This commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to: compile and display data collected during the San Bernardino Valley MSHCP effort and the recently completed South Coast Wildlands Corridor Project Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; and integrate sensitive biological data from other traditional sources (e.g., USFWS, California Natural Diversity Data Base, San Bernardino County Museum, BLM, National Park Service, California Native Plant Society, and so forth). Development of this updated database will integrate data from a number of diverse sources. Furthermore, the County has committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.

**New Program Designated Under General Plan Policy CO 2.1:**

The County has added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for the updated General Plan and subsequent development project CEQA review. This commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to: compile and display data collected during the San Bernardino Valley MSHCP effort; the recently completed South Coast Wildlands Corridor Project Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; and integrate sensitive biological data from other traditional sources (e.g., USFWS, California Natural Diversity Data Base, San Bernardino County Museum, BLM, National Park Service, California Native Plant Society, and so forth). Development of this updated database will integrate data from a number of diverse sources. Furthermore, the County has committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.

Further, following are revised mitigation measures for biological impacts which have been incorporated into Section IV- D of the Final EIR, replacing the corresponding Mitigation Measures from the Draft EIR:

**Mitigation BIO -1**

The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon. This measure will be added to the General Plan as a Program under Policy CO 1.1. (as discussed in Mitigation Measures BIO-3 and BIO-13 below).

**Mitigation BIO -2**

The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with ACOE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation. This mitigation will be added to the General Plan as a Program under Goal CO 1.

**Mitigation BIO -3**
The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay would also include a streamlined and standardized reporting process for use in CEQA, CESA and ESA compliance. An updated database that integrates CNDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Project and other sources could also be prepared as an information reference base. The Overlay update will be added to the General Plan as a Program under Policy CO 2.1.

**Mitigation BIO -4**
The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats. This mitigation will be added to the General Plan as a Program under Goal CO 1.

**Mitigation BIO -5**
The County shall not permit land conversion until adequate mitigation is provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant. This measure will be added to the General Plan as a program to implement Policy CO 2.4.

**Mitigation BIO -6**
The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries). This measure will be added to the General Plan as a program to implement Policy CO 2.3.

**Mitigation BIO -7**
The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays. This measure will be added to the General Plan as a program to implement policy CO 2.1.

**Mitigation BIO -8**
The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or
prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing. This measure will be added to the General Plan as a program to implement Policy CO 2.4.

Mitigation BIO -9
The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents. This measure will be added to the General Plan as a program to implement Policy CO 2.1.

Mitigation BIO -10
All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report.

The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.

Mitigation BIO -11
In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County’s role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. This measure shall be added to the General Plan as a program to implement Policy CO 2.1.

Mitigation BIO -12
Within the County’s Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated “BR” or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.

82.13.020 – Location Requirements

The BR overlay district shall be applied to areas that have been identified by a county, state or federal agency as habitat for species of unique, rare, threatened or endangered plants or animals or their habitats as listed in the General Plan. The overlay applies to policy areas identified on the Open Space Overlay.

82.13.030 – Application Requirements
When a land use is proposed, or an existing land use is increased by more than 25 percent of disturbed area within a BR overlay district, the land use application shall include a biotic resources report prepared as follows, except where the Director finds that prior environmental studies approved by the County have determined that the site does not contain viable habitat.

Report content. The biotic resources report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development, and shall also identify mitigation measures designed to reduce or eliminate impacts to the identified resources, and shall be submitted along with the application for the proposed development.

Report preparation. The biotic resources report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist, or other professional “life scientist”

82.13.040 – Development Standards

The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

Mitigation BIO-13

The County shall consider whether projects may lead to a significant environmental impact as a result of the conversion of oak woodlands consistent with new provisions added to the County Development Code Subsection 88.01.050(e)(4). Upon determination of a significant effect, the County shall employ one or more of the following measures: preservation, replacement or restoration, in-lieu mitigation fee, or other mitigation measures.

Preservation. Preserve existing oak woodlands by recording conservation easements in favor of the County or an approved organization or agency.

Replacement or restoration. Replace or restore former oak woodlands. The review authority may require the planting and maintenance of replacement trees, including replacing dead or diseased trees. The replacement ratio and tree sizes shall be based on the recommendation of an Oak Reforestation Plan prepared by a registered professional forester. The requirement to maintain trees in compliance with this paragraph shall terminate seven years after the trees are planted.

In-lieu mitigation fee. Contribute in-lieu mitigation fee to the Oak Woodlands Conservation Fund, established under Fish and Game Code Section 1363 for the purpose of purchasing oak woodlands conservation easements. A project applicant who contributes funds in compliance with this Subsection shall not receive or use a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project. The in-lieu fee for replacement trees shall be calculated based upon their equivalent value as established by the International Society of Arboriculture’s (ISA) current edition of Guide to Establishing Values for Trees and Shrubs, etc.

Other mitigation measures. Perform other mitigation measures as may be required by the review authority (e.g., inch-for-inch off-site replacement planting; transfer of development rights, enrollment of project with offset provider for carbon credits in greenhouse gas emission registry, carbon reduction, and carbon trading system; etc.).
Squire, Jim - Planning

From: Brasher, DeEllen M CIV, CNRSW [deellen.brasher@navy.mil]
Sent: Friday, October 20, 2006 1:14 PM
To: jsquire@lisd.sdcounty.gov
Cc: Brasher, DeEllen M CIV, CNRSW
Subject: FW: Comment for San Bernardino General Plan Update

From: Brasher, DeEllen M CIV, CNRSW
Sent: Thursday, October 19, 2006 11:40
To: jsquire@us.co.san-bernardino.ca.us
Cc: Brasher, DeEllen M CIV, CNRSW
Subject: Comment for San Bernardino General Plan Update

Mr. Squire:

The website will not let me send my comment so I thought I would try your e-mail. Here is our comment from the DoD Regional Wind Work Group in San Diego, California. Please call if you have questions.

"Request the Red-Yellow-Green Mapping concept be incorporated into the General Plan to help mitigate the impacts of Wind Generated Energy Facilities on military operations. If possible, please include it in this update. If that's not possible, please include it at some date in the near future. This concept has been presented to County Planning Staff and is probably the most robust system available to assist in protecting the military mission in San Bernardino County."

Thank you for your assistance,

DeEllen M. Brasher
Regional Environmental Coordinator Officer
Commander, Navy Region Southwest
33000 Nixie Way
FASW Bldg. 50; Rm 332
San Diego, CA 92147-5110
(619) 524-6263

Provide comments for Environmental Services at:
<https://ice.disa.mil/index.cfm?fa=card&site_id=720&service_provider_id=100360>

10/26/2006
RESPONSE F.1-1
Since the Red-Yellow-Green Mapping concept has not been formally adopted by the Department of Defense, it is not appropriate for San Bernardino County to adopt it as a part of the General Plan mapping. County staff will continue to monitor the progress of the negotiations between the military and the wind energy industry representatives and will amend the County mapping when deemed appropriate to protect the military mission with the County. To address the concerns of the military representatives about this issue, the County has amended its application referral process for all wind energy system projects that are submitted to the County for review and approval. The County commits to notify the military for all such projects that are proposed within the entire Desert Region of the County regardless of whether it is within a red, yellow or green zone. As a result, the military will be able to comment on any project that might impact their mission and request appropriate mitigation or even denial of the project if such mitigation is not possible. Furthermore, the County is currently cooperating with the Office of Planning and Research (OPR) in the R-2508 Land Use Study. This study may lead to recommendations for actions on the part of San Bernardino County and other participating local jurisdictions to modify General Plan policies and Development Code procedures.
County of San Bernardino
Land Use Services Dept., Advanced Planning Division
385 N. Arrowhead Ave, 1st Floor
San Bernardino, CA  92415-0182
Attn: James Squire

Dear Mr. Squire:

Project objectives for San Bernardino County (SBCO) are consistent with those for the adjacent and interspersed federal lands managed by the Bureau of Land Management (Bureau) that may be affected by your draft General Plan. The Bureau has several additional mandates that it is tasked to meet, and offers the following comments for your consideration in recognition of the interconnected nature of SBCO and the Bureau’s land-use planning strategies.

DEIR Comments unless otherwise noted
1. On Page III-2, Item 2(a) and County Plan page 1-12, Section 2(a) and (b), based on the current wording of the text, the public may be misled on federal agencies’ authorities. Federal agencies do not own federal lands. These lands are owned by the United States and are managed by one federal agency or another, consistent with whatever legislation governs those lands, or in a few cases as supplemented by third-party agreements if lands have been donated by private individuals. At the pleasure of Congress (and occasionally the Courts or the Executive branch) the agency managing federal lands may be changed, or those lands may be disposed of through one of several means. The managing agency carries out direction, and has more or less authority in how it does so, depending upon the mandates under which it is implementing the will of Congress and the President. This means that federal lands are open to the public, unless withdrawn from public entry as DOD-managed lands are. For other federal agencies, the percentage of lands that are withdrawn from public entry, generally at the behest of legislation or otherwise with the concurrence of Congress, is small.

2. On page III-9, detailed “hot spot” analysis is identified for two Valley Region communities and the Newberry Springs community within the Desert Region (not the Valley Region as identified in your text). It would be helpful if the proposed changes and alternatives that were considered in this analysis were discussed, as well as if these changes will provide additional opportunities or have indirect effects on interspersed and adjacent public lands.

3. On page IV-8, and in the Draft Plan on pages VI 12-13, Section B, Goal O55/Policies OS-5.3, restrictions are identified for development along prominent ridgelines and hilltops within the Desert Region along scenic vistas, and specific scenic routes are identified on pages IV-10 to IV-12, as well as pages VI 15-17 of the Draft Plan. It is unclear from the text whether these policies will affect development along these same vistas consistent with our policies in FLPMA and the Energy Policy Act (EPA) of 2005. Under FLPMA, the Bureau has sited many communication sites along these major highways to serve travelers and residents, and is likely to continue to receive these applications. Under
the EPA, which promotes alternative energy development (e.g., wind turbines), the Bureau has received one Plan of Development (POD) and anticipates 3 more in the next few months in areas that can economically support such development—generally ridgelines, hillsites and hillside readily accessible and visible to major highways. These POD generally include federal and non-federal lands. How far would these scenic designations apply, particularly for the long stretches of I-15, I-40, SR 127, SR 18 from Apple Valley to Big Bear, and SR 247?

4. On page IV-23, one of the County’s significance criteria for farmlands is “farmlands of Statewide importance”. Such lands have not been identified (mapped).

5. On page IV-43, the text indicates that BLM has designated 13 ACECs and 3 other BLM Special Areas in SBCO. These figures are inaccurate and do not reflect the substantial biological conservation actions that occurred as a result of the West Mojave Plan (March, 2006) and Northern and Eastern Mojave Plan (December, 2002). As of March of 2006, BLM has designated 30 ACECs, and 3 other Special Areas:
   - We have no records of a Dark Mountain ACEC.
   - BLM is no longer the management agency over the Fort Soda, Fort Piute, and New York Mountains areas. These are within the Mojave National Preserve and are no longer ACEC.
   - In addition to the 8 ACEC cited in the draft EIR (Afton Canyon, Amargosa River, Big Morongo Canyon, Cronese Basin, Harper Dry Lake, Salt Creek, Soggy Dry Lake, Upper Johnson Valley), BLM has the following ACEC designated in SBCO for biological values: Barstow Woolly Sunflower ACEC, Bedrock Spring ACEC, Bendire’s Thrasher Conservation Areas, Bigelow Cholla Research Natural Area, Black Mountain ACEC, Carbonate Endemics Plant RNA, the southern portion of Christmas Canyon ACEC, Coolgardie Mesa ACEC, Fossil Falls ACEC, Fremont-Kramer DWMA, Ivanpah Valley DWMA, the southern portion of Kingston Range Natural Area ACEC, Manix ACEC, Mojave Fishhook Cactus ACEC, Mojave Fringe-Toed Lizard ACEC, Mojave Monkeyflower ACEC, Parish’s Phacelia ACEC, Pinto Mountains DWMA, Pisgah ACEC, Piute-Fenner DWMA, Ord-Rodman DWMA, Rainbow Basin-Owl Canyon ACEC, Red Mountain Spring ACEC (formerly Squaw Spring ACEC), Rodman Mountains ACEC, Shadow Valley DWMA, Steam Well ACEC, Superior-Cronese DWMA, Turtle Mountains National Natural Landmark ACEC, West Paradise ACEC, and the northern portion of Whitewater Canyon ACEC.
   - North Harper and South Harper have been combined into one smaller ACEC (Harper Lake ACEC).
   - (This error also occurs on page V 6, B.3 last parag. of Draft Plan) BLM is no longer the management agency over Kelso Dunes National Natural Landmark, Granite Mountains Research Natural Area, and the East Mojave National Scenic Area, and therefore they are no longer recognized as BLM special areas. You have adequately covered these areas in your discussion of the Mojave National Preserve. Other Habitat Conservation Areas on BLM-managed public lands in SBCO include the eastern portion of the North Edwards Habitat Conservation Area (HCA), the Mojave Ground Squirrel HCA, and the Joshua Tree-to-Yucca Valley Linkage.

6. On page IV-45, the text indicates significant unmitigated impacts to T&E species and habitat in the Desert region of the County (BIO-1). In addition, on page IV-51, the text indicates the same for candidate, sensitive and special status species and habitat in the Desert region (BIO-13). It appears that the draft General Plan is consistent with the overall regional strategies developed under the West Mojave

---

1 Many of these conservation areas focus on specific species or habitats, and several areas overlap.
and Northern and Eastern Mojave Plans, both of which received non-jeopardy biological opinions from USFWS. If your General Plan strategy is substantially consistent with the West Mojave HCP strategy, any significant effects from your development activities have been substantially mitigated, and it would be appropriate to indicate that in Section 4 (mitigation). In addition, it would be appropriate to indicate the mitigating effects of these larger regional strategies in the cumulative impacts section.

7. On Pages IV 46-47 and IV-52, the text indicates that County Plans would not adversely affect federal protected wetlands as defined by Section 404 of the CWA in the Desert region of the County (BIO-3, redundant BIO-15). All wetlands are considered sensitive habitats in the desert, precisely because of their rarity. In addition, in feedback on federal projects, EPA has determined that at least two waterways, the Mojave River and the Amargosa River, and one lake (Harper Lake) are subject to Section 404 for all or parts of their areas. Portions of the Mojave River and Harper Lake include wetland habitat not managed by federal agencies in SBCO. It may be appropriate to acknowledge in this section wetland losses that are anticipated. It would also be appropriate to acknowledge the ongoing efforts of the Mojave Water Agency to provide recharge to the groundwater and maintain riparian and wetland habitat in the Mojave River.

8. On Pages IV 47-48 and IV-52, the text indicates that County Plans would adversely affect wildlife corridors in the Desert region of the County (BIO-4, redundant BIO-16). These are also issues that have been substantially addressed and mitigated in the regional plans identified in the previous comments, including establishment of ACEC and wildlife corridors to preserve opportunities for wildlife movement.

9. On Pages IV 49 and IV 53, and in the Draft Plan on page V 5 B.3, 4th parag., the text indicates that the County is participating in the West Mojave Planning Process (BIO-6, redundant BIO-18). A Record of Decision for this plan was signed in March, 2006, so it would be more appropriate to indicate that the County has participated in the recently completed West Mojave planning process (BIO-6). The Bureau is pleased that the County is pursuing a regional HCP, as it will continue to facilitate the Bureau’s regional plan implementation efforts. If the wording, Specifically, San Bernardino County is participating in the West Mojave Plan and intends to proceed with obtaining a local government Habitat Conservation Plan to obtain Section 10a and 2081 permits (e.g., consistent with strategies and mechanisms for local agencies within the West Mojave IICP), it would be appropriate to add the parenthetical or other appropriate language to clarify here, and cross-reference this in your Section 4 mitigation and cumulative impacts section.

10. On Page IV-51-52, the text indicates that County Plans would adversely affect riparian and other sensitive communities in the Desert region of the County (BIO-14). These are also issues that—at least on a regional basis—have been substantially addressed and mitigated in the regional plans identified in the previous comments.

11. On Page IV-54, the text indicates that one of SBCO’s mitigation measures will be to pursue initiatives to reduce dumping in unincorporated areas (Mitigation BIO-7). The Bureau commends this action and would like to assist the County. Please contact our District Manager or Barstow Field Manager if you would like to work on joint initiatives, or participate in the Desert Managers’ Group (DMG)—Hazmat Subcommittee to glean ideas and seek from other local, State, and federal assistance. Several Kern County initiatives may be useful for SBCO to review. A good Kern County contact on these initiatives is Kern County Supervisor Don Maven (661- 868-3660), who is also a member of the DMG.

12. On Page IV-56, Item 5, the text indicates that loss of native species and habitat from population growth is irreversible and unmitigated. While loss is unavoidable, it is mitigatable. The Bureau has an ongoing program of invasive species eradication and replacement with natives in at-risk upland and riparian habitats. The Bureau has, on occasion, included non-federal lands in these strategies to increase
long-term effectiveness. The Bureau would be happy to coordinate such a plan with SBCO, particularly along the Mojave River, towards offsetting losses to native plant communities. Other activities are conducted by Caltrans and utility companies towards similar goals during highway and rights-of-way construction activities. You may wish to consider existing or new programs that may serve as partial mitigation for these losses.

13. On page IV 67-68, the text describes the geologic and soil setting for the Desert region of the County. Fragile desert pavements and biological crusts also occur in currently undisturbed portions of the desert and may be impacted by development plans. These issues are also addressed and partially mitigated on a regional basis in the regional plans identified in the previous comments.

14. On page IV 72, the definition of hazardous materials in the text does not include petroleum-containing substances managed under federal and State law as hazardous.

15. On page IV 87, the first water quality threshold for significance is the violation of any water quality standard or water discharge requirement. It should be noted that some exceedances of water quality standards, particularly in the Desert region of the County, are naturally occurring, and therefore should not be included in this threshold.

16. In Table IV-J-1 on page IV 104, #5 Fort Cady Mineral Corp. is listed as one of the active operations. If this is the plant adjacent to Rheox off 1-40, near Newberry Springs, our files indicate that it has not operated for several years and has not produced a substantial amount of minerals or developed the site per their mining plan. The Bureau has placed this project in its inactive files, and identified it for closure.

17. The text on page IV-106 refers to minerals of regional importance, but does not list what those minerals are. The Bureau recommends that the County consider whether aggregate materials are of regional importance, if that is not currently the case, and develop strategies to resolve associated conflicts early. These operations can result in substantial air quality and visual impacts to neighboring communities, but have also been substantially limited in terms of availability from federal lands due to land use zoning, associated legislation (e.g., Fort Irwin Expansion Act, CDPA, 1994) and the federal regulations under which they are permitted. Distance from source is an important factor in cost-effectiveness of providing aggregate for construction, roads and other infrastructure needs. The County will continue to face a challenge to resolve potential conflicts between communities and current and potential future providers of these materials, if growth and development within the area continues as projected on page IV 116.

18. On page IV 135-136, the County identifies mitigation for recreation. The Desert region of the County has many opportunities for recreational pursuits, including OHV pursuits, but also faces challenges from OHV use of community roads, closed areas, and private lands to access these large Open Areas. In conjunction with Mitigation REC-13, REC-23, and REC-24, mitigation measures that could reduce these conflicts include a recreational trail system to these large open areas and design features in new housing developments near these areas to provide trails and plan for such use legally. Flood control easements specified in REC-19 should also consider excluding areas of riparian vegetation or containing unique plant species, such as the Little San Bernardino Mountains Gilia, found in the washes of Yuca Valley and Joshua Tree.

19. On page IV 141, the text identifies miles of State, County and local roads. The draft plan also identifies the County Policy on page VI 23, Section E, Goal D/OS-2, to continue to provide public access to lands under Bureau jurisdiction. It would be useful to federal agencies such as the Bureau to have access to a GIS coverage of State and County roads, particularly those in unincorporated areas, to overlay
their route systems and work with the County to identify and resolve any inconsistencies and additional access needs/clarifications.

20. On page IV 162, the text identifies Maglev as the high-speed rail under consideration in the County. The Bureau has received an application from another, privately funded corporation for a relatively high-speed (over 100 mph) rail system connecting Victor Valley and points east to Las Vegas, generally following the I-15 corridor. A second phase of the project calls for extension of the system from Victor Valley to the Lancaster/Palmdale area. A Notice of Intent has been published for this proposal and city leaders of Victorville and Barstow have received preliminary briefings on this proposal. While it is premature to anticipate that this proposal will be approved, it is another strategy on the table to provide rail transport through a substantial portion of the Desert region of the County. The Bureau recommends that the County either mention both proposals or rewrite the section to be more inclusive (i.e., general).

21. On page VI 1, regarding the conclusion that cumulative impact to aesthetics is not considerable. As per earlier comment #3, substantive impacts may occur because of communication sites and alternative energy proposals, particular wind farms currently under application or reasonably foreseeable.

22. On pages VI 1-2, per earlier comments #6-9, various measures have been taken to address cumulative impacts.

23. On page III 45, Goal CI-17 of the Draft Plan, the Bureau supports increased cooperative Law Enforcement strategies with the County, particularly in the large Desert region of the County. Local, State and federal law enforcement agencies lack adequate resources to cover this large area, protect public health and safety, and safeguard property and utility infrastructure. In addition, the area is intermingled federal, State, and private lands throughout. A cooperative agreement would assist all law enforcement in achieving these common goals.

24. When review of the CD version of the Draft Plan was approximately halfway through, pages in the file became unreadable and the entire file was irreparably damaged (unreadable). The Bureau was able to complete its review from the posted document at your website. It may be advantageous in the Final Plan to use an index and subdivide the document into smaller PDF sections.

25. On page V 42-43, Section F, Goal D/CO-1.13 of the Draft Plan, the text indicates that one of SBCO’s policies will be to support preparation of a regional HCP in the Desert region of the County. The Bureau commends this policy and will continue to provide reasonable support upon request towards its completion.

25. On page VI 3, Section A.3, of the Draft Plan, the text indicates that BLM sets forth four multiple use classes for public lands. In addition, some lands remain unclassified, subject to site-specific management. Many of these unclassified lands are located within land-tenure adjustment areas (identified for potential sale or exchange out of federal ownership).

26. The Biotic Resources Overlay Map (5a) utilizes outdated terminology for designations of desert tortoise habitat. The Bureau recommends using the boundaries of the desert wildlife management areas or the designated critical habitat. In addition, this map does not indicate the general locations or critical habitat of several other federally-listed threatened or endangered species. For updated coverages, contact Larry LaPre (951-697-5218) of the Bureau California Desert District Office.

27. The Open Spaces Overlay Map (5b) utilizes outdated terminology and information for NPS lands. Joshua Tree and Death Valley are now National Parks, and the Mojave National Preserve is not shown.
The Bureau hopes these DEIR and Draft Plan comments are useful to the County as it proceeds with its County Plan. If you have questions about any of these comments, you can contact Edythe Seehafer (760-252-6021) of my staff.

Sincerely,

[Signature]
Roxie C. Trost
Field Manager
LEAD AGENCY RESPONSE TO COMMENT LETTER F.2
BUREAU OF LAND MANAGEMENT, OCTOBER 27, 2006

RESPONSE F.2-1
The County agrees with this clarification. The third sentence of Section 2(a) on page III-2 of the Draft EIR has been revised to read as follows:

Of this non-jurisdiction land, approximately 6 million acres are owned by the United States and controlled by the Bureau of Land Management, Department of Interior; and 1.9 million acres are owned by the United States and controlled by various military branches within the United States Department of Defense.

RESPONSE F.2-2
The County agrees that further clarification of the Newberry Springs “hot spot” would be helpful. The analysis performed for Newberry Springs resulted in no changes to land use designations within the community. The analysis for this area was focused on examining General Plan Policies or Programs that could provide incentives for business development, particularly businesses that may capitalize on resurgent Route 66 interest. This evaluation also considered the interests of community residents as expressed in Visioning Process meetings that were held 2004. During these meetings residents expressed a desire to expand home-based businesses while maintaining the rural character of the area. There is a considerable inventory of undeveloped and under-development property that is zoned commercial within Newberry Springs. The analysis concluded that no land use zoning district changes would contribute to objectives of the analysis. However, changes to home-based business regulations in the Development Code adopted in 2003 as well as the addition of new Agritourism land uses in the update to the Development Code responded to community interests. These changes have no identifiable effects on Public Domain Lands managed by the BLM.

RESPONSE F.2-3
The County acknowledges the Bureau of Land Management’s (BLM/Bureau) concerns about certain County Open Space policies potentially interfering with future development on BLM controlled property located on prominent ridgelines and hilltops within the Desert Region along scenic vistas and specific County scenic routes identified in the General Plan. These Open Space policies are not intended to interfere with development allowed by the Bureau’s FLPMA or the Energy Policy Act on lands controlled by BLM. On the contrary, the Project Description on pages III-1 and III-2 of the Draft EIR explains the jurisdiction of the County and its General Plan. The General Plan goals and policies are intended to address land use activities on private land or land owned by local governmental jurisdictions.

As discussed on page IV-8 of the project Draft EIR, the County currently has a number of controls in place that are intended to help limit a projects’ impact on ridgelines and hilltops along County scenic routes. These include County review of project plans to help ensure preservation of scenic values and to prevent the obstruction of scenic views and to provide for grading and landscaping so the project blends with the surrounding landscape. For projects on BLM owned property, the Bureau can proceed with the project as they see fit, taking into consideration any comments the County has on the project.

For project’s proposed on County controlled lands, the 2007 General Plan Open Space policy 6.5 provides additional guidance on development that is proposed to occur on natural landforms and ridgelines, including keeping cuts and fills to an absolute minimum during development of the area, requesting that grading contours that do occur blend with the natural contours on site or to look like contours that would naturally occur, encouraging the use of custom foundations in order to minimize disruption of the natural landform, and requiring that units located in the hillside be so situated that roof
lines will blend with and not detract from the natural ridge outline. The County hopes that the BLM would also follow these policies.

The County would be pleased to work with the BLM on future projects proposed along I-15, I-40, SR-127, SR-18 and SR-247 that could potentially impact scenic resources along County scenic routes along these highways.

**RESPONSE F.2-4**

Figures 6-9A, 9B and 9C in the project Conservation Background Report (Appendix H of the Draft EIR) show the location of farmlands in the Valley, Mountain and Desert Regions of the County. As shown on these figures, farmland is scattered throughout the Valley region, with farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance located in the Chino, Bloomington, Loma Linda, Redlands and Mentone areas. Farmland of importance is also located east of Yucaipa in the Mountain Regions. Farmland of importance is also located in the Barstow, Newberry Springs and Hesperia areas of the Desert Region. As stated in Impact AG-1, future development in these areas could result in non-agricultural land uses being developed in these areas that would result in the permanent reduction in the farmlands of importance in these areas.

**RESPONSE F.2-5**

The County as Lead Agency agrees with this clarification (see Table 9 in Attachment 1) and has attached a table that details 33 ACEC and 3 other BLM special areas within SBCO. Dark Mountain has been removed from Table 9. Desert Region, Local, State and Federally Administered Lands and Regional Planning Documents.

**RESPONSE F.2-6**

The County appreciates the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. However, General Plan implementation in the Desert Region has the potential to adversely affect local, state, and federal protected wildlife and plant species and their habitats (e.g. desert tortoise, Mojave ground squirrel, and so forth). The Upper Santa Ana Wash Land Management and Habitat Conservation Plan that is being prepared for private and Public Domain lands within the Valley Region of the County offer a coordinated approach to sound land use and wildlife conservation. The County and the BLM, as well as two cities, the U.S. Fish and Wildlife Service and other federal and state agencies, are cooperating with the San Bernardino Water Conservation District acting as the Lead Agency for the plan. Within the Mountain Region the County and the BLM participated in the preparation of the Carbonate Plant Management Strategy that was lead by the U.S. Forest Service, U.S. Fish and Wildlife Service and cooperating mining companies in an effort to protect federally and state threatened and endangered plants while providing for continued mining of calcium carbonate minerals along the North Slope of the San Bernardino Mountains. The County has worked vary closely with the BLM on the West Mojave Land Management and Conservation Plan within the Desert Region of the County. The West Mojave Land Management and Conservation Plan offers a program to provide for enhanced wildlife protection on federal lands and a method for streamlined permitting for land uses on private land that may be subject to federal and state endangered species regulations.

The Desert Region has been identified as an important landscape linkage in southern California as it supports and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 5 and 6 in Attachment1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Table 9 in
Attachment1). Therefore, General Plan implementation in the Desert Region has the potential too: result
in direct (e.g., destroy individuals, mortality, removal, and so forth resulting from grading, excavation,
etc.) and indirect (e.g., temporary displacement due to noise, dust, and vibration from development-
related activities) adverse impacts to numerous relatively common native and non-native plant and animal
species, as well as migratory birds, raptors, and other local, state, and federally protected species; restrict
wildlife and plant usage of the Desert Region including species movement and dispersal corridors,
including buffers associated with local, state, or federally managed lands; deter individual animals from
utilizing the Desert Region for foraging or nesting until the disturbance conditions are eliminated or the
individuals become accustomed to the disturbance; change local migration or foraging patterns and
habitat availability within the Desert Region; disrupt breeding activities and annual production within the
Desert Region; disturb or degrade the local quality or quantity of potentially Clean Water Act (CWA)
and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features (e.g.
wetlands and drainages) and modify habitat connectivity (e.g., upland and breeding connectivity,
movement corridors, landscape linkages, and so forth) within the Desert Region; increase the amount of a
series of often irregularly planned ecological light pollution\(^1\) (e.g., direct glare, chronically increased
localized illumination, and temporary, unexpected fluctuations in lighting) events and the quantity of non-
native species within the Desert Region; modify local, state, or federal administered lands that possess
wildlife movement and dispersal corridors, and rare, unique, or unusual qualities of scientific,
educational, cultural, or recreational significance (see Table 9 in Attachment1); alter noise and light
regime (frequency and duration) within portions of the Desert Region thereby affecting long-term
occupancy and productivity for many wildlife species; and reduce wildlife intra-species communication
distances and distort sounds (TNCC, 1997) within the Desert Region.

As a result, specific portions of the Desert Region will require subsequent projects to include surveys and
may in certain circumstances, oblige specific mitigation programs to avoid adverse impacts to the
aforementioned protected wildlife/plant species, and CWA / CDFG jurisdictional features. The General
Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3,
and CO 2.4) which define a robust framework that the County will use as a means of evaluating future
development proposals (see County of San Bernardino 2007 General Plan; Section V-11 Conservation
Element) which is consistent with the Northern and Eastern Mojave (NEMO) and Western Mojave
WEMO Plans. Nonetheless, the intended use of this section of the EIR is to disclose and evaluate the
environmental baseline conditions for the San Bernardino County General Plan consistent with CEQA.
This section of the EIR is the first tier of a multi-level environmental review and analysis process, which
programmatically analyzes the general biological elements, contained in the General Plan not a specific
development proposal. The General Plan does not address specific development proposals. Rather, the
General Plan establishes an overall policy framework that the County will use as a means of evaluation.
To that end, this EIR section focuses on the broad policy implications of implementing the General Plan
as a whole. While the County agrees your interpretation using standards for the National Environmental
Policy Act, which applies to federal actions related to the West Mojave Plan specifically. However, until
and unless the County adopts and implements the local jurisdiction version of the WEMO for private and
local government owned lands, there still may be significant unavoidable effects as determined by CEQA

---

\(^1\) Ecological light pollution may potentially cause wildlife to experience orientation, miss-orientation, or disorientation from additional
illumination (Longcore and Rich, 2004). Wildlife can be attracted to, or repulsed from, the light altered environment, which in turn
may affect foraging, reproduction, communication, and other behavior factors (Longcore and Rich, 2004; Hill, 1990; and Schwartz
significance thresholds. Therefore, it cannot be concluded at this time with reasonable certainty that implementation of the General Plan within the Desert Region will be mitigated to a level below significance.

**RESPONSE F.2-7**
The County appreciates the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. See Response F.2-6, and Categorical Discussion 7 for further explanation.

**RESPONSE F.2-8**
The County appreciates the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Desert Region has been identified as an important landscape linkage in southern California as it supports and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 5 and 6 in Attachment1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Table 9 in Attachment1). Therefore, General Plan implementation in the Desert Region has the potential too: Restrict wildlife and plant usage of the Desert Region including species movement and dispersal corridors, including buffers associated with local, state, or federally managed lands; Deter individual animals from utilizing the Desert Region for foraging or nesting until the disturbance conditions are eliminated or the individuals become accustomed to the disturbance; Change local migration or foraging patterns and habitat availability within the Desert Region; Disrupt breeding activities and annual production within the Desert Region; Disturb, degrade, and/or modify habitat connectivity (e.g., upland and breeding connectivity, movement corridors, landscape linkages, and so forth) within the Desert Region; and Modify local, state, or federal administered lands that possess wildlife movement and dispersal corridors, rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance (see Table 9 in Attachment1).

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.2-9**
The County recognizes the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. General Plan implementation within the Valley, Mountain, and Desert Regions may conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (see Table 9 in Attachment1). Additionally, the County has supported and/or participated in the following adopted comprehensive planning documents: City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly; Upper Santa Ana Wash Land Management and Conservation Plan; Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan. To that end, application of General Plan Goals, Policies, and County Ordinances (e.g., Plant Protection and Management Ordinance - County Code, Title 8, Division 9, Chapters 1 through 5) to a particular development proposal will ensure that the project's impacts are consistent local, state,
federal, and regional planning documents. Therefore, these impacts can be mitigated to a level below significance.

**RESPONSE F.2-10**

The County appreciates the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. However, General Plan implementation in the Desert Region has the potential to disturb or degrade the local quality or quantity of riparian and potentially Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (ET seq) jurisdictional features within the Desert Region. As a result, specific portions of the Desert Region will require subsequent projects to include surveys and may in certain circumstances, oblige specific mitigation programs to avoid, minimize, or compensate for adverse impacts to the CWA / CDFG jurisdictional features. Nonetheless, we concur that the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals impacts to the CWA / CDFG jurisdictional features. Therefore, the affects of General Plan implementation on CWA / CDFG jurisdictional features within the Desert Region will be mitigated to a level below significance.

**RESPONSE F.2-11**

The County agrees that illegal dumping on public and private lands is an issue and is proposing a policy framework to address this issue. County officials will contact Kern County to consider that County’s approach. A number of programs are currently in place, such as the use of “Free Dump Days” sponsored by the County Solid Waste Management Division of the Public Works Department, expanded Community Drop-Off Facilities where residents are provided convenient locations for disposal of household trash disposal, continued Code Enforcement actions to provide deterrents and follow-up law enforcement by County Sheriffs when egregious violations are associated with more serious crime. Additionally, the West Mojave Plan that the County is hopeful of adopting and implementing includes various strategies on illegal trash dumping related to raven control practices for the purpose of reducing raven predation on desert tortoise.

**RESPONSE F.2-12**

The County appreciates the Bureau of Land Management’s (BLM) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as it supports and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1-6 in Attachment1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7-9 in Attachment1). Therefore, General Plan implementation in the Valley, Mountain, and Desert Regions has the potential too: Result in direct (e.g., destroy individuals, mortality, removal, and so forth resulting from grading, excavation, etc.) and indirect (e.g., temporary displacement due to noise, dust, and vibration from development-related activities) adverse impacts to numerous relatively common native and non-native plant and animal species, as well as migratory birds, raptors, and other local, state, and federally protected species; Restrict wildlife and plant usage of the Valley, Mountain, and Desert Regions including species movement and dispersal corridors, including buffers associated with local, state, or federally managed lands; Deter individual animals from utilizing the Valley, Mountain, and Desert Regions for foraging or nesting until the disturbance conditions are eliminated or the individuals become
accustomed to the disturbance; Change local migration or foraging patterns and habitat availability within the Valley, Mountain, and Desert Regions; Disrupt breeding activities and annual production within the Valley, Mountain, and Desert Regions; Disturb or degrade the local quality or quantity of potentially Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features (e.g. wetlands and drainages) and modify habitat connectivity (e.g., upland and breeding connectivity, movement corridors, landscape linkages, and so forth) within the Valley, Mountain, and Desert Regions; Increase the amount of a series of often irregularly planned ecological light pollution\(^2\) (e.g., direct glare, chronically increased localized illumination, and temporary, unexpected fluctuations in lighting) events and the quantity of non-native species within the Valley, Mountain, and Desert Regions; Modify local, state, or federal administered lands that possess wildlife movement and dispersal corridors, and rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance (see Tables 7-9 in Attachment1); Alter noise and light regime (frequency and duration) within portions of the Valley, Mountain, and Desert Regions thereby affecting long-term occupancy and productivity for many wildlife species; and Reduce wildlife intra-species communication distances and distort sounds (TNCC, 1997) within the Valley, Mountain, and Desert Regions.

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.2-13**

The County agrees that fragile desert pavements and biological crusts also occur in currently undisturbed portions of the desert and may be impacted by development plans. Therefore, the first paragraph on page IV-68 of the EIR will be revised as follows:

...Mountain areas of the Desert region may be susceptible to landslides, particularly associated with large earthquakes. Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur. Fragile desert pavements and biological crusts also occur in currently undisturbed portions of the Desert region. Currently, agricultural use of soils in the Desert region is generally limited by available water, and some areas have highly alkaline soils and playas that are unsuitable for agricultural use. Fallow or abandoned agricultural fields often lead to unstable surfaces that are subject to wind erosion that can lead to fugitive dust or even small dune formations that cause other indirect effects such as property damage and over-covering of native vegetation.

**RESPONSE F.2-14**

The County acknowledges the cementer’s statement regarding the definition of hazardous materials. The reference to “hazardous materials” in the Draft EIR is consistent with the California Health and Safety Code, Section 25501, definition as “any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.”

---

\(^2\) Ecological light pollution may potentially cause wildlife to experience orientation, miss-orientation, or disorientation from additional illumination (Longcore and Rich, 2004). Wildlife can be attracted to, or repulsed from, the light altered environment, which in turn may affect foraging, reproduction, communication, and other behavior factors (Longcore and Rich, 2004; Hill, 1990; and Schwartz and Henderson, 1991).
**RESPONSE F.2-15**

Naturally occurring discharges are being addressed in the TMDL process through the Regional Water Quality Control Board. The County is committed to cooperative relationships with resource agencies for the protection of water and biological resources. The County proposes policies and programs to protect these resources and looks forward to discussions on the protection of these resources.

**RESPONSE F.2-16**

The Fort Cady Mineral Corporation mine listed on Table IV-J-1 (Prominent Mine and Processing Plant Locations in San Bernardino County) on page IV-104 of the project EIR is the same mine discussed in this BLM comment. Since the mine has not operated for several years, not produced a substantial amount of minerals and the mine has not been developed per its Mining Plan, Table IV-J-1 will be revised as follows:

*Fort Cady Mineral Corporation mine will be removed from Table IV-J-1*

**RESPONSE F.2-17**

As discussed on page 6-114 of the Conservation Background Report that was an appendix to the project Draft EIR, minerals found in the County of San Bernardino include peat, bituminous rock, gold, sand, gravel, clay, crushed stone, limestone, diatomite, salt, borate, and potash. The County agrees with the BLM that aggregate materials are of regional importance and that aggregate mining can create air quality and visual impacts to communities near these mines.

The update to the County’s Development Code includes a number of sections to protect aggregate mines from encroachment from non-compatible land uses (Mineral Resources Overlay District - Code Sections 82.17.010 to Section 82.17.040). The Code also includes a number of provisions to prevent aggregate mines from creating significant impacts on land uses adjacent to these mines as described in the above Code sections.

**RESPONSE F.2-18**

The County agrees with the BLM’s concerns about OHV activities. OHV recreational pursuits have been a critical issue since the beginning of the General Plan update process through policy development. The Vision Statement adopted by the Board of Supervisors states: “The plentiful open space in San Bernardino County serves County residents and attracts people from other areas as they pursue a wide variety of recreational activities: hiking, camping, off-highway vehicle traveling, fishing, horseback riding, star-gazing, winter sports, youth athletics, performing arts, and other entertainment.” (Emphasis added)

As such, the County is committed to both providing for continued OHV recreational opportunities within the County and to protecting neighborhood settings from illegal OHV riding. The integration of linkages exclusive to OHV use from neighborhoods to OHV designated areas and use of flood control easements are two ideas that the County will further explore in the evolving issue of OHV use in the County.

**RESPONSE F.2-19**

The County agrees that "inter-agency cooperation" relates to roads, as well as the many other issues facing jurisdictional interface issues between the County and other agencies. The County maintains and is continually improving its data sets and GIS layers and reciprocal exchange of GIS and other data is in the best interest of the County and the BLM.
**RESPONSE F.2-20**
The County agrees with the comment. A new paragraph has been added to Chapter IV Project Analysis / Section O. – Transportation / Traffic / Subsection I. – Setting / Heading – Railroads / Subheading – High-Speed Rail / Maglev (page IV-162 of the Draft EIR) as follows:

A second, privately funded, high-speed rail project is currently in the preliminary stages of development. The proposed DesertXpress high-speed train project includes passenger stations, a maintenance facility, and a new railroad line along the I-15 corridor between Victorville and Las Vegas. The project would involve construction of a fully grade separated, dedicated double track passenger-only railroad along an approximately 200-mile corridor within or adjacent to the I-15 freeway for about 170 miles and adjacent to existing railroad lines for about 30 miles.

**RESPONSE F.2-21**
The County believes that the conclusion that cumulative aesthetic impacts are not considerable was the correct conclusion, even though future communication sites, and alternative energy proposal, including wind farms, may be constructed in the future that are visible from County scenic highways. This conclusion is due to the County’s standard practice to evaluate projects for their aesthetic effects and the policies included in the update to the General Plan that include polices related to scenic corridors and to protect ridgelines and hilltops as outlined in Response to Comments F.2-3 above.

**RESPONSE F.2-22**
The County appreciates the opinion of BLM that cumulative impacts to biological resources have been mitigated. While the County may be inclined to agree with the BLM’s opinion with regards to the area covered by the WEMO Plan and other conservation plans referenced above, a substantial portion of the private lands within the County are outside of the WEMO and other plan boundaries. Thus, given the uncertainty of successful implementation of all biological mitigation programs on private lands throughout the entire County over the life of the General Plan, the County respectfully differs with this conclusion.

**RESPONSE F.2-23**
The County agrees in cooperative policing and governance throughout the County, especially in the desert where there is intermingled jurisdictions throughout. The Bureau's interest in a cooperative agreement will be forwarded to the Board of Supervisors and the County Sheriff.

**RESPONSE F.2-24**
The County will consider this suggestion, as we publish the final General Plan documents.

**RESPONSE F.2-25**
The County acknowledges the agreement of BLM with Goal D/CO-1.13 of the General Plan.

**RESPONSE F.2-26**
The County acknowledges the BLM’s correction to the referenced text. All maps for the Background Reports were prepared as of December 31, 2004. Although the County recognizes the distinction made with regards to unclassified public lands, the tenuous nature of their status makes it difficult to track and maintain correct jurisdictional designation. The designation of these lands, albeit somewhat limited, do not have material impact on the General Plan and therefore will remain as shown. Land use mapping, however, will be updated regularly as data is made available to the County.
While the current Biological Resource Overlay Maps only include discrete local, state, and federally protected species occurrence, these data serve as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biologic and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

Additionally, the County has added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for General Plan and subsequent development project CEQA review and compliance. The County’s commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort as well as integrate sensitive biological data from other sources (e.g., U.S. Forest Service, USFWS, San Bernardino County Museum, BLM, CNDDB, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and so forth). An element of the above referenced policies shall be the maintenance of a database that will contribute to evaluation of cumulative impacts from previously approved projects. Development of this updated database will integrate data from a number of diverse sources. Furthermore, the County has committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.

The open space map is reflective of the programmatic nature of the EIR, identifying in only a broad brush way that there are open space and habitat issues with the various regions of the County. Implementation of the General Plan Goals and Policies requires examination and use of the Open Space Overlay Map, which provides a much higher level of detail and map scale to allow for evaluation of potential impacts and scoping of needed studies for development projects. The County updates these overlay maps regularly and encourages the BLM to provide input on how these maps can be refined to be a better tool for habitat, open space, and wildlife corridor protection.
Mr. Jim Squire, AICP, Supervising Planner  
Land Use Services Division  
Advance Planning Division  
County of San Bernardino  
385 North Arrowhead Ave., 1st Floor  
San Bernardino, CA 92415-0182

Dear Mr. Squire:

Thank you for the opportunity to comment on the San Bernardino County Draft Environmental Impact Statement that analyzes effects to the updated General Plan, County Development Code and adoption of the 14 Community Plans. We appreciate the effort put forth in the planning documents and for incorporating our recommendations to date from 3 prior responses dated July 16, 2004, July 28, 2005 and November 7, 2005. We offer the following comments with the intent of assisting the County in completion of plans that will provide greater safety, economic vitality and general community resiliency for private residents as well as the National Forest System lands surrounding these communities. This letter summarizes most of our major concerns.

The San Bernardino National Forest’s Land Management Plan (revised in 2005) shares many of the same vision statements and issues as those identified in County’s proposed General Plan. Lands under our jurisdictions also share many of the same resources and management of land under each of our jurisdictions affects each other’s resources.

The SBNF manages 665,753 acres of land that provide open space and recreational opportunities for the 24 million residents of southern California. It is one of the most urban-influenced National Forests in the system with over 400 miles of urban interface and 147,313 acres of inholdings within our boundary. Significant portions of National Forest System (NFS) lands surround, are interspersed, or are adjacent to parcels under County jurisdiction.

One of the main challenges facing the SBNF is the rapidly increasing population of southern California and the resulting effects on NFS lands. Privately-owned open space is being rapidly converted to commercial and residential developments and supporting infrastructure (roads, utility corridors, landfills, etc.). This growth will continue with the expected increase by 500,000 people per year over the next 20 years for an additional 10 million people by 2026. Although there are numerous facilities such as utility corridors, communication sites, dams, diversions and highways already located on the SBNF, there will be an increased demand from private, semiprivate and public industry, corporations, associations, and private individuals for requests for additional use on these public lands.
Requiring communities, private land owners and developers to not rely on NFS land to provide infrastructure, secondary access, fuel reduction, fire protection, or as the only remaining open space needed for recreation are examples of actions that could greatly reduce future impacts to NFS land. We request that the County assess the effects of development on lands adjacent to NFS lands during long range and site specific planning efforts to ensure that developments are designed to minimize impacts to NFS lands.

Perhaps our biggest, immediate challenge is the threat of wildland fire to communities and providing for fire fighter safety during fire suppression. Housing and other development near NFS lands is increasing at a rapid rate without adequate provision for the development of a “defensible” space around them. The recent drought related die-off of forest and chaparral vegetation and forecasts of mega-fires further compounds the situation.

Additional management actions are needed to complement the fuel reduction occurring on NFS lands within the wildland urban interface. Development and growth patterns, building codes, materials and the clearing of fuels around homes must be addressed and enforced. We requested and continue to recommend that you take a hard look at the fire risk and the question of whether isolated, undeveloped lands within the SBNF boundary should be developed and whether we can adequately improve community defense through land ownership adjustment, vegetation clearing standards and setbacks from NFS lands. These actions cannot be successful without commitment by local governments, community organizations and citizens to work together to sustain a long term program that includes ecosystem restoration and maintenance and increasing the awareness of property owners of their responsibility to reduce fire hazards. Over time, we will collectively benefit from this approach by reducing the physical and emotional trauma of community members, reducing direct losses of property and loss of ability to generate income. As we succeed, we will regionally reduce down-stream effects and ripple effects on the economy as fewer claims are filed with federal emergency management agencies.

Another SBNF challenge is the long term protection of our natural, cultural, and historical resources. SBNF land management plays a regional role in protecting cultural and historical resources and supporting traditional uses. These NFS lands also serve as quality, low cost, sources of water for the urban population of southern California and as recharge areas for reservoirs and ground water basins. The increasing demands on limited water resources will continue to degrade our aquatic and riparian habitats and placing limits on development may be necessary to protect these resources.

The SBNF lies within a region recognized by Conservation International as one of the world’s 25 biodiversity “hotspots” (areas where exceptional concentrations of endemic species are undergoing exceptional loss of habitat). The SBNF manages habitat for long-term conservation and to promote recovery for 84 threatened, endangered or sensitive plants and 51 threatened, endangered or sensitive animals. These lands contain some of the only remaining refugia for species imperiled by loss of habitat off NFS lands. An additional issue is continued isolation of our wildlife populations due to habitat fragmentation. Maintaining large blocks of habitat that serve as wildlife corridors is an especially important consideration in the planning processes as these corridors must include non-NFS lands to be effective.
Carefully looking at the inherent limitations on future growth of our mountain communities by thoroughly analyzing issues such as water, sewer and transportation (circulation), will be necessary in future County decisions. Balancing the needs of people while protecting these resources can occur by educating and working closely with community members and local governments to find solutions to sustain these resources over the long term. The NFS lands are critical to the success of these efforts.

Our review of the existing maps and maps currently being completed, indicate the County has not had the opportunity to utilize the most recent biological and open space data available. We concur with the 2002 Executive Summary that the Natural Resources Overlay (Biotic Resources map) is inadequate for analysis in the DEIR and the General Plan update and that “the Natural Resources Overlay needs substantial work to compile missing information concerning a variety of biological resources.” Due to this situation, I have asked several of my staff to schedule time to share data for your update of the Biotic Resource Overlay, the Open Space Overlay and the Scenic Resources Overlay Maps.

I would also like to schedule time for my staff to discuss with you the recent proposal to include the former “holding zone” strategy to parcels currently zoned as low density “BV/RL-40 (Rural Living, 40 acre minimum parcel size) and other similar low density designations” in the Bear Valley Community Plan. As described in the September 21, 2006 Planning Staff Report, residential parcels zoned as low density in 1988 would require a General Plan amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis.” The planning report states the “current 2006 Community (plan) incorporates that same approach as expressed through various land use polices and circulation/infrastructure policies.” However staff is proposing to add language to the Community Plan to “better recognize the historical relationship of the holding zone concept to the 1988 plan.”

It is unclear if bringing forth the “holding zone” concept results in removal of the requirement for a General Plan amendment if all of the project design issues mentioned above could be met. The proposed wording in the Community Plan is also unclear as to which densities would be included under this policy as it is currently stated “Current residential land use zoning designations on large parcels with low development densities are reflected in such designations as BV/RL 40 and other “similar” low density designations. We assume this means BV/RL 20 but would it also include BV/RL10?

If the holding zone concept removed the requirement for a plan amendment prior to up-zoning, our review of the Rural Living 40, 20 and 10 minimum acre parcels under County jurisdiction within the Bear Valley Community Plan area indicate that at least 6 locations of RL/40, 13 locations of RL/20, and 6 locations of RL/10 with parcels adjacent to NFS lands could be affected by this policy. This includes approximately 2 square miles of RL/40, 3 square miles of RL20, and a square mile of RL/10 within or adjacent to the Forest within the Bear Valley Community Plan area.

As described above, we continue to be concerned regarding the fire risk and potential effects of development of isolated, undeveloped lands within the SBNF boundary. We expect that this
policy could reduce the analysis necessary to determine how these lands should be developed. Could General Plan Policy CO 1.2 requiring the “County to review Land Use Designations for unincorporated areas within one mile of national forest to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas” effectively mitigate this? Would maps with parcels affected by this policy eventually be recoded in yellow to show proposed areas of change?

Another issue affecting the SBNF is the amount of uncontrolled Off Highway Vehicle (OHV) use coming onto the Forest from adjacent private lands. As described in detail in the attached enclosure, unauthorized use from the Phelan area onto NFS lands in the Baldy Mesa area has been ongoing and continues to elevate. Due to effects from unauthorized use, the number of OHV enthusiasts in southern California and the increase in OHV vehicle sales in recent years, the southern California national forests continued the policy of only allowing motorized vehicle use on designated roads and trails in our revised land management plans. Lands managed under the Bureau of Land Management have a similar policy. It would be helpful if the County could propose something similar. If that is not possible we encourage the County to strictly enforce the newly adopted Off-Highway Vehicle Ordinance.

There are additional comments, recommendations and corrections directly related to the DEIR, General Plan, Development Code and 7 of the 14 Community Plans in the attached 34 page enclosure. The issue of water management is discussed in depth along with other items of concern. In addition, information regarding NFS lands has been updated.

Please contact Devere Kopp at 909/382-2831 to schedule the exchange of mapping data and to discuss this response. Please also notify her of other reviews or hearings (other than December 7) related to the County plan update. We look forward to working with your staff throughout the remainder of your planning process.

Sincerely,

JEANNE WADE EVANS
Forest Supervisor

Enclosures

cc: Richard M. Tjornburgh
San Bernardino National Forest
Response to
San Bernardino County Planning Documents
(DEIR, General Plan, Development Code and Community Plans)
October 20, 2006

For easier review, San Bernardino National Forest comments are organized by planning document name and then by table of contents. However, due to the amount and complexity of Water Section comments, these comments are retained together under the Draft Environmental Impact Report section. Please contact Devere Kopp, San Bernardino National Forest Planning staff at (909) 382-2831 or (909) 844-4130 for questions regarding these comments.

All County planning documents

Document name: All County Planning documents
Page number: All
Paragraph number: All
Specific item of comment: Consistency regarding name used for Forest Service
Forest Response: For consistency, we recommend a global replacement for the words USFS, US Forest Service, Forestry Service, and forest service to the title U.S. Forest Service.

Draft Environmental Impact Report

Chapter I. Executive Summary
C. Summary of environmental impacts to be resolved

Document name: DEIR
Page number: I-3
Paragraph number:
Specific item of comment: Impact BIO-4 Mitigation
Forest response: This is the first place that reference to a developing a wildlife corridor map. Other places refer to this as well. It is critical that the Open Space Map which has requirements for use in development proposals be updated prior to the approval of the EIR and Plan. There are some serious mapping errors and much has been learned since the development of this map in 1991.

The Forest Service would like to help the County improve the accuracy of the mapping to include corrections and new information. It is imperative that the County incorporate the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains. The Forest Service and the County
cooperated in the identification of these linkages and target species and the information in these reports needs to be used in this planning effort. If this new information is not used, it cannot be stated that implementation of the Plan will not be a significant impact.

**Document name:** DEIR  
**Page number:** 1-3  
**Paragraph number:**  
**Specific item of comment:** Impact BIO-4 Mitigation  
**Forest response:** Roadway reconstruction or improvement should also be identified as requiring wildlife crossings for area wildlife. Some of the County roads were built before there was knowledge of wildlife crossings and species requirements. Now there are opportunities as roads are improved or reconstructed to improve them for wildlife.

**Document name:** DEIR  
**Page number:** 1-4  
**Paragraph number:**  
**Specific item of comment:** Impact BIO-7  
**Forest response:** This is the first location in the DEIR that use of the Biotic Resources Overlay District is credited as being one of the means of protecting biological resources and mitigating for development. In order for this to be effective as mitigation, the map needs to be accurate. The current map is lacking information for many species and critical habitats that have been designated. We as well as CA. Dept. of Fish and Game and U.S. Fish and Wildlife Service have mapped locations of many of these species that are not currently reflected in your maps. We would like to work with the County prior to adoption of the EIR and Plan to ensure these maps are accurate and effective for planning and development.

**Document name:** DEIR  
**Page number:** 1-4  
**Paragraph number:**  
**Specific item of comment:** Impact BIO-10  
**Forest response:** See comment BIO-4 regarding reconstructed and improved roads needing crossings for wildlife as well as new construction.

**Document name:** DEIR  
**Page number:** 1-21  
**Paragraph number:**  
**Specific item of comment:** Impact BIO-1  
**Forest response:** Both the Biotic Resource Overlay and Open Space Mapping are shown as ways that impacts to wildlife will be mitigated. This is only true if the maps are accurate and up to date. There is much more known information on sensitive species and critically important habitats than is currently reflected on these maps. The Forest Service and Fish and Wildlife Service and South Coast Wildlands has high resolution GIS coverage of much of this information that can be made available to the County and incorporated into these layers before approval of the EIR and Plans.
Chapter III. Project Description

Aesthetics

Chapter IV. Project Analysis
Air Quality

Document name: DEIR
Page number: IV-36
Paragraph number: 
Specific item of comment: The map of the AQMD
Forest Response: We believe more of San Bernardino County is covered by SCAQMD than is represented on the map.

Biological Resources

Document name: DEIR
Page number: IV-44
Paragraph number: 3
Specific item of comment: Biological Resources Setting
Forest response: This states that the Open Space Plan Diagram identifies recognized wildlife corridors in the County. This mapping is out of date and the Forest Service would be happy to assist the County get the map up to date with the latest knowledge.

Document name: DEIR
Page number: IV-44
Paragraph number: 1
Specific item of comment: Impact Analysis, Impact BIO-1
Forest response: The Open Space Diagram is referred to as helping to minimize impacts. This will only be effective if the Diagram is updated with current knowledge. We can help with this task.

Document name: DEIR
Page number: IV-47
Paragraph number: 2 and 3
Specific item of comment: Impact BIO-4
Forest response: The Missing Linkages Reports for the San Bernardino and connections to other Mountain Ranges needs to be referenced. We can provide these reports and references. They are also on-line at http://www.sawildlands.org/. The mapping for linkages and wildlife corridors needs to be updated using this and other agency knowledge. We would be pleased to help improve the mapping.

In addition, corridors and open space areas listed in the Conservation section of all the Community Plans (such as BV/CO 1.7 on page 52 in the Bear Valley Plan) should also be checked against the Open Space Overlay map after it is updated. Changes to this section of the Community Plans should be completed as necessary.

Document name: DEIR
Page number: IV-48
Paragraph number: 2
Specific item of comment: Impact BIO-4
Forest response: The impact can only be fully mitigated with updated accurate maps.

Document name: DEIR
Page number: IV-50
Paragraph number: 5
Specific item of comment: Impact BIO-11
Forest response: Need to update the Open Space Map as impacts can only be mitigated if map is updated and accurate.

Document name: DEIR
Page number: IV-52
Paragraph number: 5
Specific item of comment: Impact BIO -16
Forest response: Need to mention Open Space map and update information included for animal movement corridors and linkages.

Document name: DEIR
Page number: IV-54
Paragraph number: 2
Specific item of comment: Mitigation BIO-3
Forest response: We totally support using the SB County Museum as the proper group to review biological assessments. We have found the Museum to have very credible biological staff and they have cooperated closely with the Forest Service on biological issues, surveys and management. The museum is in the best position to insure that the biological work is accurate. We applaud this decision.

Document name: DEIR
Page number: IV-54
Paragraph number: 6
Specific item of comment: Mitigation BIO-8
Forest response: It is good that the County is going to develop a wildlife corridor map, but the map needs to be updated with currently available information prior to adopting the Plan and EIR. NGOs (such as South Coast Wildlands) need to be shown as well as other agencies for coordination in the mapping effort. New developments as well as land use conversion should be required to use the wildlife corridor and refuge area maps in preparation of biological assessments.

Document name: DEIR
Page number: IV-55
Paragraph number: 1
Specific item of comment: Mitigation BIO-9
Forest response: Mitigation with wildlife crossings should also be required for reconstruction or improvement of existing roads and utility installations. Dispersal should also be included as reason to prevent fragmentation.
Hydrology, Flood hazards and Water Quality

Note that this section contains comments on water issues that apply to more than just the DEIR, they are retained here due to the complexity of the comments.

TMDL

General thoughts:

- Though TMDLs and nonpoint source pollution control were new ideas in 1998, the Regional Water Quality Control Board (RWQCB) is fully into this program and is implementing stricter controls on different types of development.
- The only reference to TMDLs that I found is in the Conservation Background Report, Surface Water Quality Section (pages 6-141 to 6-143). The section stated some of the listings on the 1998 303d list of water bodies with impaired beneficial uses. The list of impaired beneficial uses has a 2003 list and the current 2006 list is being discussed for adoption by the State Board.
- The General Plan should do a better job at mentioning all the TMDLs that are within the County and will become applicable in the coming years. The County has had representatives at the Big Bear nutrient, Lake Elsinore/Canyon Lake nutrient, Middle Santa Ana pathogen TMDL meetings. A more thorough discussion of the fiscal realities of each TMDL should be added, as these costs will likely be passed through to the water users and landowners of each watershed.
  - As an example, the LC/CL TMDL stakeholder group is conducting ~$800,000 per year in monitoring costs for the watershed. Big Bear and the Middle Santa Ana are in the ballpark of $300,000 per year.
- The report acknowledges the pathogen TMDLs (attributed to faulty subsurface sewage systems in mountain communities) for Mill Creek, Mountain Home Creek, and Mountain Home Creek East Fork, but does not list the pathogen TMDL for the Middle Santa Ana (currently adopted) and Lytle Creek.
  - When Mill Creek, Mountain Home Creek, Lytle Creek, and Canyon Lake pathogen TMDLs get done, any community or land owner with septic and leach fields will be scrutinized and the communities and the County are going to be dealing with similar costs of monitoring as shown above. Costs associated with changing from septic to sewer, if needed, are expensive as well.

Interaction of nonpoint source pollution from County land crossing Forest Service lands (communication and responsibility):

- Draft EIR, Page IV-54: Mitigation BIO-5: The County shall participate with Regional plans to improve water quality (could apply to TMDL) and habitat that are...
downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats (for situations where County land is above USFS land).

- In regards to the Mill Creek, Mountain Home Creek, and Lytle Creek pathogen TMDLs, there is County land upstream of Forest Service lands.
  - As the RWQCB writes these TMDLs, the San Bernardino National Forest is going to be involved with the County to provide information to the development.
  - From experience on other TMDLs, the RWQCB is going to want an inventory of pathogen producing land uses, and monitoring data showing the quantities of the pathogens leaving one land owner property and traveling onto another.
  - The Forest Service may take the position that to track cumulative effects, the changes in land use (boundaries) will become points of compliance along the course of the creeks.
  - In anticipation of this, the County and Community Plans should begin to be proactive in data collection and identification of issues. Communities should be made aware now so that they can begin to deal with the water quality limited streams and the financial implications of being involved in TMDLs.

- In regards to the Big Bear area nutrient, sediment, and metals TMDLs
  - An ongoing question for the 2009 update to the TMDL is the issue of flow-through of sediment from Forest Service lands in constructed channels and into the reservoir. In a pre-anthropogenic situation, much of the upland sediment would have been deposited on the flats without entering the reservoir.
  - This relates to comments in the General Plan about designing systems to allow flow and sediment to pass through new developments at the 100-year flood level. In cases where the Forest Service is the upstream land owner, there needs to be an understanding of where the material would have been deposited had the development not taken place.
    - This would require monitoring of sediment loading from development sites prior to construction.
    - It is especially important to gather storm flow information as the majority of erosion occurs during heavy rain event.
    - The Forest Service is concerned that the cumulative effects of development may not have been thoroughly evaluated relative to TMDLs and future water quality issues.

*Best Management Practices discussions, relating to TMDLs*

- Draft EIR, Page I-11: MR-2: mining activities that could affect water quality - all activities that could cause nonpoint source pollution need to acknowledge the existence of TMDLs and use appropriate Best Management Practices (BMPs) to mitigate any pollution from reaching the waters of the State.
- Draft EIR, Page I-15: UT-1/UT-2: As construction related activities are nonpoint source issues, then all construction should have an imposition of zero discharge (as in the Tahoe area). Once development is completed, then the development should have a storm water discharge plan to deal with the nonpoint stormwater flows that could
impact both the peak flow of channels but also the water quality of channels. And for those watersheds and channels where there are 303d listed streams, there should be more scrutiny still. New residents should be informed that they are moving into an area with watercourses that do not meet beneficial uses and that the clean up process could affect their utility costs.

**Groundwater**

- General Plan Page V-11: within 1-mile of the national forest lands; maintain sufficiently low-density development to protect visual and natural qualities of the area.
- General Plan, Conservation Element, Page V-12&13: Policy CO 2.4: Monitoring will be designed to see if mitigation (e.g. 1-mile buffer) is sufficient. Monitoring funded by project applicant to ensure compliance.
- Community Plans, Page 13: Introduction - Environment B - ensure no conflict in the interface between the national forest and adjacent land uses
  - The SBNF maintains that a groundwater well development too close to Forest Service lands has the potential to affect the natural qualities of the area from the reduction in water table levels and the potential loss of groundwater dependent ecosystems. The SBNF understands that Policy CO 2.4 was written as a biological resource mitigation. However, use of the policy in the protection of USFS overlying rights to groundwater will also protect groundwater dependent ecosystems.
  - Therefore, the SBNF maintains that any groundwater development within the 1-mile buffer adjacent to our lands should require the monitoring of the project applicant to protect our overlying groundwater rights and possibly, Federally reserved rights. The most appropriate method would be a monitoring well at the boundary of the SBNF lands, where water table data would be collected. Drawdown in the monitoring well would indicate over-pumping of the groundwater well. Such drawdown would indicate that the groundwater well pumpage would have to be reduced.
  - In addition, the SBNF has the same concerns over the impact of septic/leach field systems on the water quality of groundwater dependent ecosystems. Any septic/leach field system on lands adjacent to Forest Service lands within the 1-mile buffer should be required to have monitoring to show that increased nutrient loading is not affecting SBNF lands or resources.
    - There is a tie-in to the TMDL loading comments here as well.

**Associated groundwater comments**

Draft EIR, Page 1-9: HWQ-1: groundwater - development of groundwater adjacent to the Forest could cause drawdown of the groundwater table from beneath Forest lands, in violation of FS overlying rights or possibly federally reserved rights.
- The San Bernardino is interested in getting information on the groundwater basins that have been adjudicated. Researching on the web indicates that the adjudications
were settled after the passage of the McCarran Amendment (43 USC 666), indicating that the USFS would have been a party to the adjudication if the adjudication contained land over which the Forest Service held authority. The SBNF is interested in learning the spatial extent of the adjudicated basins and the results.
  o Draft EIR, IV-89: The SBNF wants the opportunity to deal with the Watermasters of the adjudicated basins when issues that could affect the Forest Service arise.

  • Draft EIR, Page I-9: HWQ-1: Mentions septic/leach fields needed to analyze alternative wastewater treatment to protect groundwater quality. The Forest would also care about the surface water quality unless the basin could be shown not to have a direct connection to surface water - unlikely since septic and leach fields are generally pretty shallow.
    o IV-91: mitigation HWQ-14: what is high-density housing? What factors would cause the alternative wastewater system to be used instead of septic/leach fields?

  • General Plan, Open Space Element, Page VI-22: Policy M/OS 2.3: Utilize setbacks, building coverage, the Planned Development concepts and other measures to protect the forest environment. [1989 General Plan Bear Valley Policies]
    o IV-191: no verbiage is given related to the protection of USFS and other federal overlying rights to groundwater. The USFS should tie in with the County so that in monitoring new development for adequate water supplies, the FS is informed when new groundwater development is from land adjacent to the FS.

  • Bear Valley Community Plan, Page 46: Policy BV/CI 4.1, 4.3, 4.6: Groundwater extractions that could affect Forest Service groundwater need to have FS involvement in the planning and implementation process.

  • Draft EIR, Page I-15: UT-1/UT-2: CLAWA/BBWD water suppliers having to deal with more full time residents - where to get water? The Forest Service is generally not allowing future water development of the Forest. Groundwater extraction adjacent to the Forest could cause a cone of depression that would lower the water table beneath the Forest affecting our overlying rights and Federally reserved rights. Any groundwater development should be required to install a monitoring well system to track the trends to the water table and make sure that groundwater development does not adversely impact the Forest Service resources.

  • Draft EIR, Page I-15: UT-1/UT-2: The idea of using imported waters to recharge groundwater basins should require quality monitoring for more than the drinking water constituents regulated by the EPA. Many surface waters that have been previously used domestically contain pharmaceutical byproducts. Recharging this water could adversely harm the wildlife (fish and amphibians) when the water discharges into a surface water system.
Draft EIR, Page IV-81: Mitigation HAZ-12: County to protect groundwater from contamination by following other plans, directives, and policies.

Draft EIR, Page IV-84+: Hydrology section
- IV-87: mentions the BMPs used in the Stormwater management program
- Under water quality, does not list pathogens even though Mill Creek, Mountain Home Creek, Lytle Creek, and the Middle Santa Ana have pathogen TMDLs in the works or in the future

Coordination on issues

Draft EIR, Page IV-47: Impact BIO-3:
“It is not determined whether the proposed mitigation measures to comply with state and federal water quality requirements will significantly affect downstream habitat and species beyond the County limits.”

- Within the Mountain Region, the County and the incorporated and unincorporated cities are encouraged to inform the USFS early and often through the development of new plan and projects. There should be a partnership between the agencies so that each can benefit from the skills and knowledge of the other. Bringing the USFS into the process early can benefit the process through information about the environment, species and possible issues.
- The Museum position should make contact with the Forest NEPA coordinator or other suitable point of contact.

Draft EIR, Page IV-47: What defines low-density development (Policy CO 1.2) and where is the 1-mile buffer measured from?
- General Plan Page V-11: within 1-mile of the national forest lands; maintain sufficiently low-density development to protect visual and natural qualities of the area

General Plan, Conservation Element, Page V-12&13: Policy CO 2.4: Monitoring will be designed to see if mitigation is sufficient. Monitoring funded by project applicant to ensure compliance.

Community Plans, Page 13: Introduction - Environment B - ensure no conflict in the interface between the national forest and adjacent land uses

Bear Valley Community Plan, Page 38, BV3.3, A. Local Water Service - “DWP is in the initial stages of preparing a new water master plan that will project water needs throughout their water system for the next 20 years. This plan is expected to be completed in fall 2005.”
- The SBNF is interested in acquiring and reviewing this plan.

Landsliding

In many of the flooding discussions, post-wildfire flooding is mentioned separately from mudflows. With the fire/flood cycle that has recently been observed, perhaps there
should be a blanket change to link wildfires more closely with the threat of landsliding and mudflows.

Draft EIR, Page I-7: GEO-1 & GEO-2: landsliding - for the most part there are not good landsliding maps for the Forest. Following the Grand Prix/Old fires, the Forest Service conducted a landslide assessment of the fire area. Sue Cannon of the USGS has a landsliding potential method that should be investigated. Soils become more prone to landsliding following a fire due to lack of vegetation on slopes.
- The County’s Geologic Hazard Overlay should be checked/amended if necessary, to take into account the lessons learned from the fire/flood frequency in the mountains. What does complying with the District require of new development? (see page IV-70)

Seven Oaks Dam Conservation Pool

Safety Background, Page 7-99 to 7-100: Seven Oaks Dam Conservation Pool - the document should elaborate that this future improvement is a proposal only, and should not be considered a done deal. The proposal has a number of requirements to go through, including working with the Army Corps to have an analysis done on the requirements needed to store water. Following that multi-year process, the lead agency will need to apply for a permit from the USFS because the land that the conservation pool would cover is USFS jurisdiction land. The application for a water right to use this 10,000 AF/year is under protest from the USFS because the required permits for use of this water have not been acquired.

The document is written as if the conservation pool and the water is a foregone conclusion that could be used as documentation for continued growth. The document needs to be updated to match the reality of the situation with multiple years worth of work to acquire permits and likely mitigation specific to the project to make up for the damaging environmental effects to having a conservation pool.

Land Use and Planning

Document name: DEIR
Page number: IV-103
Paragraph number: 3
Specific item of comment: “Other Habitat Conservation Plans within the boundaries of San Bernardino County include but are not limited to:”
Forest Response: “The Carbonate Habitat Management Strategy” should be added to this list of bullets. In addition, this strategy should also be added to all other County planning documents where habitat conservation plans within the County are listed.

For the record regarding the Carbonate Habitat Management Strategy, San Bernardino County is a signatory with USDA Forest Service, San Bernardino National Forest, USDI Bureau of Land Management, OMYA, Inc., Specialty Minerals Incorporated, Mitsubishi, California Native Plant Society, and Cushenbury Mine Trust on the Memorandum of Understanding of 2003. This agreement states that the signatories will implement the Carbonate Habitat Management Strategy dated April 2003, for the dual purpose of
conserving threatened and endangered carbonate plants and streamlining mining operations.

**Recreation**

**Document name:** DEIR  
**Page number:** IV - 130  
**Paragraph number:** 3  
**Comment:** Corrections recommended as follows.

The U.S. Department of Agriculture, Forest Service (USFS), and Department of Agriculture manages the majority of the geographic area within the Mountain Regions of the County totaling over 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains. The mission of the USFS is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. The National Forests are managed by the USFS for multiple uses including recreation, watershed protection, grazing, wildlife, and forest stand-management. Within the San Bernardino County portion of the San Bernardino National Forest lie the Cucamonga Wilderness, San Gorgonio Wilderness, and Bighorn Mountain Wilderness. The USFS has recently updated the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The USFS also administers the Pacific Crest Trail (PCT), which is a designated National Scenic Trail approximately 2,650 miles long running from Canada to Mexico. One hundred fifteen miles of the PCT trail runs through San Bernardino County.

**Forest Response:** Corrections recommended as follows.

b) **Mountain Region**  
Most of the Mountain Region of the County of San Bernardino is covered by the Angeles and San Bernardino National Forests. State parks include Cucamonga Wilderness Area, San Gorgonio Wilderness Area, Bighorn Mountains Wilderness Area, and Silverwood Lake State Recreation Area. Table IV-N-3 lists the regional and community parks in the Mountain Region of the County.

**Document name:** DEIR  
**Page number:** IV - 132  
**Paragraph number:** 8  
**Forest response:** The last paragraph on the page is mistakenly included under Valley Region rather than Mountain Region. And the Desert Region is mistakenly listed under the Mountain Region.

**Document name:** DEIR  
**Page number:** IV - 133  
**Paragraph number:** 8  
**Forest response:** Corrections recommended as follows.
While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, national forests, state parks and BLM land which the people of the County can use.

**Document name:** DEIR  
**Page number:** IV - 137  
**Paragraph number:** 1  
**Forest response:** Table IV-N-1. Regional and Community Parks in San Bernardino County is incorrect. “Grout Bay Park, Meadows Edge Park, Switzer Park Picnic Area and Thurman Flats Picnic Area” are not County community parks. They are San Bernardino National Forest picnic areas.

**Document name:** DEIR  
**Page number:** IV - 139  
**Paragraph number:** 1  
**Forest response:** Table IV-N-3. Regional Parks and Community Parks in the Mountains Region is also incorrect. “Grout Bay Park, Meadows Edge Park, Switzer Park Picnic Area and Thurman Flats Picnic Grounds are not County community parks. They are San Bernardino National Forest picnic areas.

**Transportation/Traffic**

**Document name:** DEIR  
**Page number:** IV-141  
**Paragraph number:** 5  
**Specific item of comment:** Roadway System  
**Forest Response:** In addition to the approximate 10,000 miles of roadway within San Bernardino County maintained by State, County, and local jurisdictions, the U.S. Forest Service operates and maintains an additional 914 miles that is open to the general public for pursuit of various recreational opportunities.

**Document name:** DEIR  
**Page number:** IV-171  
**Paragraph number:** 3 and 4  
**Specific item of comment:** "...no roadway segments under county jurisdiction in the Mountain Region are projected to operate at unsatisfactory levels of service", and "...with implementation of the General Plan circulation system, no roadways under County jurisdiction will remain deficient", referring to the Mountain Region. In paragraph 4 it states "...certain roadway segments of limited length in the Mountain Region may experience congestion and deficient levels of service in the future". "...These localized deficiencies may ultimately be resolved through certain operational solutions such as signalization, lane striping, access control, additional road widening, etc".

**Forest Response:** Since these are localized problems subject to localized solutions, it makes sense that these are dealt with using site specific Environmental Analyses when the problems occur in the future and don't seem to warrant comment at this time. If, the
problems identified in the County Planning process indicated the need to upgrade their transportation system to a completely higher standard road for a substantial distance, it would warrant comment at this time.

County General Plan

Circulation and Infrastructure Element

Document name: General Plan
Page number: III-27
Paragraph number:
Specific item of comment: Section III Circulation and Infrastructure Element
Forest response: Need a Policy that supports other land use plans and current southern California biological goals that states something like “Design new roads and retrofit existing roads as opportunities arise to maintain or improve high priority landscape linkages and wildlife corridors.”

Document name: General Plan
Page number: III-55
Paragraph number:
Specific item of comment: Goal D/Ci2., Policy D/Ci 2.1
Forest response: This policy regarding retaining natural channel bottom should be applied to all of the Regions, not just the Desert Region. This has become the industry standard for southern California where natural ecosystems have been so altered.

Conservation Element

Document name: General Plan
Page number: V-3
Paragraph number:
Specific item of comment: Biological Resources- Sensitive Plants and animals.
Forest response: Need a brief discussion of the Missing Linkages program and importance to Regional Planning. There are very good current plans for many linkages important to the SB Co. General Plan. See the South Coast Wildlands web site identified in this document for reports.

Document name: General Plan
Page number: V-5
Paragraph number: 2
Specific item of comment: Desert Region Habitat
Forest response: The writeup for the Desert Region Habitat is much more thorough than the others and contains many good policy type items that should also be utilized as policy for the other regions such as multi-species management program, creating buffers around designated sensitive areas, parks, preserves, riparian habitats etc.
Document name: General Plan
Page number: V-12
Paragraph number: 1
Specific item of comment: CO 2.2 Programs 1.
Forest response: The Biotic Resource Overlay District Map and Open Space Overlay Map must be updated and made complete to be effective for management.

Document name: General Plan
Page number: V-12
Paragraph number: 2
Specific item of comment: CO 2.2 Programs 2.
Forest response: Conditions of approval should incorporate mitigation measures to protect and preserve special habitats and habitats of species, not just identified species. Some mitigation measures apply to more than individual species like the corridors and linkages, riparian habitat etc.

Document name: General Plan
Page number: V-36
Paragraph number:
Specific item of comment: Policy M/CO1.6
Forest response: Guidelines for protection of spotted owls should be developed for protection of nest stands, not just nest trees. Protection of the nest tree will not protect the owl unless some surrounding trees in the stand are protected as well.

Open Space Element

Document name: General Plan
Page number: VI-2
Paragraph number:
Specific item of comment: 2. Input from Public Participation Program
Forest response: Based on our involvement, it seems like there should be a bullet regarding a number of respondents wanting more protection of Natural Areas.

Document name: General Plan
Page number: VI-4
Paragraph number: 1
Specific item of comment: Heading
Forest response: Should be Forest Service-Department of Agriculture.

Document name: General Plan
Page number: VI-4
Paragraph number: 2
Specific item of comment: Second Paragraph under Forest Service
Forest response: Should say much of the National Forest (instead of forest) is covered with dense chaparral.
Document name: General Plan
Page number: VI-4
Paragraph number: 1
Specific item of comment: The title of U.S. Forest Services
Forest response: Remove “s” at the end of Forest in title.

Document name: General Plan
Page number: VI-6
Paragraph number:
Specific item of comment: Goal OS 1.
Forest response: This goal should include mention of Natural Open Space and not just Open Space, which can include a lot of things besides natural open space which many of the residents of the County deem very important. Natural Open Space should be part of this goal.

Document name: General Plan
Page number: VI-7
Paragraph number:
Specific item of comment: OS 1.9 Programs
Forest response: Need a new Program which reads something like “Require new developments to consider density transfer and natural open space preservation as a means to help maintain and protect sensitive or special habitats and species.

Document name: General Plan
Page number: VI-19
Paragraph number: 1
Specific item of comment: Table OS-1 Types of Open Space Uses
Forest response: Protection of Natural Resources should include “high potential for protection and maintenance of biological diversity and productivity.”

Document name: General Plan
Page number: VI-21
Paragraph number:
Specific item of comment: Goal V/OS1.
Forest response: Protecting significant natural values should be made a part of this goal, not just quality of life.

Document name: General Plan
Page number: VI-21
Paragraph number:
Specific item of comment: M/OS 1.3
Forest response: Should read “Work with the USFS to designate trails for OHV use, not areas. The San Bernardino National Forest does not have OHV “open areas”; use is permitted on designated on roads and trails only.
Document name: M/OS 1.4
Page number: VI-21
Paragraph number:
Specific item of comment: M/OS 1.4
Forest response: Impassable vegetation around residential areas is not a good practice from a fire control standpoint. There must be other means.

Document name: General Plan
Page number: VI-22
Paragraph number:
Specific item of comment: Goal M/OS 2
Forest response: This goal should be for the entire County, not just the Mountain Region.

Document name: General Plan
Page number: VI-22
Paragraph number:
Specific item of comment: M/OS 2.2
Forest response: This should be for the entire County, not just the Mountain Region.

Document name: General Plan
Page number: VI-22
Paragraph number:
Specific item of comment: M/OS 2.5
Forest response: This should say a system of bicycle and hiking routes, not just bicycle.

Document name: General Plan
Page number: VI-24
Paragraph number:
Specific item of comment: Goal D/OS 2, Policies
Forest response: There should be a policy that outside of designated open areas, restrict OHV use to designated trails. This is the policy for National Forest System lands within the planning area. BLM also has gone to a system of designated areas and use only on designated trails only. These policies are needed due to current uses, the recent increase in purchases of off highway vehicles in California and predicted future trends.

Development Code

Chapter 82.13 Fire Safety Overlay District

Document name: County Development Code
Page number: 2-91
Paragraph number: 1
Specific item of comment: (6). Fuel modification areas. (A).
Forest response: The 100 foot fuel modification area is consistent with recent changes in the California Resources Code. As part of future design planning, fuel modification areas should exist on the development and not on National Forest System lands.

The Forest Service would like to have a fire manager comment and make recommendations on any fuel modification plans that are adjacent to Forest Service protected areas.

Document name: County Development Code
Page number: 2-92
Paragraph number:
Specific item of comment: Regarding Setback Requirements D. (I) that states “The fuel-modified area shall be maintained for either the entire slope, or 100 feet, or to the property line, whichever distance is less.”
Forest response: The need for proper fuel modification areas and proper clearances may come into conflict with distances to property lines. Developments should plan in the 100 foot fuel modification zone on the site at a minimum.

Chapter 84.09 Firewood Storage

Document name: Development Code
Page number: 4-39
Paragraph number:
Specific item of comment: 84.09.030 (b) Development Standards-Nonresidential Land Use zoning Districts regarding Firewood Business maximum storage
Forest Response: The code as written is 60 cord maximum. There is not enough capacity to deal with the firewood coming off private or public lands to deal with the surplus vegetation issues related to dead and dying trees and forest health. Further constraining the capacity is not in the interests of the citizens or government as it concentrates a fire safety hazard in less desirable areas. Suggest change the language to “no more than 60 cords unless mitigated or approved with a site specific plan approved by the county fire marshal office.”

Community Plans

All Community Plans

Document name: All Community Plans
Page number:
Paragraph number:
Specific item of comment: Safety section- Fire Stations table
Forest Response: The U. S Forest Service fire station information provided in these tables is variable across all community plans. Information in all 14 of the community plans was not reviewed by Forest personnel at this time, however updated information has been provided below for Bear Valley, Hilltop, Arrowhead, and Lucerne Valley Plans.
We will need to work with you to finalize this table in all the community plans for accuracy before plans are finalized. Please contact Devere Kopp at 909/ 844-4130 when you are ready to work with us to standardize these tables.

Situations to keep in mind as we are finalizing these tables:
- There are several other U.S. Forest Service stations such as Cottonwood, Waterman, Mill Creek, etc. that may need to be added to other community plan tables.
- We are assuming this is a listing of fire stations that occur with each planning area not necessarily ones that respond within each planning area.
- Would you like us to add U.S. Forest Service hand crews to the personnel cells where applicable?

The updated information is provided below.

**Document name:** Lucerne Valley  
**Page number:** 61  
**Paragraph number:** Table 7: Fire Stations  
**Specific item of comment:** USFS fire station info. needs to be added/corrected in table  
**Forest Response:** In Table 7, add a new row with the following information below the Lucerne Valley CDF Station row.

<table>
<thead>
<tr>
<th>Fire Stations</th>
<th>Fire District/ Agency</th>
<th>Area served</th>
<th>Equipment</th>
<th>Personnel (number and title)</th>
<th>EMP response capabilities</th>
<th>Availability of ambulance services</th>
<th>Nearest medical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>USFS Station 19 located with Lucerne Valley CDF Station</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, Type IV unit</td>
<td>5 daily, summer only</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Document name:** Bear Valley Community Plan  
**Page number:** 71  
**Paragraph number:** Table 7: Fire Stations  
**Specific item of comment:** USFS fire station info. needs to be added/corrected in table.  
**Forest Response:** Correct existing information in table 7 with that from table below.

<table>
<thead>
<tr>
<th>Fire Stations</th>
<th>Fire District/ Agency</th>
<th>Area served</th>
<th>Equipment</th>
<th>Personnel (number and title)</th>
<th>EMP response capabilities</th>
<th>Availability of ambulance services</th>
<th>Nearest medical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>USFS Station 16, Fawnskin</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, Type IV unit</td>
<td>5 daily, open all year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USFS</td>
<td>U.S.</td>
<td>U.S.</td>
<td>Type III</td>
<td>5 daily,</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 19 of 34  
SBNF response to SB County planning documents
<table>
<thead>
<tr>
<th>Fire Stations</th>
<th>Fire District/ Agency</th>
<th>Area served</th>
<th>Equipment</th>
<th>Personnel (number and title)</th>
<th>EMP response capabilities</th>
<th>Availability of ambulance services</th>
<th>Nearest medical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 17, Converse</td>
<td>Forest Service</td>
<td>Forest Service lands</td>
<td>engine, Type IV unit</td>
<td>summer only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USFS Station 15, Big Pine Flat</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, Type IV unit</td>
<td>5 daily, summer only</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Document name:** Arrowhead Community Plan  
**Page number:** 73  
**Paragraph number:** Table 7: Fire Stations  
**Specific item of comment:** USFS fire station info. needs to be added/corrected in table.  
**Forest Response:** Correct existing information in table 7 with that from table below.

<table>
<thead>
<tr>
<th>Fire Stations</th>
<th>Fire District/ Agency</th>
<th>Area served</th>
<th>Equipment</th>
<th>Personnel (number and title)</th>
<th>EMP response capabilities</th>
<th>Availability of ambulance services</th>
<th>Nearest medical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>USFS Station 13, Rock Camp</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, utility vehicles</td>
<td>5 daily, summer only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USFS Station 11, Sky Forest</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, Type IV unit</td>
<td>5 daily, open all year</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Document name:** Hilltop Community Plan  
**Page number:** 58  
**Paragraph number:** Table 7: Fire Stations  
**Specific item of comment:** USFS fire station info. needs to be added/corrected in table.  
**Forest Response:** Correct existing information in table 7 with that from table below.

<table>
<thead>
<tr>
<th>Fire Stations</th>
<th>Fire District/ Agency</th>
<th>Area served</th>
<th>Equipment</th>
<th>Personnel (number and title)</th>
<th>EMP response capabilities</th>
<th>Availability of ambulance services</th>
<th>Nearest medical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>USFS Station 12, Deer Lick</td>
<td>U.S. Forest Service</td>
<td>U.S. Forest Service lands</td>
<td>Type III engine, Type IV unit, and water tender 12</td>
<td>5 daily, summer only</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Table 7: Fire Station information in the Phelan/Pinyon Hills community plan has been reviewed and is correct unless we need to add engines that respond within this planning area.
Document name: All community plans
Page number:
Paragraph number:
Specific item of comment: Item A. Fires Services
Forest Response: All community plans need to be checked to review the need to include U.S. Forest Service in the paragraph starting with “Other agencies providing fire protection”.... We know it is needed in the Bear Valley Plan but all plans have not been reviewed at this time.

Document name: All Community Plans
Page number:
Paragraph number:
Specific item of comment: Conservation section
Forest Response: Corridors and open space areas listed in the Conservation section of all the Community Plans (such as BV/CO 1.7 on page 52 in the Bear Valley Plan) should also be checked against the Open Space Overlay Map after it is updated. Changes to this section of the Community Plans should be completed as necessary.

MOUNTAIN REGION

Bear Valley Community Plan

Document name: Bear Valley
Page number: 11
Paragraph number: 1
Specific item of comment: reference to 3 ski areas by 1952...
Forest Response: This should be updated to reflect the current number of operating ski areas in this planning area. This wording should be added. “Two ski areas remain in operation today, Bear Mountain and Snow Summit. The third ski area previously operated under special use permit on the San Bernardino National Forest, is no longer in operation and lands are currently being rehabilitated.”

Also in this same section, remove the word “do” in the 2nd to last sentence in paragraph 3. “The natural land features of the valley DO present constraints. Removal of this word still has the same meaning.

Document name: Bear Valley
Page number: 11
Paragraph number:
Specific item of comment: BV1.23 Description of the Study Area
Forest Response: Change title to Description of the Plan Area (to be consistent with other community plans)
Located within the Bear Valley plan area, Big Bear Lake is the largest high elevation lake in southern California with a surface area of approximately 10 square miles and 23 miles of shoreline. The lake is home to the largest population of wintering bald eagles in southern California, provides year round habitat for waterfowl and is a popular destination for wildlife viewing. Pinyon-Juniper woodland, conifer forest, subalpine forest, willow riparian forest and one of the 2 quaking aspen groves in southern California also support a variety of wildlife species including California spotted owl, southern western willow flycatcher and southern rubber boa. Deer, coyote, gray squirrel, and the occasional bobcat can also be seen here.

The planning area is also recognized as an ecological hotspot known for the high number of plant species known only from this area. Unique plant communities found on carbonate substrate, pebble plain, and montane meadow habitat support federally listed plant species found nowhere else in the world. Three locations within the plan area on National Forest system lands are designated as Critical Biological zones due to the unique plant and wildlife species present. The natural resources of the plan area are not only ecological assets but also are an essential element of the local recreation-based economy.

Document name: Bear Valley
Page number: 12
Paragraph number: 3, 2nd sentence
Specific item of comment: abundant wildlife and rich vegetation...
Forest Response: Recommend you replace “rich” with “diverse” vegetation

Document name: Bear Valley
Page number: 13
Paragraph number:
Specific item of comment: Community character section
Forest Response: Recommend an addition to this section:

F. Acknowledge services and infrastructure capacity and limitations of the area, particularly roads and water, to serve future development. This is listed in the Arrowhead plan and is highly applicable to this plan area also.

In addition, C. in this section could also be edited for clarity.
Document name: Bear Valley Community Plan
Page number: Page 12
Paragraph number: 1
Specific item of comment:
Forest Response: Last word in the paragraph “infrastructure” should have a “(c)” in front of it, then add “and (d) coordination with U.S. Forest Service”.

Document name: Bear Valley
Page number: 25
Paragraph number: last, last sentence
Specific item of comment: “This facility provides access to residential properties in the north western portion of the plan area.”
Forest Response: Correct to state: “This facility (or just say road here?) provides access to residential properties in the north eastern portion of the plan area.”

Document name: Bear Valley
Page number: 37
Paragraph number:
Specific item of comment: Add goal BV/CI 4.
Forest Response: Recommend addition of this goal and 2 policies that are present in the Arrowhead Plan and are also relevant to this planning area.

BV/CI 4. Protect the designed vehicular capacity of all mountain roads.
   BV/3.1 Cut and paste text from Lake Arrowhead plan LA/3.1 on page 38
   BV/3.2 Cut and paste text from Lake Arrowhead plan LA/3.3 on page 38

Document name: Bear Valley Community Plan
Page number: 28
Paragraph number:
Specific item of comment: FS roads description
Forest Response:
Description of FS roads 1, 2, 3 needs re-writing to the following.

1. Coxey Truck Trail (3N14) is a two-lane, unpaved road. This facility ........... rest is ok.

2. Delamar Mountain Road (3N12) is a two-lane, unpaved road that extends from Holcomb Valley Road (3N16) southwest to Coxey Truck Trail (3N14), approximately 2 miles northwest of the community of Fawnskin.

3. Holcomb Valley Road (3N16) is a two-lane, unpaved road that begins near the community of Green Valley Lake and continues generally northeast to Big Pine Flat and east through Holcomb Valley to SR 18 near the north end of Baldwin Lake.
Specific item of comment: 
Forest Response: Re-word paragraph near bottom of page that starts with “Holcomb Valley Road” to

“Polique Canyon Road (2N09) is a two-lane unpaved US Forest Service road that extends north and east from SR 38, north of Big Bear Lake, to Holcomb Valley Road (3N16).”

Document name: Bear Valley Community Plan
Page number: 31 (Chart)
Paragraph number:
Specific item of comment: Edit Chart

Document name: Bear Valley Community Plan
Page number: 35
Paragraph number:
Specific item of comment: BV/CI 1.15
Forest Response: This section discusses the extension of Fox Farm road, east to Sugarloaf. This route would potentially cross U.S. Forest Service land close to known endangered and sensitive plant species. We are currently working with the County on this proposal and will continue to do so.

Document name: Bear Valley Community Plan
Page number: 41
Paragraph number:
Specific item of comment: item B. Regional Water Supply.
Forest Response: 2nd sentence should read “Groundwater in,” not Groundwater is.

Document name: Bear Valley Community Plan
Page number: 46
Paragraph number:
Specific item of comment: Policy BV/CI 4.1, 4.3, 4.6
Forest Response: Groundwater extractions that could affect Forest Service groundwater need to have FS involvement in the planning and implementation process.

Document name: Bear Valley
Page number: 52
Paragraph number:
Specific item of comment: BV/CO 1.6
Forest Response: Due to recent GIS mapping updates completed for the SBNF revised land management plan we would like to work with County staff to provide the latest data layer. In addition we would like to discuss a potential edit of this policy.
Forest Response: last sentence should read “The Mountaintop Ranger District of the San Bernardino National Forest is responsible for maintaining......”.

Also, add a sentence at end of this paragraph. “The U.S. Forest Service is currently addressing the potential impacts of a “Rim of the World” trail system, which would potentially link several of the mountain communities through a system of access trails and trailheads.”

Forest Response: We are concerned regarding the second part of this policy regarding first right of refusal on lands available. This may not be reasonable, and in fact, may be illegal. We notice it is not in the Hilltop community plan and suggest you remove or reword it here. This type of wording is also found in the General Plan, page VI-21, M/OS 1.2. The intention needs to be made clear in all documents where it occurs.

We recommend this be reworded as the SBNF strongly recommends that communities, private landowners, and developers do not rely on National Forest System lands as the only open space needed for recreation. Instead this could be reworded to something like “Encourage private landowners to develop recreation opportunities for the public”.

Document name: Bear Valley Community Plan
Page number: 61
Paragraph number:
Specific item of comment: item BV/OS 3.2
Forest Response:  Is the U. S. Forest Service a member of this SB County Trails and Greenways Committee? If not, the paragraph should state “Support coordination between the community, U.S. Forest Service, and the ……….”

Document name: Bear Valley Community Plan
Page number: 62
Paragraph number:  
Specific item of comment: BV/OS 4.4
Forest Response: Delete “Gray’s Landing”; it has been closed for several years.

After “Duane R. Boyer Public Boat Launch,” add “(West launch ramp)”

Change “North Shore Public Boat Launch” to “Carol Morrison Public Boat Launch (East launch ramp)”

Eliminate “Juniper Point” as there is no longer a marina or launch ramp at that site.

Document name: Bear Valley Community Plan
Page number: 67
Paragraph number:  
Specific item of comment: item A. Fires Services
Forest Response: Paragraph starting with “Other agencies providing fire protection” should include US Forest Service.

Document name: Bear Valley Community Plan
Page number: 77
Paragraph number: 2
Specific item of comment:  
Forest Response: Change “while the local lakes provide opportunities for fishing and water sports” to “while Big Bear Lake provides opportunities for fishing and water sports” (since none of the other lakes do).

Document name: Bear Valley Community Plan
Page number: 77
Paragraph number:  
Specific item of comment: policy BV/ED 1.1
Forest Response: This policy is to encourage development and business activities that capitalize on the amenities and recreational activities contained within the plan area and surrounding National Forest.

We recommend this policy be rewritten so it does not imply that National Forest System lands should be developed for economic development. Our policy is to require communities, private land owners and developers to not rely on National Forest System lands to provide infrastructure or the only necessary open space needed for recreation.
Lytle Creek Community Plan

1. Item “LC6.1-A”: The 3rd sentence is incorrect. Recreation opportunities within the National Forest in the greater Lytle Creek area include only 1 public campground (USFS—Applewhite), and no organization camps.

2. Item “LC6.1-B”: (See the last sentence). There are no existing or potential land exchanges which will affect any Forest Service roads or trails in the Lytle Creek Planning Area.

3. Item “LC6.2 Goal OS 1.3”: I doubt that we will “establish” buffer zones of “impassable vegetation” between our recreation facilities and residential areas. (We only have Applewhite Picnic Area, and Applewhite Campground—there are no other developed recreation sites.) I think the community desire is to prevent forest visitors from walking from those two facilities onto private lands; and if so, that is the responsibility of the private land owner. Also, there is no such native vegetation that we could use that is “impassable”, and we do not use non-natives in our landscaping.

4. Item “LC8.2 Goal LC S1.2”: Any effective firebreak system would need to be located on National Forest lands. I think the “ensure the development of” needs to be changed to “examine the feasibility of developing”. Such a system on National Forest System lands would be very costly to create, and even more so to maintain.

5. Item “LC8.2 Goal LC S2.1”: The County owns Lytle Creek Road (located on NF lands under Special Use Permit), the only paved road in the canyon, and there is nothing they could really do to improve the quality of that road for emergency entry/exit purposes other than installing more turnouts. While Forest System roads north and east of the community could be used for emergency entry/exit, none are suitable for 2x4 sedan use given our current policy of once-a-year road maintenance, especially during the winter/wet months.

As an aside, in 1990-91 the Federal Highway Administration was looking for easily accessible areas in which to do a major winter project, and offered to pave 2NS6 (Sheep Creek Road) and the lower portion of Lone Pine Canyon Road (more commonly called Swarthout Canyon Road) for such emergency use. The community objected strongly, as they felt high-desert-LA area commuters would discover it as a good bypass for the increasing I-15 commuter congestion (which they would). FHWA dropped the offer.

6. Please consider adding a policy stating “The County should work with the U.S. Forest Service when opportunities arise to improve the natural appearance and function of Lytle Creek Wash while providing for protection of Lytle Creek Road.”
Hilltop Community Plan

Document name: Hilltop Community Plan
Page number: 32
Paragraph number: 
Specific item of comment: HT/CI 2
Forest response: Sentence should read “Establish and coordinate a system of pedestrian and bikeway trails connecting residential areas to recreational facilities, the National Forest, and downtown Running Springs.”

Document name: Hilltop Community Plan
Page number: 37
Paragraph number: paragraph immediately following Table 6.
Specific item of comment: 3rd, 4th, and 5th sentences regarding Snow Valley Ski Area wells and the effluent line and the water not being sold.
Forest response: Change the 3rd sentence to read “Snow Valley has several wells on site used for domestic water sources and snowmaking.”

Delete the sentence regarding the effluent line in this paragraph. The environmental analysis was never completed and the project was never implemented.

Delete the sentence regarding the water not being sold.

Document name: Hilltop Community Plan
Page number: 47
Paragraph number: 1
Specific item of comment: B. Trails
Forest response: Change 2nd sentence to read “The U.S. Forest Service, through its offices in San Bernardino and Sky Forest, is responsible for maintaining these facilities.”

Document name: Hilltop Community Plan
Page number: 52
Paragraph number: 
Specific item of comment: HT/OS 1.3
Forest response: Should read “Work with the U.S. Forest Service to designate trails for OHV use, not areas. The San Bernardino National Forest does not have OHV areas, use is only designated on roads and trails. This policy is stated as “open areas” throughout many of the community plans, please global replace this as necessary.

Document name: Hilltop Community Plan
Page number: 52
Paragraph number: 
Specific item of comment: HT/OS 2.1 B.
Forest response: Should read “Provide trail heads that link regional trails and those on National Forest System lands to those in recreational areas, residential areas, neighborhood trail systems and commercial nodes.” As a side note, providing trail head
access and linking residential areas to trails on National Forest system lands is needed however we do not wish to promote use onto the San Bernardino National Forest where trails are not in place to manage this use. Therefore, the rewording as stated above is needed.

Lake Arrowhead Community Plan

Document name: Lake Arrowhead
Page number: 25
Paragraph number:
Specific item of comment: LA/LU 2.6
Forest Response: Consider adding items A, B and C as listed on page 24 (BV/LU 2.6) in the Bear Valley community plan under this policy as they may have been inadvertently left off.

Document name: Lake Arrowhead
Page number: 44
Paragraph number: 3
Specific item of comment: Regional Water supply section
Forest Response: This paragraph needs editing to eliminate repeated sentences, etc.

Document name: Lake Arrowhead
Page number: 45
Paragraph number: both
Specific item of comment:
Forest Response: Several typos need correction in these paragraphs

Document name: Lake Arrowhead
Page number: 83
Paragraph number:
Specific item of comment: Appendix- historical sites and structures
Forest Response:

Item 15 under Other sites and Structures should be edited to say:
Redwood Grove, planted in 1930’s by U.S. Forest Service (beyond Baker’s Old Mill)

Item 1 under Historical Monuments should be edited to say:
Indian Rock Camp, State Highway 173, U.S. Forest Service

Pg 57: B, Trails. Similar edit as for the Hilltop Plan, noted on pg 47 above.

Pg 61: Goal LA/OS 1. Same comment as HT/OS 1 above.

Pg 62: LA/OS 3.2 and 3.5. Similar comment as HT/OS 3.2 and 3.5 above.
Pg 54: Goal LA/CO 2. Similar comment as HT/CO 2 above.

Pgs 67 and 73: LA8.1, A. Fire Services. Similar comment as HT 8.1 above.

Pg 76: LA8.2. Similar comment as HT8.2 above.

**Crest Forest Community Plan**

Pg 49: B, Trails. Similar edit as for the Hilltop Plan, noted on pg 47 above.

Pg 53: Goal CF/OS 1. Same comment as HT/OS 1 above.

Pg 53, 54: LA/OS 3.2 and 3.5. Similar comment as HT/OS 3.2 and 3.5 above.

Pg 48: Goal CF/CO 2. Similar comment as HT/CO 2 above. Goal is incorrectly labeled HT/CO 2.

Pgs 57: LA8.1, A. Fire Services. Similar comment as HT 8.1 above.

Pg 65: LA8.2. Similar comment as HT8.2 above.

**DESERT REGION**

**Phelan/Pinon Hills Community Plan**

**Document name:** Phelan/Pinon Hills Community Plan  
**Page number:** 47  
**Paragraph number:** 4  
**Specific item of comment:** This paragraph states that “the community has indicated a strong desire to increase recreation opportunities through the addition of hiking, biking and equestrian trails.” Also, “residents expressed a desire to continue working closely with the San Bernardino County Trails and Greenways Committee in their trail development effort.”

**Forest Response:** The Phelan area has many residents who own and operate OHVs, including motorcycles and ATVs. Future planning should include the needs of these residents. The Trails and Greenways Committee should also work closely with the Forest Service in considering OHV trail access from the community to the OHV trails on the national forest in the Baldy Mesa area.

**Document name:** Phelan/Pinon Hills Community Plan  
**Page number:** 47  
**Paragraph number:** 6  
**Specific item of comment:** C. Off-Highway Vehicle Use
Residents within the plan area expressed concerns with the use of Off-Highway-Vehicles within the plan area. They articulated a need for better enforcement to ensure appropriate use of off-highway-vehicles within designated areas.

Forest Response: There is a future planning need to propose, analyze and designate OHV routes in appropriate locations, since none currently exist. When there are no legal routes, some OHV users operate illegally on the existing roads and trails in the undeveloped areas, and continue to create new trails. County law enforcement, in the past, has rarely enforced restrictions on non street legal OHVs that enter the National Forest System lands on undesignated roads and trails, which has and continues to result in extensive damage to Forest lands.

Our most recent mapping effort to identify sources of unauthorized routes on to National Forest System lands from the Phelan area indicate that several miles of trails are present that direct users onto the Forest in the Baldy Mesa OHV area. These unauthorized, user-created routes are degrading the watershed and affecting habitat for the endangered desert tortoise and other Forest sensitive species and resources. In addition, dozer lines created to protect adjacent housing communities from the numerous wildfires in the Baldy Mesa area when rehabilitated are frequently accessed and degraded by unauthorized off route vehicle use. This results in non-native grass establishment that in turn fuels more fires. To remedy this situation, as in the previous comment, the Phelan community and the Forest Service need to work together to plan for establishment of appropriate OHV routes on to designated routes on National Forest System lands. Please see our discussion of other potential methods in the cover letter attached to this document.

Document name: Phelan/Pinon Hills
Page number: 52
Paragraph number:
Specific item of comment: PH/OS
Forest Response: Recommend addition of PH/OS 4.2 that states “The County shall strictly enforce Off-Road Vehicle laws.”
This policy is listed in the Lucerne Valley Plan.

Document name: Phelan/Pinon Hills
Page number: 52
Paragraph number:
Specific item of comment: PH/OS
Forest Response: Recommend addition of PH/OS 4.3 that states “Utilize signing to designate appropriate OHV trails and to notify where OHV use is prohibited.”
This policy is listed in the Lucerne Valley Plan.

Additional comments regarding Phelan/Pinon Hills
1. Plan states that wildlife species are a priority to protect and the plan seems to use large lot sizes as their protection measure. Lots are usually fenced and thus fragmented and not an effective way to preserve and maintain wildlife habitat.
2. Page 11 mistakenly lists white-tailed deer and spade-foot toad as species that occur in this plan area. Also, the wildlife species listed as occurring in each of the vegetation communities in the plan occur to varying degrees in each of the zones. The plan reads as if they are tied specifically to a specific habitat type and should be corrected.

3. The plan neglects to provide for parks and open space areas in the plan area and relies on U.S. Forest Service and BLM lands as their recreational areas. The communities should plan specific open space for recreation and not rely solely on federal lands.

4. In addition to the Mojave yucca and Joshua tree, we recommend preserving California juniper where it occurs because it is quickly disappearing in the high desert.

5. The plan states that Hwy 138 between Hwy 2 and I-15 is two laned and they did traffic analysis accordingly but NEPA has already been completed on 4 laning this portion of the highway.

6. The U.S. Forest Service land on the south of the plan area is part of the San Gabriel/San Bernardino connection and is an important wildlife linkage. Projects adjacent to this area should include this in any analysis to ensure this linkage is preserved. Refer to the Missing Linkages reports for this area.

7. If Lone Pine Road is ever widened, provisions to ensure wildlife permeability (crossing structures) should be included. This is south of the plan area but traffic congestion is addressed and the road is mentioned.

8. The Forest would consider support of a minimum parcel size for OHV tracks/facilities on private land as is described in the Lucerne Valley Community Plan (LV/LU 1.8 page 24). It is not specifically recommended here because unlike Lucerne Valley where this policy is proposed, Phelan does not have RC zoning. We encourage the County to consider this type of policy if it were feasible for the zoning within the Phelan plan area.

Lucerne Valley Community Plan

Document name: Lucerne Valley
Page number: 11
Paragraph number: 5, 2nd sentence
Specific item of comment: “the Ord Mountains on the north”
Forest Response: On our Forest map the Ord Mountains are located on the west (not the north) side of the Lucerne Planning area.

Document name: Lucerne Valley
Page number: 11
Paragraph number: 5
Specific item of comment: “once an Indian campground”
Forest Response: Recommend this is reworded or deleted.
Document name: Lucerne Valley
Page number: 15
Paragraph number: 3, 3rd sentence
Specific item of comment: The National Forest controls....
Forest Response: Please edit this line to say “The San Bernardino National Forest manages”....

Document name: Lucerne Valley
Page number: 46
Paragraph number:
Specific item of comment: LV/CO section
Forest Response: Recommend addition of policy LV/CO 1.4 that states “Support implementation of the Carbonate Habitat Management Strategy to the greatest extent practicable.”

Document name: Lucerne Valley
Page number: 67
Paragraph number: 2, 1st sentence
Specific item of comment: “The overarching goal in the Lake Arrowhead Community plan”....
Forest Response: Change Lake Arrowhead to Lucerne Valley

Background documents

Conservation

Document name: Conservation Background Report
Page number: 6-32
Paragraph number:
Specific item of comment: Wetlands
Forest Response: All 3 subsections of this section should be updated using data available from San Bernardino National Forest botanists and biologists.

Document name: Conservation background Report
Page number: 6-34
Paragraph number:
Specific item of comment: pebble or pavement plains
Forest Response: Delete reference to “pavement plains” throughout all documents. This habitat is now commonly referred to as “pebble plain.” All 3 subsections of this section should be updated using data available from San Bernardino National Forest botanists and biologists.
There are species that have had status changes and name changes that should be updated.
The County agrees with these descriptive statements. Immediately subsequent to the first paragraph on Page VI-4 of the General Plan, the following paragraphs have been added:

The San Bernardino National Forest manages 665,753 acres of land that provide open space and recreational opportunities for the 24 million residents of southern California. It is one of the most urban-influenced National Forests in the system with over 400 miles of urban interface and 147,313 acres of inholdings within its boundary. Significant portions of National Forest System (NFS) lands surround, are interspersed, or are adjacent to parcels under County jurisdiction.

One of the main challenges facing the San Bernardino National Forest is the rapidly increasing population of southern California and the resulting effects on NFS lands. Privately-owned open space is being rapidly converted to commercial and residential developments and supporting infrastructure (roads, utility corridors, landfills, etc.). This growth will continue with the expected increase by 500,000 people per year of the next 20 years for an additional 10 million people by 2026. Although there are numerous facilities such as utility corridors, communication sites, dams, diversions and highways already located on the San Bernardino National Forest, there will be an increased demand from private, semiprivate and public industry, corporations, associations, and private individuals for requests for additional use on these public lands.

The second paragraph on Page VI-4 of the General Plan has been revised as follows:

The San Bernardino National Forest covers over 671,686 acres, of which 456,928.12 acres are located within San Bernardino County. The forest ranges in elevation from 2,000 feet on the valley floor to 11,502 feet at the top of Mount San Gorgonio. It contains many different habitats and over 440 species of wildlife (USFS, 2004). The Angeles National Forest covers over 650,000 acres, of which 10,352.42 acres are located within San Bernardino County. The forest elevations range from 1,200 to 10,064 feet. Much of the forest is covered with dense chaparral, which changes to pine and fir-covered slopes at higher elevations (USFS, 2004).

The County agrees with this comment. General Plan Policies LU 11.3, 11.4 and 11.7 address County-U.S. Forest Service inter-agency cooperation and coordination. Policy LU 11.3 specifically focuses on the County’s development policy of eliminating conflicts between public and private lands. Mountain Region Policies 1.8, 1.11 and 1.15 provide additional guidance for development of private land within the National Forest.

However, in order to provide better attention to this specific issue, a new policy M/LU 1.20 has been added to the General Plan to read as follows:

Closely review development projects on private land adjacent to National Forest lands to ensure that development projects are capable of meeting all development requirements within the project boundaries or other non-federal land. Provide opportunities for the U.S. Forest Service to consult with the County on development of private land that may have an adverse effect on adjoining National Forest land.
RESPONSE F.3-3

The County agrees that wildland fires pose an immediate challenge. The County has worked very closely with the U.S. Forest Service over the last two decades to provide adequate fire safety measures in its emergency response plans and in community development. In particular, County Fire Department officials, County Planning staff and County administrators have worked on several aggressive programs to develop a more holistic and comprehensive approach to integrated fire safety planning following the Old Fire and Grand Prix Fire. The County worked with the previous Forest Supervisor, Gene Zimmerman and his representatives such as Alex Dunn and Forest Public Information Officer Ruth Wenstrom on Mr. Zimmerman’s Mountain Summit Initiative and development of fire prevention strategies that consider the National Forest and the intermix of established communities in a cohesive, coordinated manner. The County is committed to working with the U.S. Forest Service and other federal and state agencies such as the Natural Resource Conservation Service and the California Department of Forestry in full partnership in addressing community and National Forest protection from wildland fires. One only need to look at the origins of some of the major catastrophic wildland fires on the San Bernardino National Forest to see that the communities are not the major threat factor. Arson-caused fires or National Forest recreational users are clearly the primary causes of these catastrophic incidents. These catastrophic fires typically race across National Forest lands into the mountain communities. Coordinated vegetation treatment for fuels reduction, strategically located fuel breaks and safety areas mutually benefit local communities and National Forest lands. The County believes, and it appeared that the previous Forest Supervisor shared the opinion, that an integrated strategic approach to fire/fuel management planning holds the best hope for the future. We hope that the institutional memory from the previous Forest Service administration has not been lost with their departure.

RESPONSE F.3-4

The County, as Lead Agency wants to assure the commenter that the County has been very aggressive in its enforcement of development requirements through its development review process and its building permits issuance. Following the Old and Grand Prix Fires, the County established a taskforce to review and update its Fire Safety Overlay to improve fire safe development. The Forest Service participated in that process and the County felt that the Forest Service was satisfied with the results of that effort based on comments made at that time. The comment in this letter appears to overlook the recent coordination with the Forest Service on this program. The revisions to the Fire Safety Overlay were incorporated into the County Development Code. One of the significant improvements to the overlay was detailed fuel treatment analysis that focuses on fuel management plans that must be approved by the County Fire Department. This was specifically intended to address defensible space principles into project design. Other refinements, regarding access, construction materials and building design were all intended to contribute to improved community fire safety. Through development application processing, project notices and circulation of environmental review documents, such as EIRs and Initial Studies/Mitigated Negative Declarations, the Forest Service is invited to review and comment on the effectiveness of the proposed measures. General Plan Policy LU 11.4 is specifically intended to encourage land exchanges between private landowners of isolated inholdings to provide a more efficient and effective land ownership pattern.

RESPONSE F.3-5

The County agrees with this comment. The Mountain Region Policies within the General Plan (refer to pages II-41 through II-44) and numerous provisions of the Development Code, including but not limited to the Biologic Resource Overlay, Open Space Overlay, Fire Safety Overlay, Geologic Hazards Overlay, the Landscaping Standards and Plant Protection Standards implement the General Plan by providing limitations on development to achieve the General Plan goals.
**RESPONSE F.3-6**
The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Valley, Mountain, and Desert Regions has been identified as an important landscape linkage in southern California as it supports and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1).

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-7**
The County agrees that careful evaluation of future growth in the mountain communities is essential. Infrastructure issues such as water, sewer and transportation (circulation), have been recognized in various policies of the General Plan and Community Plans, specifically in the Circulation/Infrastructure Element. The County also appreciates the role of National Forest System lands as a critical component to sustainable growth in the Mountain Region.

**RESPONSE F.3-8**
The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. While the current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence, these data serve as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biologic and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan’s Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-9**
The County wishes to clarify the issue of “holding zones.” The background explanation that was included in the Bear Valley Community Plan (BVCP) at the September 21, 2006 Planning Commission hearing regarding the holding zone concept of the 1988 BVCP is provided for historical context of current land use designations that have been carried forward as part of the General Plan Update. It does not interject a new policy into the community plan and it has no application outside of the BVCP. The inclusion of this information does not provide exceptions to the policies contained in the 2006 BVCP; the discussion is included to provide a context bridge to the 1988 Plan. The 2006 Community Plan is intended to establish clearly defined community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. With regards to Policy BV/LU 1.1, the language does not mean that future Land Use Zoning District changes cannot be approved; on the
contrary, the intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan. The carry over of the “holding zone” concept was a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing and then considered by the County Board of Supervisors.

RESPONSE F.3-10
The County agrees with this comment. Policy CO 1.2, along with the myriad of land use policies and Development Code requirements cited in Response F.3-5 could effectively mitigate adverse effects of a zoning change.

No further changes are proposed as a result of this comment.

RESPONSE F.3-11
The County agrees with this comment. The County recently adopted a new ordinance intended to provide better regulation of off-highway vehicles. Ordinance 3973 relating to Off-Highway Vehicles was adopted by the Board of Supervisors on May 2, 2006 with an effective date of July 1, 2006. The California Vehicle Code regulates vehicles on state and local roads and highways. The County’s ordinance regulates use on private land. There is no comparable OHV route system to the National Forest or the Public Domain lands administered by the BLM on private lands under County jurisdiction.

RESPONSE F.3-12
The County agrees with this clarification, and has endeavored to replace various references to this agency with the title: U.S. Forest Service.

RESPONSE F.3-13
The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Valley, Mountain, and Desert Regions have been identified as important landscape linkages in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). In order to better define and manage these movement and dispersal corridors and maintain optimal connectivity between habitats, the General Plan’s implementation will be modeled after the work is completed by the Missing Linkages Project and South Coast Wildlands who designed linkages between habitats that would accommodate a diversity of movement needs and ecological requirements for a variety of local species (Penrod 2005). As a result, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific portions of the Valley, Mountain, and Desert Regions will
require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors for protected wildlife/plant species.

Additionally, the current Biological Resource Overlay Maps only include discrete local, state, and federally protected species occurrences. This data serves as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biologic and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-14**

The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1).

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-15**

See Response to Comment F.3-8.

**RESPONSE F.3-16**

The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. However, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitates the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1).

See Categorical Discussion 7 for further information regarding Biological Resources.
RESPONSE F.3-17
See Response to Comment F.3-8.

RESPONSES F.3-18, F.3-19
The County agrees with this comment. The State Department of Water Resources and various court decisions regulate water resources in the State of California. The State Water Quality Control Board and its local regional boards regulate water quality. Policy BIO-2 was added in the Draft EIR to mitigate potential indirect affects on water-dependent wildlife resources. In response to a comment received from the Santa Ana Regional Water Quality Control Board, the measure has been revised and moved to the water section of the Conservation Element. This revision removes the ambiguity of the original language and locates the measure in the appropriate topical section of the document.

The County agrees that the protection of natural water sources is an important issue for biological protections. This mitigation measure however is inappropriately placed as it is targeting a water quality issue and will be relocated and redrafted.

Mitigation measure BIO-4 has been deleted from Section IV-D of the EIR, relocated to Section IV-H and reworded as follows.

Mitigation HWQ-16
The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.

RESPONSE F.3-20
The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. To that end, the County agrees that an emphasis needs to be placed on protection of biological diversity and preservation of natural areas. As a result, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.” Thus, maintaining biological diversity, significant natural areas, and ecosystems are included as goals of the Plan.

RESPONSE F.3-21
The County acknowledges that it has no authority to designate development policies on National Forest Transportation System Roads.

RESPONSE F.3-22
The County acknowledges this comment. According to the SCAQMD’s draft 2007 Air Quality Management Plan (AQMP) text at page 1-2 and Figure 1-1 at page 1-3, the SCAQMD only has jurisdiction over the non-desert portions of San Bernardino County. The predominant [desert] portion of San Bernardino County is under the jurisdiction of Mojave Desert Air Quality Management District.

Figure IV-C-1 as presented in the Draft EIR is accurate.

RESPONSES F.3-23, F.3-24
The County appreciates the assistance of the Forest Service in updating base maps as appropriate.
**RESPONSE F.3-25**

The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions.

In order to better define and manage wildlife movement and dispersal corridors and maintain optimal connectivity between habitats, the General Plan’s implementation will be modeled after the work completed by the Missing Linkages Project and South Coast Wildlands who designed linkages between habitats that would accommodate a diversity of movement needs and ecological requirements for a variety of local species (Penrod 2005). As a result, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. The County appreciates the USFS offer to assist in further mapping of wildlife movement corridors as an additional means to highlight this issue. Although additional mapping will not occur as part of this General Plan update, future programs to plot these corridors can certainly be considered.

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-26**

It has been suggested that the Biological Resource and Open Space Overlay Maps do not contain adequate and/or current information on local, state, and federally protected species occurrence and their habitats.

While the current Biological Resource Overlay Maps only include discrete local, state, and federally protected species occurrence, these data serve as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important Biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

**RESPONSE F.3-27**

General Plan implementation has the potential to disturb or degrade the local quality or quantity of potentially Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features within the Valley, Mountain, and Desert Regions. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, or compensate for adverse impacts to the CWA / CDFG jurisdictional features. Nonetheless, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals impacts to the CWA / CDFG jurisdictional features.
Mitigation measure BIO-4 has been deleted from Section IV-D of the Draft EIR, relocated to Section IV-H and redrafted as follows.

**Mitigation HWQ-16**
The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.

**RESPONSE F.3-28**
The open space map in the EIR is provided as a generalization of open space and open space issues in the programmatic analysis provided in the EIR. For actual implementation of the policies, the Open Space Overlay will be utilized. It is at a more useable scale and detail for a basis of assigning the scope of analysis for subsequent development. The County regularly updates these overlay maps and welcomes input for further refinement.

**RESPONSE F.3-29**
The Valley, Mountain, and Desert Regions have been identified as important landscape linkages in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connects large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). In order to better define and manage these movement and dispersal corridors and maintain optimal connectivity between habitats, the General Plan’s implementation will be modeled after the work completed by the Missing Linkages Project and South Coast Wildlands who designed linkages between habitats that would accommodate a diversity of movement needs and ecological requirements for a variety of local species (Penrod 2005). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors for protected wildlife/plant species.

Additionally, the current Biological Resource Overlay Maps only include discrete local, state, and federally protected species occurrences. This data serves as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biologic and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.
RESPONSE F.3-30
The County acknowledges this comment regarding the recognition of the San Bernardino County Museum’s expertise. The County will continue to use its museum and staff for support in a broad spectrum of environmental issues, for which the museum is the local repository or expert.

RESPONSE F.3-31
See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE F.3-32
Mitigation Measure BIO-6 as currently drafted requires mitigation with wildlife crossings for new roadways and roadway expansions, and by this language will apply to major projects on existing roadways. The County does not agree that such mitigation should be required for all reconstruction or improvement projects, as many reconstruction or improvement projects are modest in scope. The County will consult with the Service, however, regarding the implementation and interpretation of Mitigation Measure BIO-9 to further evaluate what types of road projects should be considered an "expansion" that would trigger this mitigation requirement.

RESPONSE F.3-33
The County agrees that maps for biotic resources and open space should be updated as noted in Mitigation BIO-3 of Categorical Response 7, which states, “The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on.” Although the current Biological Resource Overlay Maps only include discrete local, state, and federally protected species occurrence, these data serve as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important Biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE F.3-34
Bullets 1 – 4 are general comments. However, San Bernardino County Flood Control District implements the NPDES program for the County. The San Bernardino County Flood Control District is very active in the TMDL development process. The specific TMDL issues will be addressed in detail as part of the MS4 Permit, which is being implemented by the San Bernardino County Flood Control District. The County is committed to cooperative relationships with resource agencies for the protection of water and biological resources. The County proposes policies and programs to protect these resources and looks forward to discussions on the protection of these resources.

RESPONSE F.3-35
The County agrees with the Forest Service that it is the County’s responsibility to participate in the plans developed by the Regional Water Quality Control Boards (RWQCB) to improve water quality, including
the establishment of TMDLs for impaired waters in the County. This is already occurring though the NPDES Permit and the Water Quality Management Plan (WQMP) development process. The County is committed to cooperative relationships with resource agencies for the protection of water and biological resources. The County proposes policies and programs to protect these resources and looks forward to discussions on the protection of these resources.

The County will also help to protect habitats that are upstream and downstream of land controlled by the Forest Service to prevent degradation of the waters in these areas. The County is currently coordinating with the three RWQCB (Santa Ana Region, Lahontan Region and the Colorado River Region) because three different watersheds cross the County to minimize the degradation of water quality in these areas. The policies and programs included in the update to the General Plan and through the NPDES Permit and the Water Quality Management Plan (WQMP) development process help protect area water quality. The County is committed to cooperative relationships with resource agencies for the protection of water and biological resources.

**RESPONSE F.3-36**

The County understands that certain TMDLs for pathogens have been established for Mill Creek, Mountain Home Creek, and Lytle Creek that are upstream of Forest Service Lands. This implementation element is already part of the MS4 Permit. Public Education is already occurring through multiple County departments. The current MS4 Permit that governs development adjacent to these creeks includes requirements that information on this development be provided to the County during its review of developments plans in these areas. The Permit requires that an estimate of the pathogens being produced by these land uses and the quantities of the pathogens leaving these projects via any of the above creeks be provided to the County. This information will be made available to the Forest Service as requested for use in tracking cumulative effects on TMDLs in these creeks on Forest Service land. A number of County departments also have public education programs that help to guide development adjacent to creeks to reduce the amount of pathogens that will ultimately make their way to a stream course.

**RESPONSE F.3-37**

The County understands that certain nutrient, sediment and metal TMDLs are generated by development in the Big Bear area. It is also understood that sediment from Forest Service lands flow-through constructed channels into a reservoir below these lands rather than being deposited along stream courses had they not been channelized. Sediment transport and hydromodification are already being considered through the WQMP process. The requirements for hydromodification are already being implemented through the WQMP process. The County will suggest to the RWQCB that hydromodification be considered when they consider updating TMDLs for creeks and streams leading from the Big Bear area that have channelized.

**RESPONSE F.3-38**

The County agrees with the Forest Service that mining activities can affect water quality and that all activities that create non-point source pollution need to acknowledge the existence of TMDLs and use appropriate Best Management Practices (BMPs) to mitigate any pollution from reaching waters of the State. The update to the County’s Development Code requires the use of BMPs to reduce non-point source pollutants from impacting area water quality. Also, the State Water Quality Control Board, through the Industrial Activities Permit process, regulates mining activities.

**RESPONSE F.3-39**

The County shares the concern of the Forest Service about the impacts of new development on storm water discharge. All new projects that will create 1-acre or more of soil disturbance are required to
prepare and implement a Storm Water Pollution Prevention Plan in conformance with Section C, Provision 9 of the General Construction Permit (CAS 000002, Order No. 99-08-DWQ).

Implementation of a Storm Water Pollution Prevention Plan will reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction. Furthermore the Storm Water Pollution Prevention Plan will be modified and amended to reflect any amendments to the Permits or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The Storm Water Pollution Prevention Plan will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. Implementation of the Storm Water Pollution Prevention Plan also requires the development of a maintenance schedule for Best Management Practices (BMPs) installed during construction to reduce or eliminate pollutants after construction is complete (i.e., post-construction BMPs). Therefore, compliance with the General Construction Permit and implementation of a construction site Storm Water Pollution Prevention Plan will reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during and after construction.

RESPONSES F.3-40, F.3-41
General Plan Policy CO 1.2 does not establish a “buffer zone” one mile in width around the National Forest. The policy clearly states that some (emphasis added) natural resources require a buffer between the resource and the development. The existing County Open Space Map (proposed to be codified as part of the Development Code Overlay System) established buffers. Those are limited to areas along the Joshua Tree National Park, Death Valley National Park and the Afton Canyon area on the Mojave River. Individual development applications will be evaluated on a case-by-case basis for projects within one mile of designated scenic areas, National Forest boundaries and so on to determine if there are unique natural resources that warrant special mitigation. This will normally be carried out through the CEQA review process and notice of affected agencies regarding development applications. The County has committed to technical updates of its Biologic and Open Space Overlays to establish an improved database of sensitive resources and include recent wildlife corridor information from the South Coast Wildlands Corridor Project. This process will provide a forum to acknowledge additional special resources and focus special review pursuant to this policy by identifying strategic locations of unique resources such as drainages that serve as wildlife corridors.

RESPONSE F.3-42
The County shares the Forest Service’s concern about the possibility of the development of groundwater adjacent to Forest Service lands and how this develop could potentially cause drawdown of the groundwater table. The County is committed to a cooperative relationship with all resource agencies for the protection of water resources controlled by the Forest Service as well as other agencies; however, the County has no role in the management of groundwater through the California court adjudication process.

Under this court-directed process, the courts study available data to arrive at a distribution of the groundwater this is available each year, usually based on the California law of overlying use and appropriation. Unlike overlying and non-overlying rights to groundwater, such decisions guarantee to each party a proportionate share of the groundwater that is available each year. There are 19 court adjudications for groundwater basins in California, mostly in Southern California. In these adjudications, the court judgment limits the amount of groundwater that can be extracted by all parties based on a court-determined safe yield of the basin. The court also defines the basin boundaries. The original court decisions provided watermasters with the authority to regulate extraction of the quantity of groundwater; however, they omitted authority to regulate extraction to protect water quality or to prevent the spread of
contaminants in the groundwater. Because water quantity and water quality are inseparable, watermasters are recognizing that they must also manage groundwater quality.

The County has proposed policies and programs to protect groundwater resources in the update to the General Plan and looks forward to discussions with the Forest Service on the protection of these resources.

RESPONSE F.3-43
The County shares the concern of the Forest Service over the use of septic tanks and leach fields on surface and groundwater quality. The County’s current practice is to require that alternative wastewater treatment systems including package treatment plants be studied when developers propose to use septic tanks and leach fields for this purpose. The County also discourages their use when the pollution of surface or groundwater may occur.

RESPONSE F.3-44
The County wishes to clarify the definition of “high-density” in this context. The County considers high-density housing to be at four dwelling units per acre and higher. Standard factors of soil type, total number of dwelling units proposed by the project, project location and whether it is in area designated by a Regional Water Quality Control Board as prohibited from on-site disposal.

The threshold density standards for uses of septic systems versus wastewater treatment facilities (package plants or tie-ins to a regional system) are based on Regional Water Quality Control Board standards. Generally, 2 dwelling units per acre are maximum however this is location variable dependent on soils types, percolation rates, and regional water quality attainment requirements set by the Water Board. Please contact the Water Board for more detailed information.

RESPONSE F.3-45
The County will provide notice of development applications and CEQA documents for County projects that may affect National Forest lands.

RESPONSE F.3-46
The County is likewise concerned about groundwater protection. At the Community Plan level and County wide near National Forest lands, notice of discretionary projects is made available and the County encourages Forest Service input and comment.

RESPONSE F.3-47
The County shares the concern of the Forest Service about groundwater extraction adjacent to the San Bernardino National Forest causing a lowering of the water table beneath the Forest. The impact of groundwater extractions to serve new development is considered by the County during the approval process for new projects based on information included in a hydrology report prepared on the project. On-site testing and information from the water district that controls the groundwater basin that would be used to serve the project would obtain the information in this report. A monitoring well system to track the trends to the water table would normally not be required unless there was a concern about the supply of groundwater that would serve the specific project. The County proposes policies and programs to protect water resources and looks forward to discussions on the protection of these resources.

RESPONSE F.3-48
The use of imported water to recharge groundwater basins is a common practice in southern California. Many cities and water districts use water provided by the Metropolitan Water District of Southern California and the State Water Project water for this purpose. The sources are generally natural resources
and have never been used before. Imported water used to recharge these basins is tested using state and federal standards for water quality before it is allowed to be used for this purpose and the county has no jurisdiction over these activities. Should “recycled” water, rather than “imported” water, ever be used to recharge a groundwater basin, it would have to be treated to remove impurities and then pass stringent state and federal water quality standards before being used for groundwater recharge purposes. The County is committed to cooperative relationships with resource agencies for the protection of water and biological resources. The County proposes policies and programs that are within its control to protect these resources and looks forward to continued discussions on the protection of water resources.

RESPONSE F.3-49
The County has no control over groundwater basins. Those basins are controlled by a number of water districts located through the County. The County is also working with the U.S Environmental Protection Agency, the California Department of Health Services, and three Regional Water Quality Control Boards with oversight over areas of the County to protect area groundwater. As required by Mitigation HAZ-12, the County will protect groundwater quality from contamination by following the plans, directives and policies of the above agencies.

RESPONSE F.3-50
The County understands that pathogen TMDL for Mill Creek, Mountain Home Creek, Lytle Creek, and the Middle Santa Ana River are or have been developed for these creeks and river. However, this information was not available at the time of the preparation of the project EIR. The San Bernardino County Flood Control District currently addresses these TMDLs in other countywide programs including the NPDES program managed and implemented. The County is committed to implementing requirements, or advising applicants of their obligations regarding approved TMDLs.

RESPONSE F.3-51
The County is committed to coordinate with the State and federal agencies responsible for addressing effects to downstream habitats and species. These agencies are best suited for setting and maintaining these standards and the County will continue to implement their part of those regulations or mitigation measures as appropriate.

RESPONSE F.3-52
There is no specific “low-density” residential designation in the General Plan. There are however several designations that have what can be considered low density intensities applied to those categories. The County has the Resource Conservation designation, which has a base density of 1 unit per 40 acres. The agricultural land use designation has a range of density from 1 unit per 40 to 160 acres. The Rural Living classification has a density range of 1 unit per 6 to 40 acres, depending on subdistrict. In addition, there is the Single Residential designation, which may also be considered low density, which has a range of 1 unit per acre to up to 1 unit per 10,000 square foot parcel. The idea of low density is contextual related to the setting and environment. This comment arises from policy CO 1.2, “The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas [see Existing Policy OR-27]”. The County continues to be committed to re-evaluating land use designations within proximity to State or federally designated areas to protect the visual and natural qualities of the areas.
Response F.3-53
Conservation Element Policy CO 2.4 is designed to define a clear expectation for the development community that they are responsible for mitigating their projects to the greatest feasible condition as approved or certified and conditioned in their CEQA documentation and conditions of approval. Further, the development community is responsible for funding their own mitigation and contributing as appropriate to cumulative and fair share impact mitigations.

Response F.3-54
The County agrees that County/Forest interface is an important issue.

Response F.3-55
The County suggests that the Forest Service contact the City of Big Bear Lake, Department of Water and Power for a copy of the referenced plan.

Response F.3-56
The County agrees with the suggested change in wording to better characterize the particular type of mudflow that is addressed in the referenced discussions. The proper technical description of the type of flows that can occur following high intensity wildland fires is more appropriately that of debris flows. The following text will be added to the geologic setting discussion in the last paragraph on page IV-66 of the Draft EIR to better describe the link between debris flows and the so-called fire/flood cycle:

Debris flows, are a type of post-wildfire event that has come to be referred to as mudflows due to the heavy sediment load that is typically carried down steep slopes in defined channels. The flows may originate from mass wasting due to landslides and accumulated soil and rock from in-channel sediment and from extensive bank erosion as the flow moves down gradient. These flows typically accumulate debris in the form of rocks, boulders, logs and so on that are carried by the energy of the flow. They are part of the commonly referred to fire/flood cycle that occurs in the mountain foothills in southern California. These events are triggered by heavy rainfall during the winter months following intensive wildfires in late summer and fall that denude the hillsides of vegetation leading to rapid water runoff.

Response F.3-57
The Geologic Hazard Overlay does identify debris flow as a form of hazard to development that must be considered in the County review of new development (Sections 82.15.010 and 82.15.020). The landslide mapping that is delineated on the Geologic Hazard Overlay is based on information provided by the California Geologic Survey. The mapping depicted on the Overlay is based primarily on geologic and soil conditions for conventional slope instability evaluation that does not take into account the increased instability due to loss of vegetation from wildland fires. Landslides that are triggered by the loss of vegetation caused by wildland fires require special evaluation that considers such factors as fire intensity, soil hydrophobic conditions, soil depth, slope angle, size of drainage area, rainfall intensity and duration. Because these conditions can vary from incident to incident even within the same geographic area, landslide/debris flow evaluations/predictions have been made following wildfires as part of post-fire hazard assessments. To date, the County is not aware of any predictive models that have been adopted for use in pre-development planning. The County is very interested in coordinating with the U.S. Geological Survey and the U.S. Forest Service in the application of scientifically developed tools for evaluating the hazards associated with post-fire debris flows and the risks to existing and future development. To this end, an additional program has been added to the Final EIR to serve as added programmatic mitigation for the General Plan Update. Program 3 under General Plan Policy S 1.2 will be amended to add the following:
Mitigation HAZ-19

Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies being developed by the U.S. Geological Survey and other federal agencies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement feasible advance public notification methods to warn of impending hazardous conditions.

The above language will be included as Mitigation Measure HAZ-19 in the final EIR.

RESPONSES F.3-58; F.3-59

The County acknowledges these clarifications. The Background Reports were prepared to assist the development of the Draft General Plan policies. As such, these Reports present the best information available to the County at the time of their preparation (2004) and are not proposed to be updated. Thank you for clarification of the Seven Oaks Dam Conservation Pool. The County has no proposed policies that are based on the conservation pool.

RESPONSE F.3-60

This listing of habitat conservation plans on page IV-103 is illustrative, and does not include all possibly applicable conservation plans. The County agrees that the Carbonate Habitat Management Strategy is one of such plans.

RESPONSE F.3-61

The County agrees with these corrections. The third paragraph on Page IV-130 of the Draft EIR has been revised as follows:

The U.S. Department of Agriculture, Forest Service (USFS), and Department of Agriculture manages the majority of the geographic area within the Mountain Regions of the County totaling over 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains. The mission of the USFS is to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations. The National forests are managed by the USFS for multiple uses including recreation, watershed protection, grazing, wildlife, and forest stand management. Within the San Bernardino County portion of the San Bernardino National Forest lie the Cucamonga Wilderness, San Gorgonio Wilderness, and Bighorn Mountain Wilderness. The USFS has recently updated the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The USFS also administers the Pacific Crest Trail (PCT), which is a designated wilderness National Scenic Trail approximately 2,650 miles long running from Canada to Mexico. One hundred fifteen miles of the PCT trail runs through San Bernardino County.

RESPONSE F.3-62

The County agrees with these corrections. The third paragraph on Page IV-131 of the Draft EIR has been revised as follows:

b) Mountain Region

Most of the Mountain Region of the County of San Bernardino is covered by the Angeles and San Bernardino National Forests. State parks include Cucamonga Wilderness Area, San Gorgonio Wilderness Area, Bighorn Mountains Wilderness Area, and Silverwood Lake State Recreation Area. Table IV-N-3 lists the regional and community parks in the Mountain Region of the County.
3. IMPACT ANALYSIS

Impacts related to increased demand for recreational opportunities will be significant if a proposed project requires new construction to maintain acceptable performance standards for public parks or recreational opportunities and that new construction causes new significant environmental impacts.

a) Valley Region

Impact REC-1
The County does not have adequate park space for the projected population called for by the updated General Plan in the Valley Region. The County would need an additional 1,712 acres of parkland to meet the accepted standard.

The 2030 projected unincorporated County population for the Valley Region is 186,224. The total projected population for incorporated city residents in the Valley Region is 1,716,384. This brings the projected total residents of the Valley Region to 1,902,608. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. Using the County standard, the required regional park space for the Valley Region would be approximately 4,757 acres. Currently, there are approximately 3,045 acres of regional and community parks in the Valley Region.

There is a planned regional park, Colton Regional Park, which will add 150 acres of parkland to the Valley Region. The County and local cities would still need an additional 1,562 acres of regional parkland in the Valley Region.

This impact can be mitigated by the adoption of certain mitigation measures presented in Section 4, below.

b) Mountain Region

Impact REC-2
The 2030 projected unincorporated County population for the Mountain Region is 72,833. The total projected population for incorporated city residents in the Mountain Region is 11,890. This brings the projected total residents of the Mountain Region to 84,723. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Mountain Region would be approximately 213 acres. Currently, there are approximately 1,551 acres of regional and community parks in the Mountain Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

c) Desert Region

Impact REC-3
The 2030 projected unincorporated County population for the Desert Region is 148,918. The total projected population for incorporated city residents in the Desert Region is 548,584. This brings the projected total residents of the Desert Region to approximately 698,000. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Desert Region would be approximately 1,745 acres. Currently, there are approximately 5,051 acres of regional and community parks in the Desert Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

d) County

Impact REC-4

The 2030 projected population for the County, as a whole is 2,685,486. Under the County’s guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The County as a whole currently has 9,647 acres of parkland. The County as a whole will meet the County standard.

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, state parks and BLM land which the people of the County can use.

Since this Impact is not significant, no mitigation measures are necessary.

Response F.3-64

The County agrees with these corrections. The third paragraph on Page IV-131 of the Draft EIR has been revised as follows:

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, national forests, state parks and BLM land which the people of the County can use.

Response F.3-65, F.3-66

The County agrees with these corrections. Table IV-N-1 and Table IV-N-3 on Page IV-137 of the Draft EIR have been revised to delete Grout Bay Park, Meadows Edge Park, Switzer Park, and Thurman Flats from these two Tables.

Response F.3-67

The County agrees with these corrections. The fifth paragraph on Page IV-141 of the Draft EIR has been revised with an added sentence as follows:

The U.S. Forest Service operates and maintains an additional 914 miles of roadway that is open to the general public for pursuit of various recreational opportunities.

Response F.3-68

The County agrees with this comment.
**RESPONSE F.3-69**

Mitigation Measure BIO-9 was included in the Draft EIR at page IV-50 to address the need identified in the subject comment. Upon further review in the context of its application in strategic locations, the measure has been revised as shown below. The following language will be added as a program to implement General Plan Policy CO 2.4. The revised text is as follows:

> The County shall require all new roadway, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing.

**RESPONSE F.3-70**

The County agrees that the referenced Policy D/CI 2.1 is also appropriate for the Mountain Planning Region. The following Goal M/CI 4 and Policy M/CI 4.1 will be added to the General Plan:

**GOAL M/CI 4.** Ensure that infrastructure improvements are compatible with the natural environment of the region.

**POLICIES**

**M/CI 4.1 Retain the natural channel bottom for all storm drainage facilities and flood control channels when such facilities are required for a specific development. This protects wildlife corridors and prevents loss of critical habitat in the region.**

**RESPONSE F.3-71**

Please see the response to comment F.3-25.

**RESPONSE F.3-72**

The County acknowledges this comment regarding the “thorough” written description of the Desert Region.

**RESPONSE F.3-73**

Please see the County’s response to comment F.3-33 and to comment F.3-151.

**RESPONSE F.3-74**

The County agrees that mitigation measures to protect special habitats and habitats of species, in addition to the species themselves, are appropriate and desirable in order to comply with the framework established by General Plan Goals CO 1 and CO 2, which call for the maintenance of “natural resources that contribute to the quality of life within the county” and maintenance and enhancement of “biological diversity and healthy ecosystems throughout the county”. In accordance with these goals, the County has established Mitigation Measures BIO 1, as found in Categorical Response 7, to “ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County”.

**RESPONSE F.3-75**

Project-specific mitigation measures, such as those that protect nest stands and trees of spotted owls, will be determined and approved in coordination with resource agencies as indicated in Mitigation BIO-9 of
Categorical Response 7 during the project approval process. This measure states that “The County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.” Approval of future mitigation measures for the spotted owl at the project level will meet the criteria of Goal M/CO 1, which calls for the preservation of “unique environmental features of the Mountain Region including native wildlife, vegetation and scenic vistas”.

**RESPONSE F.3-76**
The County agrees with this comment. In response, the following bullet will be added to Page VI-2 of the General Plan.

- A number of respondents wanted to see more protection of Natural Areas.

**RESPONSE F.3-77**
The County agrees with this correction. The heading on the first paragraph on Page VI-4 of the General Plan will read as follows:

*FOREST SERVICE – DEPARTMENT OF AGRICULTURE*

**RESPONSE F.3-78**
The County agrees with this correction. The last sentence on paragraph 2 on Page VI-4 of the General Plan will read as follows:

Much of the National Forest is covered with dense chaparral, which changes to pine and fir-covered slopes at higher elevations (USFS, 2004)

**RESPONSE F.3-79**
The County agrees with this correction. The heading on the first paragraph on Page VI-4 of the General Plan will read as follows:

*FOREST SERVICE – DEPARTMENT OF AGRICULTURE*

**RESPONSE F.3-80**
The County respectfully disagrees with this comment. Rather than listing "natural open space" in the Goal, Table OS-1 presents the various types of open space proposed in the General Plan.

**RESPONSE F.3-81**
The County agrees with this addition. An additional program statement has been added to Program 3 under Policy 1.9 under General Plan Goal OS 1:

*Use density transfer methods through the planned development process to preserve natural open space.*

**RESPONSE F.3-82**
The County agrees that an emphasis needs to be placed on protection of biological diversity and preservation of natural areas. As a result, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.”
Additionally, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals (see County of San Bernardino 2007 General Plan; Section V–11 Conservation Element) which is consistent with other regional planning documents (e.g., Northern and Eastern Mojave Plans, City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan). Additionally, the County’s Plant Protection and Management Ordinance (County Code Title 8, Division 9, Chapters 1-5) provides guidelines for the management of plant resources on private and County property within unincorporated areas of the County; promotes the conservation of plant life that increases aesthetic value; conserves native plant life heritage; regulates removal of native flora via uniform standards; protects local watersheds; preserves habitats for rare, endangered or threatened plants and animal species; establishes regulations, standards, and enforcement for the maintenance of forests within the Mountain Region and trees within the Valley Region; sets forth guidelines for the conservation of desert native plants and use of desert resources; and establishes guidelines for the preservation and management of riparian habitats and plants.

RESPONSE F.3-83
The County respectfully disagrees with this comment. Table OS-1 presents the various types of open space proposed in the General Plan.

RESPONSE F.3-84
The County agrees with these corrections. Policy number M/OS 1.3 on Page VI-21 of the General Plan has been revised as follows:

Work with the USFS to designate trails areas for Off-Highway Vehicle use and establish educational programs for Off-Highway Vehicle use.

RESPONSE F.3-85
The County agrees and Policy M/OS 1.4 has been changed to read as follows: The County shall work with the USFS to establish buffer zones between recreational facilities and residential areas using suitable vegetation in a more horticultural application in managed campgrounds, such as whitethorn, wild rose, gooseberry, etc. is feasible. Other traditional structural solutions could include fencing or other suitable barriers.

RESPONSE F.3-86
The County agrees with this comment. General Plan Goal M/OS 2 has been included in the Valley Region as Goal V/OS 2. The Desert Region has substantial amounts of open space and requires less focus than the other two regions. While corridors for wildlife movement have been an issue for the Desert Region, corridors for general open space purposes are not germane given the existing and projected future conditions.

RESPONSE F.3-87
The County agrees with this comment. Policy M/OS 2.2 has countywide application. A new General Plan policy, OS 3.7, has been added to the countywide goals on page VI-11. General Plan policy OS 3.7 reads as follows:
OS 3.7 Use open space corridors to link natural areas.

RESPONSE F.3-88
The County agrees with this correction. Policy number M/OS 2.3 on Page VI-22 of the General Plan has been revised as follows:

In the communities of Lake Gregory, Lake Arrowhead, Grass Valley Lake, Fawnskin and Big Bear City, establish a system of bicycle and hiking routes connecting major activity centers, where feasible.

RESPONSE F.3-89
The County agrees with this comment. In response, the following policy statement has been added to Policy D/OS 2.3:

The County shall, in cooperation with the San Bernardino National Forest, ensure that Off-Highway Vehicle (OHV) use within the plan area and in the surrounding region is restricted to designated trails.

RESPONSE F.3-90
This new standard has been incorporated into the Fire Safety Overlay at Section 82.13.60(b)(7)(C) which will provide that new parcels created after the effective date of the updated Development Code (anticipated to be April 12, 2007) will require structures to be set back 100 feet from a property line adjoining National Forest land. The 100 feet setback will also be addressed through individual fuel management plans that are required by the 2004 revisions to the Fire Safety Overlay. At the Community Plan level and County wide near Forest areas, notice of discretionary projects is made available and the County encourages Forest input and comment.

RESPONSE F.3-91
The County agrees that new development will incorporate 100 feet clearance standard required by state law.

RESPONSE F.3-92
This firewood storage standard is subject to a variance that would be considered on the individual merits of the case at hand. The current situation that the commenter describes is a relative short-term situation that should not set a permanent standard for long-term community needs. Additional volume could be considered through a discretionary approval, such as a Minor Use Permit or Conditional Use Permit.

RESPONSES F.3-93, F.3-94, F.3-95, F.3-96
The County agrees with these comments, and has made changes as appropriate.

RESPONSE F.3-97
The County agrees with these comments, and has made changes as appropriate.

RESPONSE F.3-98
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-99
The County agrees with this comment, and has made corrections as appropriate.
The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and will replace the two indicated paragraphs as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County does not agree with this comment. The referenced text is appropriate for the context.

County-U.S. Forest Service coordination is referenced in several locations in the community plans and General Plan. The additional reference is redundant.

The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment. The following corrections have been made to the Bear Valley Community Plan: Chapter 3 – Circulation and Infrastructure / Section BV3.1 – Circulation / Subsection A. – Roadway System (page 28 Final Draft Bear Valley CP):

   The following three roads are U.S. Forest Service roads and are primarily used for access to the San Bernardino National Forest:

1. Coxey Truck Trail (3N14) is a two-lane, unpaved road. This facility...

2. Delamar Mountain Road (3N12) is a two-lane, unpaved road that extends from Holcomb Valley Road (3N16) southwest to Coxey Truck Trail (3N14), approximately 2 miles northwest of the community of Fawnskin.

3. Holcomb Valley Road (3N16) is a two-lane, unpaved road that begins near the community of Green Valley Lake and continues generally northeast to Big Pine Flats and east through Holcomb Valley to SR-18 near the north end of Baldwin Lake.

The following sentence under Chapter 3 – Circulation and Infrastructure / Section BV3.1 – Circulation / Subsection A. – Roadway System (page 28 Final Draft Bear Valley CP):

   Holcomb Valley Road is an unpaved, two-lane mountain secondary highway that extends north and east from SR-38, north of Big Bear Lake and the Serrano Campground, to Doble Dump Road.
This sentence should be changed to the following:

Polique Canyon Road (2N09) is a two-lane, unpaved U.S. Forest Service road that extends north and east from SR-38, north of Big Bear Lake, to Holcomb Valley Road (3N16).

**RESPONSE F.3-109**
The County would like to clarify Table 4 as portraying Road Segments, not the literal beginning and end of the entire road.

**RESPONSE F.3-110**
The County acknowledges this comment. The County will continue to coordinate with the Forest Service.

**RESPONSE F.3-111**
The County agrees with this comment, and has made changes as appropriate.

**RESPONSE F.3-112**
The County acknowledges this comment. The County will continue to coordinate with the Forest Service.

**RESPONSE F.3-113**
The County agrees that an exchange of data sets is appropriate and looks forward to having the key eagle habitats identified by the USFS.

**RESPONSE F.3-114**
The County agrees with this comment, and has made changes as appropriate.

**RESPONSE F.3-115**
The County agrees with this comment, and has made changes as appropriate.

**RESPONSE F.3-116**
The County agrees that there may be the potential for conflict with the language as drafted. The intent of the policy is to afford appropriate entities in the Bear Valley and other mountain areas to be able to acquire strategic pieces of property if they come available to ensure that they remain available for “public” type amenity or use to serve these areas rather than always be exchanged for development. The County has changed the policy as follows:

“BV/OS 1.2 The County shall work with USFS to explore land exchange opportunities that would provide additional areas for open space, recreational opportunities and watershed protection and involve the community and the County at the earliest stage of land exchanges. The County encourages the USFS to establish a procedure to identify appropriate land exchange opportunities to acquire land for community amenities.

Similar edits will occur on General Plan policy VI-21, M/OS 1.2.

**RESPONSE F.3-117**
The County acknowledges that Policies 2.1 and 2.2 provide adequate context for recreation needs.
RESPONSE F.3-118
The County, as Lead Agency, acknowledges this comment. The County will continue to coordinate with the Forest Service.

RESPONSE F.3-119
The County agrees with this comment, and has concluded that the referenced policy is no longer applicable. Policy BV/OS 4.4 has been revised as follows.

\[ BV/OS 4.4 \] The marina symbol designation shall be considered consistent with Commercial Land Use districts and the following marinas and boat landings shall be designated with the Marina symbol: Leonard’s landing, Duane R. Boyer Public Boat Launch (West launch ramp), Cluster Pines campground, the Lighthouse RV park and Campground, Big Bear North, Carol Morrison Public Boat Launch (East launch ramp) and Dana Point Park.

RESPONSE F.3-120
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-121
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-122
The County wishes to clarify that National Forest lands are not the target of economic development activity but rather, those multiple-uses as identified in the Forest land and Management Plan form the catalyst for economic activity on non-Forest commercial property.

RESPONSE F.3-123
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-124
The County agrees with this comment, and has made changes as appropriate to include camping, hiking and bird watching as recreation opportunities within the National Forest.

RESPONSE F.3-125
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-126
The County agrees that, rather than “impassable” vegetation, use of suitable native vegetation is more of a horticultural application in managed campgrounds, such as whitethorn, wildrose, gooseberry, etc. is feasible. Other traditional structural solutions could include fencing or other suitable barriers. The text of the policy has been revised to reflect this response and has been rewritten as follows:

\[ LC/OS 1.3 \] The County shall work with the U.S. Forest Service to establish buffer zones between recreational facilities and residential areas using suitable native vegetation such as whitethorn, wild rose, gooseberry or other vegetation as feasible. Other traditional structural solutions could also be used including fencing or other suitable barriers.

RESPONSE F.3-127
The County acknowledges the concern expressed, but notes that the Policy does not obligate USFS to establish a firebreak system on National Forest lands.
RESPONSES F.3-128, F.3-129
The County acknowledges this background information.

RESPONSE F.3-130
The County agrees that the opportunities for the improvement of the appearance of the natural environment in Lytle Creek as well as other Forest/County interface areas are important. The County is currently engaged in several interface activities with the USFS and looks forward to expanding those communications. Given the policies in place and proposed, the County does not believe an additional policy is appropriate at this time.

RESPONSE F.3-131
The County respectfully disagrees with this comment. This policy direction is already provided in Policy HT/CI 2.1.

RESPONSE F.3-132
The County agrees with this comment, and has made changes as appropriate. With regard to the effluent line, the sentence has been changed to reflect past tense (i.e., There has been discussion…").

RESPONSE F.3-133
The County agrees with this comment, and has made changes as appropriate. References to specific USFS offices have been deleted.

RESPONSE F.3-134
The County agrees with this comment, and has made changes as appropriate, including a global change from "OHV areas" to "OHV trails".

RESPONSE F.3-135
The County agrees with this comment, and has made changes as appropriate.

RESPONSE F.3-136
The County agrees with this comment, and has made changes as appropriate.

The language of Bear Valley Community Plan Policy BV/LU 2.6 will added as Regional Policy in the General Plan.

RESPONSE F.3-137
The County acknowledges this comment, but sees no need to edit the referenced paragraph.

RESPONSE F.3-138
The County agrees with this comment, and has made editorial corrections as appropriate.

RESPONSE F.3-139
The County agrees with these comments, and has made editorial corrections as appropriate.

RESPONSE F.3-140
The County agrees with these comments, and has made editorial corrections as appropriate.
The County has identified OHV use as a key issue in terms of recreational opportunity and mitigation of impacts related to these uses. Multi-agency coordination on OHV issues is critical to success of the continued opportunity for OHV activity within the County. The County encourages the Trails and Greenway Committee and the Forest Service and BLM to meet on common issues. The Trails and Greenways committee’s purpose is to look at multi-use and other trail opportunities with in the County, especially in the interface areas where communities are abutting recreational areas.

The County agrees with this comment, and has made changes as appropriate.

Items 5 and 6 will not be addressed, because they are not in the Plan area. The rest of the miscellaneous comments have been considered and the changes have been made, where appropriate.

The Ord Mountain Range is shown on the USGS Lucerne Valley quadrangle map as indicated in the Community Plan. The range is located northerly of Lucerne Valley and generally east-west trending; the location reference is well known in the community. There is another small band of hills also labeled as the Ord Mountains that trend generally north-south and are located east of the Mojave River near the confluence with Deep Creek.

The County, agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County agrees with this comment, and has made changes as appropriate.

The County’s commitment to update and enhance the Biologic and Open Space Overlays as an implementing program of the General Plan Update will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort as well as integrate sensitive biological data from other sources such as the U.S. Forest Service, the BLM and the CNDDB. Mitigation Measure BIO-3 has been revised as follows to integrate the Biological Resources Division of the County Museum into the update of the Biologic Resources and Open Space Overlays:

Mitigation BIO-3 The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. Development of an updated database will integrate CNDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, U. S.
RESPONSE F.3-152

According to Sawyer & Keeler-Wolf³ and Holland⁴ both pebble plain and pavement plain communities belong to the Black Sagebrush Series and it is therefore appropriate to reference this community type as either pebble or pavement plains.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE F.3-153

The County appreciates the San Bernardino National Forest’s (SBNF) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with the General Plan implementation within the Valley, Mountain, and Desert Regions. The Valley, Mountain, and Desert Regions support a substantial numbers of local, state, and federal protected wildlife and plant species. The aforementioned species and their regulatory status are provided in Tables 1 through 6 and are attached for your review.

See Categorical Discussion 7 for further information regarding Biological Resources.

---


Attention: Mr. James Squire  
County of San Bernardino  
Land Use Services Department, Advance Planning Division  
385 N. Arrowhead Avenue, First Floor  
San Bernardino, CA 92415-0182  

To Whom It May Concern:  

Thank you for the opportunity to comment on the draft Environmental Impact Statement for the San Bernardino County General Plan Update Program (DEIR). My staff has reviewed the DEIR and accompanying documents. Overall, we did not find any major concerns. The predominant issues identified relate to the protection of night sky against light pollution, and scenic travel corridors. Our comments are provided below.

1) Draft General Plan  
a) Page V6. The Kelso Dunes, Granite Mountains, and other places listed within the Mojave National Scenic Area are now managed by the National Park Service within Mojave National Preserve.  
b) Page VI-15. Desert region roads listed as items b,c,d,e,g,h, and i are no longer part of the BLM Scenic Byway designation system since they are now under NPS management. The NPS considers these roads to be scenic routes with equal need for protection as scenic travel corridors but does not formally designate them as scenic travel routes.  
c) Page IX-13. We would like to add a goal that the County Administrators work with NPS management to promote appropriate tourism within National Parks that will benefit both the economic development of the County and the health and well being of the landscape and associated natural or cultural resources that attract people to visit.  
d) General Comment. Mojave National Preserve would like to have private and County lands within its boundaries zoned for protection against excessive noise levels for the protection of the natural quiet found within remote sections of these landscapes. Many of the residents who live on private land within the Preserve live there because of the reduced noise levels which need to be protected from mechanical or other sources of man-made noise that could impact the property owners.

2) Open Space Background Report  
a) Page 5-13. Mojave National Preserve is not within Kern, Riverside, or Los Angeles Counties, but lies completely within San Bernardino County.

3) Impact Report, Project Analysis  
a) Impact AES-2. Scenic Resources. While the plan recognizes the significance of the scenic beauty associated with many places within Mojave National Preserve and adjacent BLM land, the zoning and development orders do not support County goals to protect such scenic resources by allowing large billboard signs along the interstate Highway 15 corridor between Zzyzx and Mountain Pass. These signs continue to obscure and distract from the beauty
of the landscape located behind these signs. We ask that the County give
some consideration to revisions in codes and this planning document that
would protect the views which other County goals seek to protect.
b) Impact AES-1. The County needs to make sure that development codes for
outdoor lighting supports the goal to protect the quality of the night sky
that is found within remote sections of the desert. Mitigation noted on page
IV-10 fails to support the goal of reducing light pollution in desert
regions.
c) Mitigation AES-5, page IV-10. Kelbaker, Keloa, Stima, Clima, Cedar Canyon, and
Black Canyon Roads are no longer part of the BLM scenic byway program but
are now under NPS management which requires equal or greater consideration
for the protection of these scenic routes within Mojave National Preserve.
d) Page IV-43. Mount Pizitz and the New York Mountain range are no longer managed
by BLM but are now managed by the NPS with equal or greater levels of
protection depending upon the resource being considered.

Thank you again for this opportunity. If you have any questions, you may contact
my office at (760) 252-6102.

Sincerely,

Dennis Schranks
Superintendent
RESPONSE F.4-1
The County agrees with these corrections. The third paragraph on Page V-6 of the General Plan has been revised as follows:

The National Park Service manages two special areas designated by the U.S. Congress for their rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance. The Mojave National Preserve, once known as the East Mojave National Scenic Area, was recognized by Congress in the Desert Protection Act of 1994. Joshua Tree National Park, once classified as a National Monument, was elevated to National Park status also by the Desert Protection Act. The Mojave Preserve includes such notable areas as the Kelso Dunes, which is recognized as a National Natural Landmark and the Granite Mountains, which is a Research Natural Area.

RESPONSE F.4-2
According to the National Park Service (NPS) Black Canyon Road, Cedar Canyon Road, Cima Road, Essex Road, Kelbaker Road, Kelso-Cima Road and the Lainfair/Invanpah Road are no longer part of the BLM Scenic Byway system since they are now under NPS management. These roads will be removed from the list of scenic roadways listed under Desert Region on page IV-15 of the EIR.

It is noted that even though the above roads that were removed as County scenic routes they are still considered by the NPS a scenic routes with equal need for protection as scenic travel corridors but are not formally designated as scenic travel routes by the National Park Service.

RESPONSE F.4-3
The County agrees with the intent of the suggested addition, however, the policy will be expanded to apply to all federal land management agencies that share a mission to provide for public recreation and tourism. Policy ED 9.5 will be added under Goal ED 9 on Page IX-13 of the General Plan and will read as follows:

ED 9.5 The County will work with federal land management agencies, such as the National Park Service, U.S. Forest Service and Bureau of Land Management, to promote tourism activities appropriate to the federal lands open to the public that will benefit both the economic development of the County and the health and well being of the landscape and associated natural or cultural resources that attract people to visit.

RESPONSE F.4-4
The County Development Code at Section 83.01.80 establishes the noise standards for various land uses that may be affected by stationary and mobile sources. These are referred to as “performance standards” that must be adhered to on an on-going basis. The Development Code is synonymous with what is commonly called a “zoning code”; hence, the County’s Development Code imposes noise limitations on land uses. Property owners within the Mojave National Preserve are protected from excessive noise the provisions described in Section 83.01.80.

RESPONSE F.4-5
The County agrees with this clarification.
RESPONSE F.4-6
The County agrees with the National Park Service’s concern about large billboards along I-15 between “ZZYZX” Road and Mountain Pass obscuring and distracting from the beauty of the landscape located behind these signs is acknowledged by the County. Future billboards to be constructed in this area will be subject to Section 82.20.030 (Development Standards) (j) Signs, of the County’s revised Development Code. This Code section prohibits primary freestanding signs greater than 18 square feet in the Scenic Resources overlay district.

RESPONSE F.4-7
The County agrees with the National Park Service’s about their concern with outdoor lighting impacting night skies in the remote sections of the desert. However, outdoor lighting and glare is controlled by Chapter 83.07 (Glare and Outdoor Lighting) of the updated San Bernardino County Development Code. Specifically, Section 83.07.040 (Glare and Outdoor Lighting – Mountain and Desert Regions) regulates outdoor lighting in these Planning Regions of the County. This section of the Code includes standards that regulate the maximum height of residential pole lighting (maximum of 12 feet), shielding requirements that require projects to meet the shielding requirements for outdoor lighting in Table 83-7 (Shielding Requirements For Outdoor Lighting In the Mountain Region and Desert Region) in the Code, how light trespass is determined, additional standards for recreation facilities, additional standards for off-site sign (billboard) and on-site signs, exempt lighting and fixtures, and nonconforming lighting.

RESPONSE F.4-8
The County acknowledges that Kelbaker, Kelso-Cima, Cima, Cedar Canyon and Black Canyon roads are no longer part of the BLM Scenic Byway program but are now under NPS management, which requires equal or greater consideration for the protection of these scenic routes within the Mojave National Preserve.

The following roads have been removed from the list of proposed County Scenic Roads listed on Page IV-15 of the Draft EIR: Kelbaker, Kelso-Cima, Cima, Cedar Canyon and Black Canyon.

RESPONSE F.4-9
The County agrees with these corrections. The third paragraph on Page IV-43 of the Draft EIR has been revised as follows:

The BLM has designated locations within three desert biomes as Area of Critical Environmental Concern (ACEC) and Special Areas. By designating areas as ACEC the BLM can develop special management programs for specific resources. These management programs are site-specific and include patrolling, fencing, and signage implemented by the BLM. The programs also recommend actions that the BLM does not have direct authority to implement. There are 11 designated biological ACECs in the Desert Region of San Bernardino County. These include:

• Fort Piute;
• New York Mountain;
• Dark Mountain;
• Amargosa River;
• Salt Creek;
• Cronese Lake;
• Fort Soda;
• Upper Johnson Valley;
• Soggy Dry Lake;
• North Harper Dry Lake;
• South Harper Dry Lake;
• Afton Canyon; and
• Big Morongo Canyon.
Mr. James Squire AICP  
County of San Bernardino  
385 N. Arrowhead Avenue, First Floor  
San Bernardino, CA 92415-0192  

Re: SCH#2005101038; CEQA Draft Environmental Impact Report (EIR); 2006 General Plan Program & Update; Community Plan; San Bernardino County, California

Dear Mr. Squire:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c)). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the area of project effect (APE), and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

- Contact the appropriate California Historic Resources Information Center (CHRIS). The record search will determine:
  - If a part or the entire APE has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded in or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- Contact the Native American Heritage Commission (NAHC) for:
  * A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .
  * The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact, particularly the contacts of the on the list.
  * Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  * Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f).
  * In areas of identified archeological sensitivity, a certified archeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  * Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

- Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans. The Specific Plan also triggers SB 16 consultation requirements (some list of contacts).
  * CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the
NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

\(^\checkmark\) Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

\(^\checkmark\) Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

[Signature]

Dave Singleton
Program Analyst

Cc: State Clearinghouse
Attachment: List of Native American Contacts
Native American Contacts
San Bernardino County
September 13, 2006

Serrano
San Manuel Band of Mission Indians
Henry Duro, Chairperson
26569 Community Center Dr.
Highland, CA 92346
dmarquez@sanmanu
(909) 864-8933
(909) 864-3370 Fax

Serrano
Soboba Band of Mission Indians
Robert J. Salgado, Sr., Chairperson
P.O. Box 487
San Jacinto, CA 92581
luiseano@soboba-nsn.
(951) 654-2765
(951) 654-4198 Fax

Chemehuevi Valley
Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976
Chemehuevi, CA 92363
chemehuevit@yahoo.
(760) 858-4301
(760) 858-5400 Fax

Chemehuevi
Fort Mojave Indian Tribe
Nora McDowell, Chairperson
500 Merriman Ave
Needles, CA 92363
mojave@ftmojave.
(760) 629-4591
(760) 629-5767 Fax

Cahuilla
San Manuel Band of Mission Indians
Bernadette Briery, GIS Coordinator/Cultural Resource
26569 Community Center Dr.
Highland, CA 92346
bbriery@sanmanuel-
(909) 864-8933 EXT
-2203
(909) 862-5152 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and
Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.95 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the
CH/2005101026; CEQA Notice of Completion; Draft Environmental Impact Report (EIR) for 2006 General Plan Update
and Community Plan; County of San Bernardino; San Bernardino County, California.
Native American Contacts
San Bernardino County
September 13, 2006

F
Mojave Indian Tribe
A. J. Dorame, Environmental Coordinator
500 Merriman Ave
Needles, CA 92363
region9epa@ftmojave
(760) 326-1112
(760) 629-4591
(760) 629-5767 Fax

Serrano Band of Indians
Goldie Walker
6588 Valeria Drive
Highland, CA 92346
(909) 862-9883

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7060.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.96 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the H\2\00610\1036; CEQA Notice of Completion; Draft Environmental Impact Report (EIR) for 2006 General Plan Update and Community Plan; County of San Bernardino; San Bernardino County, California.
Thank you for your comments on the subject topic. It should be noted that the County of San Bernardino adhered to the consultation standards required in SB 18 and notified all tribes referred by the NAHC of the pending General Plan update in conjunction with an invitation to meet and consult. Of the twenty (20) tribes contacted we (County Land Use Services Department) met with the Morongo Band of Mission Indians, the San Manuel Band of Mission Indians and corresponded with the Fort Mojave Indian Tribe.

County Staff (Dave Dawson and Jim Squire) met with the Morongo Band of Mission Indians on July 20, 2005 and developed a list of tribal concerns that were turned into General Plan policies and mitigation measures in the Draft EIR. These two documents and Ms. Robin Laska’s (Acting Coordinator for the County Archeological Information Center) recommendations are reflected in the Final EIR. On July 27, 2005, staff met with the San Manuel Band of Mission Indians who essentially wanted what the Morongo Tribe proposed. They also put emphasis on the use of a Native American monitor, a request that was accommodated. The Fort Mojave Tribe was contacted via correspondence that explained the requests made previously by the Morongo and San Manuel Tribe.

Mitigation Measures CR-9, CR-16 and CR-18 contemplate avoidance as an option available to mitigate project impacts to significant cultural resources. CR-9 and CR-16 extend the implementation of avoidance by prescribing methods to ensure the long-term protection of the avoided site as well as providing access to Native Americans.
October 23, 2006

James Squire  
San Bernardino County Land Use Services Department  
385 N. Arrowhead, 1st Floor  
San Bernardino, CA 92415-0182

Subject: County of San Bernardino General Plan Update  
SCH#: 2005101038

Dear James Squire:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on October 20, 2006, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project’s ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts  
Director, State Clearinghouse

Enclosures
cc: Resources Agency
SCH# 2005101038
Project Title County of San Bernardino General Plan Update
Lead Agency San Bernardino County Land Use Services Department

Type EIR Draft EIR
Description The San Bernardino County General Plan is part of a comprehensive planning program that includes Countywide and regional goals and policies along with the preparation of 13 Community Plans and the completely revised Development Code. The current General Plan, which was adopted in July 1999, is being updated since many physical and demographic changes have occurred at the countywide level since then, which present new opportunities and challenges.

Lead Agency Contact
Name James Squire
Agency San Bernardino County Land Use Services Department
Phone (909) 387-4147
Fax
Address 385 N. Arrowhead, 1st Floor
City San Bernardino
State CA Zip 92415-0182

Project Location
County San Bernardino
City San Bernardino, Riverside
Region
Cross Streets Various
Parcel No. Various
Township
Range
Section
Base SBBM

Proximity to:
Highways Various
Airports Ontario, San Bernardino, others
Railways BNSF, UP RR, others
Waterways Colorado
Schools Various
Land Use Various

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Cumulative Effects; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 8; Department of Parks and Recreation; Native American Heritage Commission; Department of Housing and Community Development; Department of Health Services; Department of Forestry and Fire Protection; Office of Emergency Services; Department of Fish and Game, Region 8; Department of Conservation; Colorado River Board; California Highway Patrol; Caltrans, District 8; Department of Toxic Substances Control; State Water Resources Control Board, Division of Water Quality; Caltrans, Division of Aeronautics

Date Received 09/06/2006  Start of Review 09/06/2006  End of Review 10/20/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.
NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 254
SACRAMENTO, CA 95814
(916) 653-0482
Fax (916) 653-0490
Web Site www.nahc.ca.gov

September 13, 2006

Mr. James Squire AICP
County of San Bernardino
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92410-0182

Re: SCH#200510133: CEQA Draft Environmental Impact Report (EIR); 2006 General Plan Program & Update; Community Plan; San Bernardino County, California

Dear Mr. Squire:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a "significant effect" requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the area of project effect (APE), and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

✓ Contact the appropriate California Historic Resources Information Center (CHRIS). The record search will determine:
  • If a part or the entire APE has been previously surveyed for cultural resources.
  • If any known cultural resources have already been recorded in or adjacent to the APE.
  • If the probability is low, moderate, or high that cultural resources are located in the APE.
  • If a survey is required to determine whether previously unrecorded cultural resources are present.
✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  • The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
  • The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological information center.
✓ Contact the Native American Heritage Commission (NAHC) for:
  • A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section.
  • The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact, particularly the contacts of the on the list.
✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  • Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f).
  • In areas of identified archeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  • Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
✓ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans. The Specific Plan also triggers SB 18 consultation requirements (same list of contacts).

CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the
NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

\( \sqrt{ } \) Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

\( \sqrt{ } \) Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.  

Sincerely,

[Signature]

Dave Singleton  
Program Analyst

Cc: State Clearinghouse  
Attachment: List of Native American Contacts
RESPONSE S.2-1
This comment officially transmits the Response Letter S.1, from the State Native American Heritage Commission. That letter was transmitted independently to the County; responses are presented in Section S.1, above.

RESPONSE S.2-2
This comment indicates the County’s compliance with State Clearinghouse review requirements for the Draft EIR.
James Squire, AICP
Planning Division
Land Use Services Department
County of San Bernardino
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

Re: County of San Bernardino General Plan Update, Draft Environmental Impact Report, SCH# 2005101038

Dear Mr. Squire:

The California Department of Fish and Game (Department) thanks you for the opportunity to comment on the General Plan Update (Update) Draft Environmental Impact Report (DEIR) for the County of San Bernardino. As stated in the DEIR, the purpose of the General Plan Update is to provide a projection of growth through the year 2030, identify goals and policies to guide the future development of residential, commercial, industrial, public facilities, transportation facilities and other land uses. The General Plan update also includes to 14 Community Plans.

The Department is responding as a Trustee Agency for fish and wildlife resources [Fish and Game Code sections 711.7 and 1802 and the California Environmental Quality Act Guidelines (CEQA) section 15386] and as a Responsible Agency regarding 1602 Lake and Streambed Alteration Agreements and California Endangered Species Act permits (CEQA Guidelines section 15381).

A General Plan Update in a County as large and geographically diverse as San Bernardino is a difficult task and the Department commend the County on this effort. Because of the scope of the General Plan update, Department will confine its comments to the treatment of biological resources in this document, point out areas for improvement and include recommendations regarding any identified deficiencies. In its analysis of this document, the Department has reviewed the Conservation Element, Open Space Element, Biological Resources section of the DEIR, Hydrology, flood hazards and water quality section of the DEIR.

The General Plan Update divides the County into three bioregions: the Valley, the Mountains and the Desert. The General Plan update should address the following
major issue areas where they apply in all three geographic regions.

**Major Issues**

In general, the major issue area for the Department in dealing with County projects has been the lack of a countywide plan for the identification and preservation of biological resources. The Update calls for the development of a long-term comprehensive conservation plan but there is no assurance that such a plan would be developed or the time frame involved. Therefore, it is important that the Update contain measures to identify and protect biological resources independent of some ultimate plan.

The Department and United States Fish and Wildlife Service had been negotiating with the County and cities on development of a countywide Multiple Species Habitat Conservation Plan since the late 1990's. This process stalled and a plan was neither developed nor approved. In the absence of a comprehensive multiple species plan, the wildlife agencies must deal with biological resources on a project-by-project basis. This process is not satisfactory to either the wildlife agencies or the project proponents.

First, the Update should contain measures for the immediate identification, conservation and protection of existing sensitive biological resources. Much of this information is already available. The County should identify specific habitats and species that are sensitive, (e.g., coastal sage scrub, alluvial fan sage scrub, Delhi sands, riparian habitat) and require on-site preservation or off-site mitigation for the loss of those biological resources. By mitigation, the Department is referring to a lead agency's responsibilities under CEQA (Sections 15021, 15041 and 15370).

Second, the Department has repeatedly raised the issue of assessing the impacts of individual projects in a local and regional context. Many cities have not conducted biological inventories and state that the regional identification of biological resources is a function of County government. In order to adequately assess impacts of development, there must be an existing inventory of local and regional biological resources. In the absence of this inventory, it is difficult for any public agency to make an adequate assessment of the significance of a site or particular biological resources.

Third, the San Bernardino County Museum of Natural History was the biological lead for the now defunct San Bernardino County multiple species habitat conservation planning process. As such, the Museum assembled maps of sensitive biological resources, conducted numerous field surveys and made recommendations for survey methodologies. Much of this work was funded by the wildlife agencies. As part of the analysis, the Museum observed during the planning process that: existing biological studies are inadequate, existing focused survey methodology is lacking, and numerous habitats, including vacant or agriculture sites, contain sensitive species. Did the County use the Museum data and expertise and incorporate the Museum's data and recommendations in the General Plan? If not, why?
Fourth, the Department's recommendations regarding mitigation for impacts to sensitive species and habitats are routinely disregarded in the CEQA process. The Department requests that this document specifically state that sensitive species and habitats are significant resources that do require mitigation for impacts.

Fifth, the language in the Update and DEIR often includes measures to cooperate with other agencies and proposals to encourage biological conservation (mitigation banks, etc.). The Update does not describe how the County proposes to implement these general measures. Without specific implementation measures, the Department does not envision how the conservation programs proposed in the Update will be implemented. In particular, the Department is concerned that while these plans are formulated, additional habitat and species will be removed. The Department recommends that the County formulate interim biological resource protection measures. The implementation of the measures proposed in the General Plan requires that a County department be in charge of coordinating pre-project review, development plans, fire department concerns, and flood control concerns with conservation. The department performing this function is not described in the Update.

Conservation Element

The Governor's Office of Planning and Research publishes the "General Plan Guidelines" that includes a section on the Conservation Element. On page 195, the Guidelines state:

First, the plan should include objectives, policies, principles, plan proposals, and standards to address the preservation and protection of any endangered, threatened, or candidate species. (emphasis added)

Biological Resources

1. Table IV D-1 includes a description of plant communities but does not include acreage figures. It is critical to establish how much of these plant communities remain and where they are in order to provide a context for assessing the impacts of future development projects. In particular, the update should include acreage figures for coastal sage scrub and alluvial fan sage scrub in the Valley region.

2. In pages 6-23 to 6-25, the text refers to "species of concern", "species of special concern", "state sensitivity listing", "state listed as a species of special concern", "federal or state status", "sensitive floral species", and "State Species of Concern". To avoid confusion, the document needs to clearly distinguish between state and federal designations and provide definitions for threatened, endangered, candidate, sensitive, and species of concern. These terms need to be used consistently throughout the document. Please refer to the federal and state definitions where appropriate.

3. When discussing mitigation measures, the document should precisely
state what resources require mitigation, i.e., coastal sage scrub, alluvial fan sage
scrub, federal and state species of special concern, California Native Plant
Society priority listings, etc. (see Comment # 2).

4. On page 6-23, the document notes that Stephens' kangaroo rat may be
extirpated from San Bernardino County because of development pressures and
loss of habitat. The Museum of Natural History should be consulted as to where
and in what habitat surveys would be required. In addition, surveys for this
species should be conducted on County lands in marginal areas as well as
optimum habitat to determine the status of the species. The Western Riverside
Multiple Species Habitat Plan should be consulted to determine if contiguous
parcels contain this species and if so, secure adjoining property so the species
can expand into San Bernardino County. This also applies to the species listed
at the bottom of page 6-22.

5. Policy CO1.2 of the Conservation Element should include ecological
reserves, wildlife management areas and significant natural areas. The
Department maintains a map and inventory of "Significant Natural Areas" for the
County of San Bernardino.

6. The document needs to include a discussion of the Western Riverside
Multiple Species Habitat Conservation Plan and how the County of San
Bernardino can coordinate conservation with that plan. Figure 6-3B in the
Conservation Element is a map of "Critical Habitat / Sensitive Species –
Mountain Region" that also shows the range of coastal California gnatcatcher
extending from Riverside County into San Bernardino County. Remaining habitat
at the boundary should be conserved to allow for nesting and foraging habitat for
the gnatcatcher and other coastal sage scrub species.

7. On page 6-13, there is a discussion of state and federal Endangered
Species Acts providing protection for habitats of listed species. The paragraph
needs to discuss the state as well as the federal process.

8. On page 6-5, the text states that one meeting was held with the San
Bernardino County Natural History Museum. The Museum is the major repository
for biological information in the County. Was this the extent of their participation?

9. On page 6-25, include Plunge Creek, Mill Creek, Strawberry Creek, City
Creek, and Twin Creek. Also note that species associated with some of these
creeks include Santa Ana speckled dace and mountain yellow-legged frog.

10. On page 6-10, note that "extirpation" can mean a localized or regional loss
of a species.

11. In the discussion of "Critical Issues" the Department would recommend
the following measures:
a. Coordinating flood control activities with biological resources planning;
b. Implementation of a regulation requiring the discretionary review of the removal of native habitat prior to the development process and enforcement;
c. Coordinating with the Fire Department on fire reduction measures and buffers and use of precise terms (clearing to bare earth, thinning, etc.) to define property owner obligations and avoid confusion and potential enforcement actions. Special attention should be paid to natural habitat. (This comment also applies to the Safety Element Programs 1, 9 and Goal S.3.3.).

12. The Department agrees that coordination between agencies (CO2.1) is a positive step but coordination may or may result in positive action. The Department would like to know what specific actions the County will take to ensure the preservation and protection of species and habitats independent of the wildlife agencies.

13. In reference to the “Programs” section of CO2.2 on page V-12, mitigation should include temporary and permanent impacts and should distinguish between measures to mitigate for the loss of biological resources and measures to minimize and avoid impacts (avoid construction during nesting season, etc.)

14. In Policy CO2.3, the Department recommends the County include timelines for establishing land ownership transfer programs and land conservation easement programs.

15. Land Use Policy 7.2 requires that the County enact and enforce regulations that limit development in environmentally sensitive areas. The Department recommends that the County stipulate a time limit for enacting policies and a general description of how these policies will be enforced.

16. Department recommends the document clarify the relationship between establishing “long-term comprehensive plans” and participation in Habitat Conservation Plans.

17. Policy M/CO 1.6 requires that the County prepare guidelines for the protection of eagle perches and spotted owl nest trees. There have been relatively comprehensive studies done on eagles (nesting and perching behavior) and these areas have been identified.

18. Policy M/CO1.4 of the Conservation Element (Mountain) requires that the County designate and protect unique habitats supporting rare and endangered species. What specific measures will the County implement to protect these habitats?

19. Figure CI-C1 – Circulatory Policy Map Desert Region – Many of the roads
designated as secondary Highways should not be called highways because they are
dirt roads, some needing four-wheel drive vehicles to use them. General Plan Text -
Section D/Cl- page III-52 states that reevaluation of major and secondary highway
designations in remote desert areas in needed. The Department agrees and would be
willing to assist in the reevaluation.

20. Biological Resource Overlay map - The range map for Mohave ground squirrel is
inaccurate and should be modified to the correct map. Inconsistency is noted in the
southwestern portion of the map.

**Water Resources**

This section of the Conservation Element provides policies regarding
retaining drainages in their natural condition and channelization of streams. The
Department recommends that the County inventory flood control lands and
easements and identify those areas that are important for biological resource
conservation. The Department further recommends that County resource
planners work with County Flood Control to integrate biological policies with
existing flood control master plans to identify, protect and conserve biologically
sensitive riparian areas.

1. Policy CO 5.4. The Department recommends that the County work with
the DFG Streambed Alteration Agreement Program to identify riparian areas or
streams suitable for conservation and areas where off-site mitigation may be
preferred. These streams suitable for conservation include Lytle, Cajon, Plunge,
City, Twin, and Strawberry Creeks.

2. Policy CO 5.4 Distinguish between flood control measures to protect
existing development or to protect future development (see the above comment).

**Biological Resources**

The biological resources section contains much of the same information that is in the
Conservation Element. Many of the Department's comments regarding the
Conservation Element also apply to this section.

1. Impact BIO-2 correctly states that most of the watershed within the Valley
Region has been adversely impacted. The result of this is that riparian resources are
concentrated in the remaining unaltered foothill and mountain streams. Therefore it is
critical to identify, protect and preserve these remaining streams.

2. Impact BIO-4 discusses wildlife corridors and connectivity. With the exception of
San Timoteo Creek, the Santa Ana River and the foothill streams, options for
connectivity are severely constrained or non-existent. The two major areas of concern
are wildlife movement west-east along the foothills of the San Bernardino Mountains
and south-north from inland areas into forested areas. With development encroaching
into the foothills, populations of species such as native fish, amphibians and large
mammals are adversely impacted. The use of the remaining conserved native habitat for recreation and adjacency to development may further adversely impact many of these species. Therefore it is important to distinguish between areas conserved for open space and areas conserved primarily for biological resources. The Department recommends that the County use updated information to illustrate where remaining corridors are viable and where corridor options have been curtailed.

3. The project analysis section of Chapter IV of the General Plan Update discusses several of the current conserved areas and conservation plans. However, there is no discussion of planning efforts regarding the burrowing owl.

4. Impact BIO-5 discusses County reliance upon participation in habitat conservation plans and mitigation sites to mitigate adverse effects of development. Many habitat conservation plans take years to reach approval. The Department recommends the County be proactive in identifying existing opportunities for biological resource protection (such as existing flood control easements) and working to preserve areas occupied by species such as the burrowing owl, Delhi sands flower-loving fly, San Bernardino kangaroo rat, Stephens kangaroo rat, etc. Many of these public land areas have already been surveyed for sensitive species and the information is held by the County Museum of Natural History.

5. Impact BIO-6 does mention the County’s participation in several habitat planning efforts, such as the City of Rialto HCP for the Delhi sand flower loving fly and the Santa Ana Wash Habitat Conservation Plan. The Department recommends the document include a discussion of the regional effort to eradicate arundo donax and other invasive exotics from the Santa Ana River watershed and the County’s role in that effort.

6. Mitigation Measure BIO-1 states that the County will coordinate with state and federal agencies prior to the approval of land use conversions to ensure adequate protections are in place to protect natural resources. Coordination often only ensures that issues are identified and this is done via the CEQA process. However, in the absence of discretionary authority, state and federal agencies rely upon local lead agencies to utilize their authority under CEQA to require mitigation that will minimize or avoid impacts to biological resources.

7. Mitigation Measures BIO-1, BIO-2, BIO-8, and BIO-10 all call for coordination with the wildlife agencies to preserve habitat, create buffers and mitigation banks, create a wildlife corridor map, and ensure that native species and habitats are “reflected” in reviews and approvals of development programs. The Department agrees with these proposed measures but requests that existing data be incorporated into this process, as well as time limits to accomplish these goals.

8. Biological Resources Policy CO 2.1 states that the County will coordinate with state and federal agencies to preserve rare species and habitats as well as populations and habitats of commonly occurring species. The Department suggests that the County make a list of species and habitats that require mitigation so that it is clear to County
planners as well as prospective developers.

9. Program 1 of Policy CO2.2 discusses discretionary land use changes and a requirement for a biological report and mitigation. The Department would like the County to explain how this proposal will make substantive improvements in the existing approval process.

10. Policy CO 2.3 states that the County will establish long-term comprehensive plans for the county's role in the protection of native species. The Department suggests that while the County develops these plans, it should also implement specific interim measures to protect biological resources.

Biotic Resources Overlay District

The proposed Chapter 82.11 of the San Bernardino County Code (Title 8 Development Code) describes the biotic resources overlay. This code requires that it be applied to areas identified by the County, State or Federal agencies. The Department recommends that the County meet with wildlife agencies to review vegetation maps and identify specific areas where the Overlay District would be applied. The Department has noted several errors and inconsistencies in portions of the map.

Hydrology, Flood Hazards and Water Quality

In any discussion of stream alteration, the document should include a statement regarding the necessity for obtaining a Lake and Streambed Alteration Agreement from the Department of Fish and Game. The Department also recommends that the County include a definition of drainages that require a Lake and Streambed Alteration Agreement.

Thank you for your cooperation. The Department looks forward to working with the County to conserve its biological resources. If you have any questions, please call Robin Maloney-Rames, Environmental Specialist, at (809) 980-3818.

Sincerely,

Scott Dawson
Senior Environmental Scientist

cc: State Clearinghouse
    Nancy Ferguson, USFWS, Carlsbad
LEAD AGENCY RESPONSE TO COMMENT LETTER S.3
CALIFORNIA DEPARTMENT OF FISH AND GAME, OCTOBER 23, 2006

RESPONSE S.3-1

The County has had a systematic, countywide program for identifying and protecting significant biological resources since the adoption of the 1989 General Plan through goals and policies and by incorporation of the Biologic Resource Overlay District in the County Development Code. Additionally, important open space areas within the County were recognized in the Open Space Element, graphically displayed on the Open Space Diagram, and adopted as a follow-on program to the 1989 update to the General Plan in 1992. The 2007 General Plan Update continues the use of the Biologic Resources Overlay and incorporates the existing Open Space Diagram as an overlay in the updated Development Code. Both Overlays set out the procedures for identifying, evaluating and reporting on potential project impacts to important biologic and open space resources to comply with CEQA and determine project consistency with General Plan goals and policies. Other commenters have indicated that the overlays do not contain adequate and/or current information on rare, threatened and endangered species occurrence and the habitats upon which they rely. While the current Biologic Resource Overlay Map only includes selected T & E species, these species, in practice serve, as indicators for a variety of associated sensitive species whose habitat overlaps indicator species’ habitat. Furthermore, other graphic references, such as mapped Critical Habitat and habitat mapping such as soil mapping in the case of the Delhi Sands flower-loving fly are used by the County in determining the need for specific biologic survey requirements for individual projects. Other references such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent investments in GIS software and the requisite hardware by the County, combined with the completion of a countywide parcel-base now allow the County to develop a more comprehensive method of compiling and displaying important biologic and open space data. In response to certain comments on the Draft EIR (see Comment O.6-18 and Response), the County has revised the biological resource mitigation measures in the Final EIR and included an additional implementing program in the General Plan goals and policies to improve its system for identifying important resources and natural open space areas.

RESPONSE S.3-2

The County respectfully disagrees with this comment. The statement that your agency and the U.S. Fish and Wildlife Service have been negotiating with the County on preparation of a countywide (emphasis added) Multiple Species Habitat Conservation Plan (MSHCP) is not correct. The County and 15 Cities were working on a MSHCP for the San Bernardino Valley area in southwestern San Bernardino County. The area covered by the plan was 2.5% of the total County and only about 20% of the plan area was unincorporated subject to County jurisdiction. The planning process became contentious and unworkable, in part due to the Department of Fish and Game’s position that the plan was not progressing to your agencies satisfaction, mandating that the program be completed through outside consultants, which resulted in the termination of state and federal funding through the Section 6 grant program to support the plan. Your views are acknowledged regarding your lack of satisfaction. Even though the San Bernardino Valley MSHCP was overly ambitious and ultimately did not succeed, it did spawn other more localized efforts in which the County is actively participating. These include the Upper Santa Ana Wash Land Management and Habitat Conservation Plan, and the City of Rialto Delhi Sands flower-loving fly HCP. Other related efforts at more comprehensive rare, threatened and endangered species programs include the Resource Management Plans prepared for The Preserve Specific Plan in the City of Chino, the New Model Colonies Specific Plan in the City of Ontario, and the Glen Helen Specific Plan in the County area. Within the Desert Region, as described in the General Plan, the County served as functional lead and Co-Lead Agency for CEQA purposes on the West Mojave Plan. This is a multi-agency plan that the CDFG was actively involved in along with the U.S. Fish and Wildlife Service. The County is taking the
lead on the final phase of the West Mojave Plan, which involves the preparation of a technical HCP to cover activities of local government.

RESPONSE S.3-3
The County provides for the identification and protection of sensitive biological resources through the General Plan goals, policies and programs, the Development Code, Biologic Resources and Open Space Overlays, and through CEQA compliance procedures for review of individual development applications. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors in addition to protected wildlife/plant species. The County’s proposed Goal CO 2, which states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County,” and has added a program to General Plan Policy CO 2.1 to improve the completeness, function and utility of the Biologic and Open Space Overlays for CEQA compliance at the programmatic level of the General Plan and the project level for subsequent development project review.

RESPONSES S.3-4, S.3-5
The County’s commitment to update and enhance the Biologic and Open Space Overlays as an implementing program of the General Plan Update will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort as well as integrate sensitive biological data from other sources such as the U.S. Forest Service, the BLM and the CNDDB. Mitigation Measure BIO-3 has been revised as follows to integrate the Biological Resources Division of the County Museum into the update of the Biologic Resources and Open Space Overlays:

Mitigation BIO-3 The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. Development of an updated database will integrate CNDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, U.S. Forest Service, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and other authoritative sources. This update will be added as a Program under Policy CO 2.1.

RESPONSE S.3-6
The County appreciates the California Department of Fish and Games’ (CDFG) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. The Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1).

As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of
evaluating future development proposals. Specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors in addition to protected wildlife/plant species. However, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole.

**RESPONSE S.3-7**

The County agrees that an emphasis needs to be placed on protection of biological diversity and preservation of natural areas. As a result, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.”

Protection of biological resources during the formulation of plans is important to both the Department of Fish and Game and the County. As a means of doing so, the County has established goals and policies in the General Plan that facilitate the conservation of biological resources, including rare, threatened, and endangered species, important habitats, wildlife corridors, among others. Furthermore, the mitigation measures enumerated in Categorical Discussion 7 establish the means by which the County will continue to preserve habitat for species in the interim period before specific habitat conservation plans are approved. The implementation of these measures will be carried out in coordination with interested parties, such as the Museum of Natural History, as well as resource agencies. While long-term comprehensive plans are prepared, any discretionary land-use projects still will be required to demonstrate consistency with the provisions of this General Plan, which require conservation and preservation of habitat. Implementation of goals, policies, and mitigation measures will fall under the oversight of the Land Use Services Department.

**RESPONSE S.3-8**

The County appreciates the California Department of Fish and Games’ (CDFG) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation. The County acknowledges that Table IV-D-1 does not include acreages for native vegetation communities within the County. The County also agrees that it is important to note the location and remaining acreages of these communities within the Valley Region. As stated in the environmental impact report, the Valley is largely developed with relatively small amounts of native vegetation communities, which occur along the creeks and washes and within preserves as enumerated on page IV-38 to IV-39. Although, the description does not go so far as to provide acreages, it provides an overview of important biological resources for the region. This information is augmented by Figure 6-2A of the Conservation Background Report, which presents a map of vegetation cover types of the Valley Region. The combined description in the EIR and map of vegetation communities in the background report provide sufficient level of detail at this stage in the CEQA process. However, the County will continue efforts to improve the Biological Resources Overlay as indicated in Response S.3-8.

**RESPONSE S.3-9**

The County acknowledges the importance of distinguishing between state and federal designations. References to species of concern, etc. on pages 6-23 to 6-25 were explicit and used to denote the state and federal status of the plants and wildlife, and so forth. The County contends that the use of the terms in
their current context sufficiently differentiates between federal and state designations. In addition, Sections 6.3.1.1 and 6.3.1.2 of the *County of San Bernardino General Plan Conservation Background Report* includes a detailed list of “biological resource definitions” and refers to state and local policies that distinguish between salient state and federal designations to avoid confusion.

**RESPONSE S.3-10**

The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, subsequent projects will be required to include surveys and may, in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to biological resources. The Program EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan, not a specific development proposal. The General Plan establishes an overall policy framework that the County will use as a means of evaluating state resources that require mitigation. In addition, mitigation measures provided in Categorical Response 7 (e.g., Mitigation BIO-1, BIO-2, and BIO-5) provide establish that state resources that require mitigation and the level of mitigation to be enacted will be determined in coordination with state and federal agencies.

**RESPONSE S.3-11**

The County agrees that the Museum of Natural History should be consulted regarding the implementation of habitat surveys required to detect Stephen’s Kangaroo Rat and other similar species, including the types of habitats to be surveyed (i.e., marginal and optimal habitat). Throughout the process of generating the General Plan, the County has consulted with the Museum of Natural History on many biological issues, including the conservation of rare and threatened species (personal communications, Randy Scott, San Bernardino County Planning Department). According to Mitigation BIO-1 as stated in Categorical Discussion 7, the County will coordinate with local interest groups, state, and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species, including the Stephen’s Kangaroo Rat and those listed on page 6-22. Further, the County agrees that the Western Riverside Multiple Species Habitat Plan should be consulted to determine if contiguous parcels contain Stephen’s kangaroo rat in order to facilitate inter-county movement should it occur. This viewpoint is expressed in Policy CO 2.3, which indicates that the County will establish long-term comprehensive plans to protect native species in accordance with statewide, regional, and local issues. It is the County’s position that the above referenced policies include cooperation with the Western Riverside Multiple Species Habitat Plan among other plans.

**RESPONSE S.3-12**

The County appreciates the California Department of Fish and Games’ (CDFG) continued involvement in the biological technical assessment for the EIR and General Plan. Your comments and concerns regarding this project have been beneficial in further developing our understanding of the potential impacts and issues with General Plan implementation within the Valley, Mountain, and Desert Regions. Tables 7 through 9 in Attachment 1 are attached and they identify in a tabular format the local, state, and federally administered lands (reserves, wildlife management areas, natural areas, and so forth) and regional planning documents that complement the General Plan and dictate how ecological processes and biological diversity will be maintained within the County. To that end, the County also agrees that an emphasis needs to be placed on protection of biological diversity and preservation of natural areas. As a result, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.” Therefore, no further changes to Conservation Element policies are proposed.
**Response S.3-13**
The County agrees that conservation efforts expressed in the General Plan should be consistent with the Western Riverside Multiple Species Habitat Conservation Plan as illustrated in your example regarding the joint conservation of lands to benefit the continued survival of local California gnatcatcher. In accordance, the County has noted in Policy CO 2.3 that the County will participate in long-term comprehensive plans to protect native species in accordance with statewide, regional, and local issues. It is the County’s position that this Policy is consistent with the Western Riverside Multiple Species Habitat Plan. Such consistency ensures that areas critical to California gnatcatcher, as well as other special-status species, would be jointly protected by the Counties of Riverside and San Bernardino. However, see Categorical Discussion 7 for further information regarding Biological Resources planning and protection.

**Response S.3-14**
Section 6.3.1.1 and 6.3.1.2 of the County of San Bernardino General Plan Conservation Background Report includes a detailed list of “biological resource definitions” and “Federal, State, and Local Land Policies” which distinguishes between salient state and federal endangered species act designations and processes to avoid confusion.

**Response S.3-15**
The County Museum and staff were consulted and provided guidance several times during the scoping, research and preparation of the General Plan and EIR. Further, the County has committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. The County has added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for General Plan and subsequent development project CEQA review and compliance. The County’s commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort, San Bernardino County Museum, the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains, as well as integrate sensitive biological data from other sources (e.g., USFWS, BLM, CNDDB, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and so forth).

**Response S.3-16**
The County will include Plunge Creek, Mill Creek, Strawberry Creek, City Creek, and Twin Creek to the list of creeks enumerated on page 6-25 of the Conservation Report. Species that have the potential to occur within these creeks, as well as surrounding upland areas, are presented in Table 1 of Attachment 1; therefore, the species will not be listed in the section as well.

**Response S.3-17**
The County agrees with the commenter’s definition of extirpation.

**Response S.3-18**
The County currently incorporates biological evaluations during its flood control planning activities. The County initiates Section 1601-3 Agreements with the Department to ensure compliance with state regulations on stream courses. With regards to habitat removal prior to development approval, such
removal is prohibited by the Plant Protection provisions of the County Development Code (Chapter 88.01). The General Plan and Development Code identify the County’s various policies, programs and regulations that the County uses to protect biological resources. Through the MAST program and other coordinating efforts, County Fire is a participant in issues of common concern with Land Use Services and the County Museum.

**RESPONSE S.3-19**

The County will continue to participate in local and regional programs, such as the Upper Santa Ana Wash Plan and the West Mojave Plan, respectively. It will implement programs such as the Glen Helen Specific Plan Resource Management Plan when such programs serve to conserve sensitive wildlife habitat and streamline the CEQA compliance and CESA and ESA permit processes. The County will implement its General Plan policies as particular developments are proposed to ensure the preservation of habitat and the County will carry out this activity in its role as the land use regulatory authority for lands under County jurisdiction.

**RESPONSE S.3-20**

The County agrees that project-level mitigation should include temporary and permanent impacts as mandated by CEQA. General Plan CO 2.1, Program 1 states that impacts to “all biological resources on the site and those on adjacent parcels that could be adversely affected by the proposal” will be listed in a report prepared by a qualified biologist. In such a report, both temporary and permanent impacts will be required. In the view of the County, mitigation measures that compensate for the loss of biological resources and measures that minimize and avoid impacts are the same. Accordingly, they will be developed in tandem with the complete understanding that priority will be given to measures that result in avoidance and minimization, while those that call for compensation will be used secondarily when avoidance and minimization are not practicable.

**RESPONSE S.3-21**

The County considers timelines in conjunction with the preparation of individual transfers or easements based on the circumstances of each case.

**RESPONSE S.3-22**

The Development Code requirements utilizing the various Overlays that implement the programmatic mitigation of the General Plan EIR as well as development review processes such as the Planned Development procedures set out standards for implementing the General Plan policies. Once adopted, the County will immediately begin implementing the General Plan goals and policies as well as the provisions of the development code and all affiliated Overlay Maps.

**RESPONSE S.3-23**

The County’s preparation of habitat conservation plans is one of the programs that implements Policy CO-2.3

**RESPONSE S.3-24**

The County agrees that there have been several studies on eagle nest sites, and would appreciate any further information that the California Department of Fish and Game has to offer. This information in conjunction with consultations with resource agencies will be instrumental in avoiding impacts to eagles as well as raptors.
**RESPONSE S.3-25**
The County has developed several general mitigation measures to ensure the protection and persistence of habitats that support rare and endangered species across all regions, including the Mountain region. These measures are provided in Categorical Discussion 7 and include Mitigations BIO-1, BIO-2, BIO-4, BIO-5, BIO-6, BIO-9, and BIO-11. Additional, project-specific mitigation measures will be developed prior to project approval in compliance with General Plan Goal CO-2, which states that “The County will maintain and enhance biological diversity and healthy ecosystems throughout the county.”

**RESPONSE S.3-26**
The roadway designations on the circulation maps do not reflect a roadway’s current physical status. Rather, they reflect the roadway’s ultimate configuration, when the circulation plan is fully implemented. All roadways shown on the circulation maps will ultimately be paved. Note however, that not all local County roads will be ultimately paved nor will many roads in the Desert Planning Region which are partially or wholly through BLM or other federal lands.

**RESPONSE S.3-27**
The County acknowledges that the range of the Mohave ground squirrel is inaccurate in the southwestern portion of the map as of the present date. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas in coordination with the San Bernardino County Museum as noted in Mitigation BIO-3. Coordination with the museum as well as other sources, including the USFWS, CDFG, USFS, BLM, National Park Service, and so forth, will ensure that resource-preservation decisions are implemented based on the most up-to-date data practicable.

**RESPONSES S.3-28, S.3-29, S.3-30**
The County acknowledges these three comments regarding Water Resources. The County Department of Public Works (DPW) is responsible for flood control improvement and other drainages facilities within the County. The DPW works with the CDFG Streambed Alteration Agreement Program on an on-going, routine basis. The Streambed Alteration Agreement process provides a suitable forum for integrating sensitive biological resource issues into flood control planning. The County flood protection improvement program includes assessment of facility needs to protect both existing development and new development. Regardless, the County is committed to integrating the Streambed Alteration Agreement Program into all projects undertaken by the County for the protection and safety of County residents.

**RESPONSE S.3-31**
The County acknowledges the commenter’s recognition of the similarities between the Conservation element of the General Plan and the Biological Resource section of the EIR. The County has prepared separate responses to the commenter’s comments on the Conservation element.

**RESPONSE S.3-32**
The EIR acknowledges and describes impacts on riparian resources, and the policies in the Plan as applied in specific regions will require any projects that could result in these impacts to include surveys and project-specific mitigation to implement the policies that are in the Plan.

**RESPONSE S.3-33, S.3-34**
The issue of linkage is discussed in the EIR and the County believes that the data is sufficient for the more general analysis in the EIR. The Valley, Mountain, and Desert Regions have been identified as important landscape linkage in southern California as they support and facilitate the movement and
dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1).

As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals, areas to be conserved for open space, and areas to be conserved primarily for biological resources. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors, protected wildlife/plant species, open space, and areas to be conserved primarily for biological resources.

However, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole. Updated data will be developed as needed to assess particular projects that may be proposed.

The Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1). The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned protected wildlife/plant species. However, this section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal outlining specifications for burrowing owl protection. The General Plan does not address specific development proposals. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole.

See Categorical Discussion 7 for further information regarding Biological Resources.

**Response S.3-35**

Planning efforts to conserve the burrowing owl are enumerated in General Plan Policy CO 2.1, which states that “The county will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species...are reflected in reviews and approvals of development programs.” The County contends that the burrowing owl is included under this policy as a protected species pursuant to California Fish and Game Code Section 3503.5. This section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal outlining specifications for burrowing owl protection. The General Plan does not address specific development proposals. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole.
The County acknowledges that the development of habitat conservation plans can take years to reach approval, and is in complete agreement that a proactive approach to biological resource protection is essential. As a means of doing so, the County has established goals and policies in the General Plan that facilitate the conservation of biological resources, including rare, threatened, and endangered species, important habitats, wildlife corridors, among others. Furthermore, the mitigation measures enumerated in Categorical Discussion 7 establish the means by which the County will continue to preserve habitat for species in the interim period before specific habitat conservation plans are approved. The implementation of these measures will be carried out in coordination with interested parties, such as the Museum of Natural History, as well as resource agencies. While long-term comprehensive plans are prepared, any discretionary land-use projects still will be required to demonstrate consistency with the provisions of this General Plan, which require conservation and preservation of habitat. The County has included several policies that will help to protect biological resources and further, the County will participate in earnest with any viable HCP proposal.

See Categorical Discussion 7 for further information regarding Biological Resources.

The County’s Plant Protection and Management Ordinance (County Code Title 8, Division 9, Chapters 1-5) is consistent with the regional efforts that are in place to eradicate *Arundo donax* and other invasive exotics. The County’s Plant Protection and Management Ordinance provides guidelines for the interim and long term management of plant resources on private and County property within unincorporated areas of the County; promotes the conservation of plant life that increases aesthetic value; conserves native plant life heritage; regulates removal of native flora via uniform standards; protects local watersheds; preserves habitats for rare, endangered or threatened plants and animal species; establishes regulations, standards, and enforcement for the maintenance of forests within the Mountain Region and trees within the Valley Region; sets forth guidelines for the conservation of desert native plants and use of desert resources; and establishes guidelines for the preservation and management of riparian habitats and plants.

The County agrees with this comment. General Plan Policies LU 11.3, 11.4 and 11.7 address County-State Fish and Game inter-agency cooperation and coordination.

The County acknowledges the commenter’s recognition and agreement with mitigation measures BIO-1, BIO-2, BIO-8 and BIO-10 of the EIR. Additionally, the County has added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for General Plan and subsequent development project CEQA review and compliance. The County’s commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort, CDFG sources, as well as integrate sensitive biological data from other sources (e.g., U.S. Forest Service, USFWS, San Bernardino County Museum, BLM, CNDDDB, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project, and so forth). Development of this updated database will integrate data from a number of diverse sources. Furthermore, although the County cannot commit to a timetable for the preparation of these documents and tools, it none the less is committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.
RESPONSE S.3-40
In order to provide an updated list of special status species that may require the implementation of avoidance, minimization, and compensation measures under certain circumstances, a recent 2006 data base query of the California Natural Diversity Data Base (CNDDB) was conducted. This list of species is provided as Tables 1 through 6 in Attachment 1. Habitats and species requiring special consideration are subject to change with local, state, and federal protection status; therefore, a single list presented in the General Plan may not serve to clarify required mitigation for future projects.

RESPONSE S.3-41
By requiring a report on biotic resources for all discretionary land use proposals within the designated overlays, and by requiring those reports to be prepared by an appropriate expert, the program is designed to improve the process by ensuring that these impacts are addressed on a uniform basis. This program is implemented by the Biologic Resources Overlay requirements of the County Development Code. Any project requiring a discretionary land use permit is reviewed for its geographic location against the Resource Overlay and other relevant data such as the CNDDB to determine if the project may be within the habitat of any special status species. A field assessment and report are required to be prepared by a qualified biologist to determine presence/absence of rare, threatened and endangered species. The report must describe the potential effects of the proposed project and recommend mitigation in the event of potential significant impacts. This information is used by County Planning to prepare an appropriate environmental document pursuant to CEQA.

RESPONSE S.3-42
While long term comprehensive plans are prepared, any discretionary land use projects will still be required to demonstrate consistency with the provisions of this General Plan, which require conservation and preservation of habitat. These policies and measures are currently in place and are described in the preceding responses.

RESPONSE S.3-43
The County will be coordinating with the wildlife agencies during the update of the Biologic and Open Space Overlays as described in preceding responses.

RESPONSE S.3-44
General Plan implementation in the Valley, Mountain, and Desert Regions has the potential to disturb or degrade the local quality or quantity of potentially Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, or compensate for adverse impacts to the CWA/CDFG jurisdictional features. DFG's advocacy projects obtaining a streambed permit is recognized. As part of the development review process, the County encourages CDFG to comment on individual projects and provide input on the areas of their jurisdictional responsibility. Further, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals impacts to the CWA / CDFG jurisdictional features. Therefore, the potential adverse effects of General Plan implementation on CWA/CDFG jurisdictional features within the Valley, Mountain, and Desert Regions will be mitigated to a level below significance.
October 23, 2006

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Attn: James Squire

RE: DEIR on San Bernardino County General Plan Revision

TRANSMITTED BY FACSIMILE AND U.S. MAIL

Dear Mr. Squire:

The Attorney General of the State of California submits the following comments regarding the San Bernardino County General Plan Revision Draft Environmental Impact Report ("DEIR"). The Attorney General provides these comments pursuant to his independent power and duty to protect the natural resources of the State from pollution, impairment, or destruction in furtherance of the public interest. (See Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12; D'Amico v. Board of Medical Examiners, 11 Cal.3d 1, 14-15 (1974).) These comments are made on behalf of the Attorney General and not on behalf of any other California agency or office. While these comments focus on some of the air quality and global warming issues raised by the DEIR, they are not an exhaustive discussion of all issues.

I. Introduction

The Plan is described as being San Bernardino County’s “blueprint” for land use and development through 2030. The Plan projects population growth of about 25% by 2030 (DEIR, p. 1-1), in an area that already accounts for about ten percent of the total daily trips made in the entire region. (Circulation and Infrastructure Background Report, p. 2-34.) However, the environmental analysis in the DEIR fails to adequately analyze air quality impacts and contains no analysis at all of the impact of the Plan on climate change; both omissions violate the California Environmental Quality Act (“CEQA”), Pub. Resources Code §§ 21000, et seq. As the DEIR acknowledges, San Bernardino County already has a critical air pollution problem, with state air quality standards for ozone and fine particulate matter having been exceeded on 91 days and 82 days, respectively, in 2002. (Conservation Background Report, p. 6-94.) Even though the County receives transported air pollution from the rest of the South Coast Air Basin, and from
the San Joaquin Valley (Conservation and Background Report, p. 6-92), the County itself contributes very significantly to this problem, with a very large rate of trips per day per resident, and an abysmally low rate of transit use. (Circulation and Infrastructure Background Report, p. 2-34.) The large amounts of land available for development present the probability that this problem will grow more severe during the lifetime of the General Plan revision. The environmental and public health concerns raised by the projected increases in vehicular travel under the proposed plan deserve, and CEQA requires, serious and thorough environmental analysis.

We note that the Legislature has recently enacted, and Governor Schwartztenegger has signed, AB 32, the landmark law to control and reduce the emission of global warming gases in California. We are extremely concerned that this legislation was not addressed in any way by either the draft General Plan revision or the DEIR. AB 32 requires both reporting of greenhouse gas emissions and their reduction on a brisk time schedule, including a reduction of carbon dioxide (CO2) emissions to 1990 levels by 2020. Local governments will be called upon to help carry out the legislation’s provisions, and its General Plan revision is the appropriate place for the County to identify both CO2 and other greenhouse gas sources, as well as actions for mitigation of the increases in emissions in greenhouse gases resulting from actions set forth in the General Plan revision. Because global warming is perhaps the most serious environmental threat currently facing California, the DEIR should and must address the issue, provide full environmental disclosure of the effects on greenhouse gas emissions that the General Plan revision will cause, and adopt serious and real mitigation measures for those effects and emissions.

II. The General Plan Should Address and Include Measures to Reduce Greenhouse Gas Emissions, and the DEIR Should Discuss The Plan’s Impact On Climate Change.

The General Plan revision projects that San Bernardino County’s population will grow overall by about 25% by 2030, and the background documents indicate that the areas covered by Community Plans will experience about a 50% increase in population during that time. (DEIR App.C, p. 5.) The Plan relies upon vehicular travel and improvements to freeways, roads and streets to deal with the travel needs of this expanded population, and acknowledges that the land uses permitted in the General Plan will increase traffic and may result in a substantial increase in vehicle trips unless mitigated. (DEIR, p. IV-169.) However, the DEIR never analyzes one of the most important environmental impacts of vehicle emissions -- greenhouse gases and resulting climate change.

Climate change results from the accumulation in the atmosphere of “greenhouse gases” produced by the burning of fossil fuels for energy. Because greenhouse gases (primarily, carbon
dioxide ("CO₂"), methane and nitrous oxide) persist and mix in the atmosphere, emissions anywhere in the world impact the climate everywhere. The impacts on climate change from greenhouse gas emissions have been extensively studied and documented. (See Oreskes, Naomi, The Scientific Consensus on Climate Change, 306 Science 1686 (Dec. 3, 2004) [review of 928 peer-reviewed scientific papers concerning climate change published between 1993 and 2003, noting the scientific consensus on the reality of anthropogenic climate change]; J. Hansen, et al., Earth's Energy Imbalance: Confirmation and Implications, ScienceExpress (April 28, 2004) (available at http://pubs.giss.nasa.gov/abstracts/2005/HansenNazarenkoR.html ) [NASA and Department of Energy scientists state that emission of CO₂ and other heat-trapping gases have warmed the oceans and are leading to energy imbalance that is causing, and will continue to cause, significant warming, increasing the urgency of reducing CO₂ emissions].)

In AB 32, the Legislature recognized California’s particular vulnerability to the effects of global warming, making legislative findings that global warming will “have detrimental effects on some California’s largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.” (Health and Saf. Code section 38501, subd. (b).) San Bernardino County will feel the effects of climate change in many of these areas, particularly given the importance to the County of its Mountain area’s economic dependence on tourism, skiing, recreational fishing, and recreational second homes. (Economic Development Background Report, App. A, pp. 57-59.) The Legislature also found that global warming will “increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the State.” (Health and Saf. Code, section 38501, subd. (b).) Since San Bernardino, and especially its Desert areas, are among the parts of the State that do experience hot weather, the County will suffer acutely from any electricity shortages caused by the strains of global warming, as it will also feel the economic and public health damages from decreased snowpack and increased air pollution that a changed climate will bring -- indeed, is already bringing.

To prevent these harms, AB 32 mandates that emissions of greenhouse gases to 1990 levels must be required by whatever regulatory scheme the Air Resources Board, the agency charged with carrying out the statute, ultimately adopts. (Health and Saf. Code section 38530.) Governments are not exempt from AB 32. The County, its cities, and the businesses within its borders will all have to comply with the regulations and plans that will be adopted to achieve the reduction of greenhouse gas emissions mandated by this legislation.

Nor is AB 32 the first state-wide recognition of the ravages global warming may wreak on California. In Executive Order S-3-05, issued on June 1, 2005, Governor Schwarzenegger recognized the significance of the impacts of climate change on the State of California, noting that “California is particularly vulnerable to the impacts of climate change.” And, even before
AB 32, the Legislature recognized the severe impacts that come from climate change, as well as a “projected doubling of catastrophic wildfires due to faster and more intense burning associated with drying vegetation.” (Stats. 2002, ch. 200, Section 1, subd. (c)(4), enacting Health & Saf. Code § 43018.5) In the particular realm of vehicular travel and emissions from cars and truck, the California legislature went on to recognize that “passenger vehicles and light-duty trucks are responsible for 40 percent of the total greenhouse gas pollution in the state.” (Ibid., subd. (e)(emphasis added).) Our knowledge of the existence and severity of the problem of greenhouse gas emissions and global warming is not new, but was apparent and recognized before the draft General Plan revision was issued by the County.

Despite the existence of Executive Order S-3-05 and the pendency of AB 32 during the time that the General Plan revision was being prepared, the County does not even mention the issue in its General Plan revision, although that revision is meant to cover the next quarter century. Nor does the DEIR analyze, on even the most superficial level, emissions of carbon dioxide, climate change or global warming, despite the obvious connection between such emissions and land use planning, transportation planning, or even air quality. No mitigation for emissions of greenhouse gases is proposed or adopted.

Under CEQA, an environmental impact report must identify and focus on the “significant environmental effects” of a proposed project. (Public Res. Code section 21100(b)(1); Cal. Code Regs., tit. 14, §§ 15126(a), 15126.2(a), 15143.) “‘Significant effect on the environment’ means a substantial, or potentially substantial, adverse change in the environment.” (Public Res. Code section 21068). CEQA also provides that the CEQA guidelines “shall” specify certain criteria that require a finding that a project may have a significant effect on the environment:

“(1) A proposed project has the potential to degrade the quality of the environment, curtail the range of the environment, or to achieve short-term, to the disadvantage of long-term, environmental goals.

(2) The possible effects of a project are individually limited but cumulatively considerable. As used in this paragraph, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

(3) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.”
(Public Res. Code section 21083(b).)
The CEQA Guidelines, Cal. Code of Regs., tit. 14, section 15064, subdivision (h)(3), provide that an agency may conclude that an environmental effect is not cumulatively considerable if it complies with an existing plan to meet environmental standards, such as a state implementation plan or a basin plan. The DEIR itself includes as one of its significance criteria for air quality the potential of the project to “[v]iolate any air quality standard or contribute substantially to an existing or projected air quality violation.” Here, the plans to reduce global warming are still to be formulated, but after the passage of AB 32, we know, as stated above, that a reduction of emissions of greenhouse gases to 1990 levels will be required by whatever regulatory scheme is ultimately adopted. (Health and Saf. Code section 38550.) This provision of the Guidelines does not exempt the County from doing a CEQA analysis of this issue.

In other words, if the General Plan revision could allow emissions of greenhouse gases to significantly affect the environment, directly, indirectly, or cumulative, then the EIR on the revision must analyze the issue, disclose all that can feasibly be found out and disclosed, and adopt all feasible mitigation measures. The DEIR reports that currently, San Bernardino generates about 5.2 million person trips per day (about 10.35 trips per household per day), and that over 84% of the work trips are made by car. (Circulation and Infrastructure Background Report, p. 2-34.) Given that the DEIR projects an increase in population of about 436,500 people by 2030, vehicular miles traveled by the year 2030 can be expected to grow substantially. Considering that about 40% of greenhouse gas emissions come from motor vehicles, the revision clearly “has the potential to degrade the environment” as to greenhouse gases and global warming. (See ibid., subd. (b)(1).) Moreover, the cumulative effects of this project on greenhouse gas emissions, when taken in consideration with the impacts statewide of increased population and vehicular travel over the next quarter century, are undeniable. (See ibid., subd. (b)(2).) When considering the impacts of climate change on California, it is impossible to ignore that the impacts of this project will have either direct or indirect effects on human beings. (See ibid., subd. (b)(3).) Given the scope of the General Plan revision, the projected increase in population and vehicle travel it projects, and the fact that it projects a steady and large increase in population, there is no question that the impacts of the General Plan revision on greenhouse gas emissions and climate change may, and likely will, have significant cumulative environmental impacts for California. These impacts should have been considered, analyzed, and mitigated in the DEIR.

Such an analysis is possible; the data are obtainable. Carbon dioxide emissions from cars can be quantified. In fact, under AB 32, an inventory of greenhouse gas emissions must be done in time to allow the 1990 level of such emissions to be determined by the statutory deadline of

1. DEIR, p. IV-27.
January 1, 2008. (Health and Saf. Code sections 38530, 35850.) This is such a short time that such an emissions inventory should begin immediately. However, current information on the greenhouse gas emissions of cars, trucks and buses could be used to compile an estimated inventory. Once such an estimated inventory is completed, the projections of increased driving that are in the General Plan revision could be used to estimate future growth in greenhouse gas emissions associated with the revision. The California Air Resources Board has information that could be applied to the projected increase in driving. The impacts could be assessed as to their cumulative impact on climate change, assuming (as is highly probable based on the population growth in the General Plan revision and the widely distributed nature of that growth) that there would be a considerable impact from the increase in CO2 resulting from the increased driving. (See Cal. Code Regs., tit. 14, § 15130(a) ["an EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable."] See also Cal. Code Regs., tit. 14, § 15065(a)(3) ["Cumulatively considerable’ means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.”].)

Moreover, and most importantly, the General Plan revision could and should include mitigation for these impacts. The Governor has recognized, “mitigation efforts will be necessary to reduce greenhouse gas emissions and adaptation efforts will be necessary to prepare Californians for the consequences of global warming.” (Executive Order S-3-05, June 1, 2005.) The County can both require mitigation measures from businesses and entities within its jurisdiction, through alternations to its building codes or permit requirements; e.g., it might require solar heating capabilities for all new development, or require that carbon sequestration credits be purchased for development of a certain size. The County could take direct action to offset its own carbon emissions, or those of its residents, by providing for increased public transportation service, increased support of alternative fuels and technologies, installation of electric vehicle charging stations, and other affirmative steps to reduce the transportation impacts of CO2. These are real, achievable and available mitigation measures that could be considered when San Bernardino County recognizes its obligations to analyze greenhouse gas emissions and their impact on climate change as part of its long term transportation planning. As it currently stands, we believe that the draft EIR on the General Plan revision does not comply with CEQA.

III. The DEIR Does Not Adequately Discuss The General Plan Revision’s Impact On Air Quality.

Besides its complete failure to analyze the effects of the General Plan revision on global

2. The emissions inventories in the current documentation do not include greenhouse gases. (DEIR, p. IV-33; Conservation Background Report, p. 6-93.)
warming, the DEIR also fails adequately to analyze the revision's effects on conventional air pollutants.

Air pollution is already at critical, health-endangering levels in San Bernardino County. The federal standard for ozone was exceeded on 21 days in 2002, while the state ozone standard was exceeded on 91 days. Similarly, the federal and state standard for respirable particulate matter was exceeded on 98 days in 2002. (id.) And, while emissions trends for most pollutants show modest decreases, particulate matter emissions are projected to increase, in spite of the extraordinary measures being taken by the South Coast Air Quality Management District (SCAQMD). The DEIR recognizes harm to air quality as one of the significant environmental effects of the General Plan revision that cannot be fully mitigated.

The Air Quality section of the DEIR is extremely troubling. Air quality is well known to already damage the public health in the South Coast Air Basin, with children suffering decreased lung function simply by growing up in the area. (See Bustillo, M., “Smog Harms Children’s Lungs for Life, Study Finds,” Los Angeles Times, Sept. 9, 2004, https://www.latimes.com/news/yahoo/la-me-smog9sep09,1,6309811.story.) The DEIR recognizes that the increased driving that the General Plan revision projects will further damage air quality. (DEIR, p. 1-21.) Yet, this effect, although recognized as significant, receives almost no analysis or discussion in the DEIR. Effects on air quality are discussed in a bare couple of pages, in the most general terms, such as statements that new growth will occur that will cause more driving, which will in turn create more pollutant emissions. The extremely brief, nondetailed discussion of air quality is very much out of proportion to the importance, and the probable public health impacts, of the expected effects. The CEQA Guidelines require that the discussion of significant effects of a project should include discussion of direct and indirect effects, impacts on public health, and effects on the resource base. (14 Cal. Code of Regs., tit. 14 sec. 15126.2.) In general, an EIR should contain discussions sufficient to advise the decision makers and the public of the nature and importance of the environmental effects being discussed, not merely the ultimate conclusion that an effect is significant. (Assn. of Irritated Residents v. County of Madera (2003) 107 Cal.App.4th 1383, 1390 (“The EIR must contain facts and analysis, not just the bare conclusions of the agency. . . . An EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.”) Internal citations and quotation marks

3. Conservation Background Report, p. 6-94.
5. DEIR, p. IV-27.
omitted.]) As we read the DEIR, it does not conform to this standard.

Where, as here, the environmental effect is harm to human health, the EIR must clearly set out the relationship between the effects of the project and the health damage that can be expected. The CEQA Guidelines, at section 15126.2, subdivision (a), require an EIR to discuss, among other things, health and safety problems caused by the physical changes that the proposed project will precipitate. The DEIR here gives its conclusion that the General Plan revision will have significant and unavoidable adverse impacts on air quality, but it does not actually discuss or disclose what those impacts can be expected to be on the health of the County’s residents. The EIR is required by CEQA to do so. (Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1219-1220.) The summary table in the DEIR that merely sets out general health effects from exposure to pollutants is not sufficient; actual levels of exposure expected from execution of the General Plan revision, correlated with actual populations that will be exposed and the probable health impacts on them, is required. CEQA is not just a formal exercise, where the County can state that an effect is significant and, having set out this conclusion as though it were a magic formula, move on. The EIR must spell out what that significant effect will really consist of, to allow both the decision makers and the residents whose health, and whose children’s health, will be affected, to know and understand the health damage that will result from the choices in the General Plan revision. The DEIR does not do this, and must be revised so that it does.

The DEIR also fails to adopt adequate mitigation for the significant adverse effects on air quality that it does identify. The mitigation measures for the County’s own emissions are few and minor. Many of these mitigation measures in the DEIR seem to be measures that are already required by the South Coast Air Quality Management District (SCAQMD), including its requirements that publicly owned vehicle fleets must shop from among clean-fuel vehicles. Measures that the County is already legally obliged to take should be considered part of the General Plan revision, not mitigation for its effects. The SCAQMD Fleet Rules already require public agency vehicle fleets to acquire clean-fuel vehicles. Where the County is already legally obliged to undertake pollution-reducing measures, these measures should be considered to be part of the project, not as mitigation. Such measures do not lessen or avoid the environmentally harmful effects of a project, because they must already be incorporated into the project as originally designed.

6. DEIR, pp. IV-31-32.

7. The same principle applies to greenhouse gas emission reductions. AB 32 mandates that regulatory programs adopted under its aegis require greenhouse gas emissions reductions that are in addition to reductions already required by law. (Health and Saf. Code section
CEQA forbids public agencies to approve projects that will harm the environment until and unless the agency has adopted all feasible mitigation for that harm. (Public Res. Code section 21002, 21081, subdivision a.) The County must explore all feasible mitigation that could be adopted to lessen the effects of the General Plan revision, and cannot rely upon those features of the project that are already required by law to substitute for the mitigation CEQA requires. The DEIR should be revised to adopt all feasible mitigation for its air quality effects.

Conclusion

The General Plan revision is the blueprint for development in this growing, vital area of Southern California for the next 24 years, and both current residents and the half-million additional residents expected in the County by 2030 will have to live with the choices the County makes in this revision. CEQA requires that the County fully disclose, both to the decision makers and the public, all the environmental harm that may result from this blueprint. This disclosure must include the environment effects on air quality and global warming, areas in which the DEIR is currently woefully deficient, or even totally silent. We urge the County to thoroughly revise the DEIR in these areas to bring it into compliance with CEQA.

Thank you for the opportunity to offer these comments. Any questions may be directed to the undersigned. We also request a copy of the final EIR when it is issued.

Sincerely,

SUSAN DURBIN
Deputy Attorney General

For BILL LOCKYER
Attorney General

cc: Kurt Weis, General Counsel
    SCAQMD

38560.5, subdivision (d)(2).
LEAD AGENCY RESPONSE TO COMMENT LETTER S.4
CALIFORNIA DEPARTMENT OF JUSTICE, OCTOBER 23, 2006

RESPONSE S.4-1
The County agrees that there is a dispersion of air contaminants from one air basin to another air basin. The County believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting as the responses themselves. In response to this comment, Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses.

RESPONSE S.4-2, S.4-3, S.4-4, S.4-5, S.4-6, S.4-7, S.4-8
Assembly Bill 32 will create a new regulatory program intended to reduce statewide greenhouse gas emissions to their 1990 level. It is not yet clear how, or if, these future regulations would affect local governments or how they might influence local land use planning decisions. From the background discussion in Categorical Discussion #3, it is clear that the issue of greenhouse gas reductions extends well beyond the scope of local government actions incorporated in General Plans. Nevertheless, the County of San Bernardino recognizes the importance of this issue. Goals and policies already incorporated into the General Plan will serve to reduce vehicle trip generation when compared to existing conditions. For further information, please see Categorical Discussion #3. As described in that Categorical Discussion, based on the lack of any methodologies or significance thresholds that can be applied in determining whether the impacts of the General Plan revision will be significant in terms of greenhouse gas emissions or climate change, the County believes that this EIR currently includes the proper level of disclosure for a CEQA document.

RESPONSE S.4-9
Please see Categorical Discussion #3 for an extensive explanation absence of any methodology or agency guidance that would enable the County in this EIR or in this General Plan revision to assess or mitigate greenhouse gas emissions. The plan already includes policies to reduce emissions and those policies will help to reduce greenhouse gas emissions as well. In addition, the County respectfully disagrees with the argument that the Draft EIR should be recirculated for a second round of public review. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 6.

RESPONSE S.4-10
The County acknowledges the commenter’s opinion regarding air quality in San Bernardino County. CEQA Guidelines, §15125 require that an EIR include a description of the environment within the vicinity of a proposed project as it exists at the time the NOP/IS is published, or if no NOP/IS is published, at the time the environmental analyses commences from both a local and regional perspective. The air quality analysis in the Draft EIR was prepared at a programmatic level based on data that was the most accurate at the time the NOP/IS was published. Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

RESPONSE S.4-11
The County acknowledges the commenter’s concern regarding air quality and public health in the County of San Bernardino. The air quality section of the Draft EIR begins on page IV-25 and continues through
The Draft EIR at page I-21 is only the Executive Summary. The purpose of the Executive Summary is to present the conclusions of the analysis without the detail.

The air quality analysis for the update of the General Plan for the County of San Bernardino was sufficiently prepared pursuant to the requirements outlined in the CEQA statutes beginning at Section 21000 of the California Public Resources Code, and also pursuant to the CEQA Guidelines at the California Code of Regulations, Title 14, beginning at Section 15000. Therefore, the proper analysis, evaluation of impacts, and identification of feasible mitigation measures has been accomplished in accordance with the appropriate state regulations.

The Draft EIR for this General Plan update has been prepared at a programmatic level. Program EIRs focus on policy rather than project-related impacts. They contain a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that will follow and be implemented by the General Plan.

**RESPONSE S.4-12**

The County acknowledges the concerns regarding the public health concerns associated with mobile source emissions. Mobile source emissions from passenger vehicles, trucks, locomotive, ships, etc., are under the jurisdiction of the California Air Resources Control Board and EPA. These agencies currently enforce and will continue to enforce rule, regulations and controls to reduce emissions. The County of San Bernardino will adopt local, state and federal air quality regulations for both stationary and mobile source emissions in an effort to reduce air contaminants.

The impacts on the freeways and local roads are not an issue of County development, but a regional and even statewide issue. Not only growth in the County of San Bernardino, but every city within San Bernardino and surrounding counties and communities are contributing to the traffic on the regional freeway system. Preventing opportunities for growth in San Bernardino County alone will not sufficiently reduce traffic on the freeways.

Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data is provided for information only and does not alter the conclusions reached in the Draft EIR.

**RESPONSE S.4-13**

The County acknowledges the commentator’s opinion regarding the need for additional mitigation measures to reduce the significant adverse effects on air quality. Since, the Draft EIR for the County of San Bernardino General Plan is a "Program EIR," it evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. The Draft EIR evaluates large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that may follow and be implemented by the General Plan.

The County disagrees with the comment that it is inappropriate to consider mitigation measures that are already required by the South Coast Air Quality Management District. It is common practice to include mitigation measures imposed or recommended by air quality regulatory agencies, and it is a sensible practice. The fact that such mitigation measures may be required by the District does not mean that they should not also be included as programs and policies in a general plan, as including such measures in a general plan provides an additional regulatory means of carrying out and implementing those measures.
Multiple commenter raised questions about the same or similar issues. The County believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting as the responses themselves. In response to this comment, Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses. Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

RESPONSE S.4-14

The County respectfully disagrees that the Draft EIR’s discussion on Air Quality effects is “woefully deficient.” The County’s position is that the air quality analysis corresponds closely to the guidance provided by the South Coast Air Quality Management District and the California Air Resources Board, both of which agencies were consulted in the preparation of the analysis. Neither agency chose to submit a letter of comment on the Draft EIR. In accordance with Section 15207 of the CEQA Guidelines, the County has concluded that these two agencies had no comments to make on the air quality analysis presented in the Draft EIR.

With regard to global warming issues, neither the California Air Resources Board nor the South Coast Air Quality Management District raised these issues during the Notice of Preparation period, nor did either agency provide comments on the Draft EIR. Categorical Discussion 3 provides further response on the analytical status of global warming issues at the present time.
October 30, 2006

Jim Squire, Supervising Planner, Advance Planning
County of San Bernardino Land Use Services Division
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

DRAFT ENVIRONMENTAL IMPACT REPORT, COUNTY OF SAN BERNARDINO
GENERAL PLAN UPDATE, SCH# 2005101038

Dear Mr. Squire:

Staff of the Regional Water Quality Control Board, Santa Ana Region (RWQCB), have reviewed the County of San Bernardino's Draft Environmental Impact Report (DEIR) for its pending General Plan Update, Adoption of Community Plans, and a complete replacement of the County's Development Code with proposed County Code, Title 8 (collectively, "Project"). We are concerned with those aspects of the Project that address, or can address, water-quality related issues in the portion of San Bernardino County within the Santa Ana River watershed. We previously commented on the Project's Initial Study with a November 2, 2005 letter (enclosure). Our comments on the DEIR follow:

We believe that the DEIR's proposed policy of avoidance for portions of channels (Table 1-1 of Executive Summary, listing mitigation measures) provides an over-arching response to our earlier recommendations that the filling, alteration, and hydromodification of natural, naturalized, and ephemeral surface drainages (and loss of their associated water quality beneficial uses) be avoided (see portions of comments 1, 6, 7, 8, 9, 14, and 15 in the November 2, 2005 letter). In the Executive Summary, mitigation of Impacts BIO-2, BIO-8, and BIO-16, or general adverse impacts to riparian habitat, will be provided by the proposed County policy to preserve 75% of each existing "natural water resource" on a project site (including ephemeral watercourses), with the remaining 25% of each water body developed and under appropriate permits. Further, the Project stipulates that the County will ensure that permanent loss of habitat will be mitigated by enhancement of the habitat in the conserved areas, and that the County will participate in regional plans to improve water quality and habitat downstream of a project, even outside of County jurisdiction. Pg. VIII-21 (Safety Element) urges preservation of unlined or natural channels as linear parks or similar designations whenever feasible.

We support the far-reaching possibilities for the protection of water quality beneficial uses if the above group of proposed policies is adopted and implemented. However, we are quite concerned with the policy contained in the Project whereby an apparently arbitrarily determined 25% of a site's natural surface water drainage features, and the water quality beneficial uses they support, will be allowed to be impacted by development as the policies contained in Project are applied. The 25% of a site's drainages designated for
construction disturbance may not correspond to the surface area of the surface water drainage where protection of beneficial uses is most necessary, e.g., head waters areas, areas where water quality beneficial uses are currently well supported, previously disturbed drainages with significant potential for restoration of beneficial uses, etc. Impacts to natural surface water drainages must be limited to those areas that cannot be avoided, and if desirable, limited by policy to not exceed a scientifically derived, rationally developed maximum area of the natural drainage features a project site. Further, the arbitrary establishment of the 25% criteria appears to be direct conflict with the policies of avoidance discussed above. The proposed policy would seem to invite, not encourage avoidance of, impacts to surface water drainages, up to some arbitrary percentage of site area. In addition, such a policy creates loopholes that could lead to obliteration of drainages that possess attributes favorable to support of water quality beneficial uses, and to elimination of stream restoration opportunities.

A Clean Water Act Section 401 Water Quality Certification, with appropriate mitigation, will continue to be required for the dredge, fill, or other disturbance to water bodies deemed jurisdictional by the U.S. Army Corps of Engineers, and wherever possible the mitigation should be conducted within the same portion of the channel chosen for construction. We request that the DEIR’s policy incorporate these caveats.

Pg. V-22 (Conservation Element) proposes the prohibition of streambed conversions except where necessary for public safety. The Project would “allow no development in designated flood plains, which would alter the alignment or direction or course of any blue line stream.” This clause could be interpreted in two differing ways, depending on the inclusion of the comma, and therefore should be clarified. This clause should also be expanded to include not only “blue line streams,” perennial or intermittent drainages shown on USGS quadrangle maps as solid blue lines, but also intermittent and ephemeral or streams shown on quad maps by broken blue lines. Consideration should be given to extending this prohibition to locally significant drainages not depicted on quad maps but that currently support water quality beneficial uses associated with surface waters, particularly in parts of watersheds where support of these beneficial uses is not widespread. Also, in the Executive Summary, the mitigation of Impact HWQ-2 (alteration of existing drainages) would be this prohibition of streambed conversions but without the qualifier about public safety. Pg. V-22 and the Executive Summary should be consistent.

Pg. X-8 (Stormwater) is too general with regard to the discussion of Best Management Practices and Hydrologic Conditions of Concern for stormwater runoff control, and the relationship of such non-point sources to Total Maximum Daily Loads (TMDLs) (suggestions in November 2, 2005 letter). The text should describe NPDES Permit No. CAS618036 as Regional Water Quality Control Board Order No. R8-2002-0012, “Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region Area-Wide Urban Storm Water Runoff,” also known as the San Bernardino County municipal separate storm sewer system (MS4) permit, and generally summarize its goals, objectives and implementation. This summary should include the model water quality management plan, developed by the County pursuant to the MS4 permit. We are in agreement with the Project’s generalized goals for groundwater basin protection, sewer expansion, and removal of dairy waste (Section III, Circulation Element).
Most of our November 2, 2005 comments on the general text also apply to the 2006 Project's community plans: Bear Valley, Bloomington, Lytle Creek, Muscoy, and Oak Glen. We do wish that similar extrapolations of those community plans could be included for unincorporated portions of Upland (San Antonio Heights), Montclair, Redlands, Mentone, and Fontana.

If you have any questions, please contact me at (951) 782-3234, or Glenn Robertson of my staff at (951) 782-3259.

Sincerely,

Mark G. Adelson, Chief
Regional Planning Programs Section

Enclosure

cc: Scott Morgan – State Clearinghouse

X:G Roberts on Magnolia/Data/CEQA/DEIR- County of San Bernardino- General Plan Update Oct. 2006
November 2, 2005

Jim Squire, Supervising Planner, Advance Planning
County of San Bernardino Land Use Services Division
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92410-0182

INITIAL STUDY FOR DRAFT ENVIRONMENTAL IMPACT REPORT, COUNTY OF SAN BERNARDINO GENERAL PLAN UPDATE

Dear Mr. Squire:

Staff of the Regional Water Quality Control Board, Santa Ana Region (RWQCB), have reviewed the County of San Bernardino's Initial Study (IS) for a Draft Environmental Impact Report (DEIR) for its pending General Plan Update, Adoption of Community Plans, and a complete replacement of the County's Development Code (collectively, "Project").

This office is interested in those aspects of the Project that address, or can address, water-quality related issues in the portion of San Bernardino County within the Santa Ana River watershed, which includes the community plan areas of Bear Valley, Muscay, Lytle Creek, Bloomington, Oak Glen, Mentone, and West Fontana. Southerly-most parts of the Hilltop and Lake Arrowhead community plan areas are also within the Santa Ana River watershed. We suggest that community plans include unincorporated portions of Montclair, Upland, San Antonio Heights, and Redlands in order to address extension of sanitary sewer.

We request that the following comments be considered and incorporated into the DEIR, with the objective that the Project provide appropriate direction for protection of water quality standards (that is, water quality objectives, beneficial uses, and an applicable anti-degradation policy) that are identified in the Water Quality Control Plan for the Santa Ana River Basin, 1995, and subsequent amendments (Basin Plan). Links to the Basin Plan and amendments can be found at http://www.waterboards.ca.gov/santaana/html/basin_plan.html

1. Project alternatives leading to decisions that are most protective of water-quality beneficial uses are preferred, such as those that minimize development in areas where surface water beneficial uses listed in the Basin Plan, such as Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Cold Freshwater Habitat (COLD), Rare, Threatened and endangered species (RARE), Water Contact Recreation (REC1) and Non-contact Water Recreation (REC2) are well supported. There is widespread experience that urbanization of previously undeveloped areas affects water quality, contributes to pollutant loadings and often contributes to violations of water quality standards. The IS acknowledges that expansion of infrastructure and population carries incremental effects that are "cumulatively considerable" and pose a "potentially significant impact" on the environment. Project alternatives that place emphasis on large-scale avoidance of surface waters of the state and establishment of undeveloped buffers around these waters as a way of protecting their water quality standards should be favorably considered. These alternatives should be fully evaluated in the DEIR in terms of how they impact (or don't impact) water quality standards and exhibited with maps of the affected areas at a scale that allows detailed analysis. Consideration of water quality anti-degradation policies, such as the State Water Resources Control Board's...
(SWRCB) Resolution No. 68-16 and the federal anti-degradation policy (40 CFR 131.12) should be discussed in the DEIR as part of the Project alternatives evaluation.

2. The DEIR should recognize that the Project must incorporate the requirements of Regional Water Quality Control Board Order No. R8-2002-0012, "Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region Area-Wide Urban Storm Water Runoff (NPDES Permit No. CAS618036)," also known as the San Bernardino County municipal separate storm sewer system (MS4) permit, (see http://www.waterboards.ca.gov/santaana/pdf/02-12.pdf). All new development must conform to the San Bernardino County Water Quality Management Plan (WQMP), required by the MS4, by implementing a variety of structural and non-structural Best Management practices (BMPs) to control pollutants discharged to the MS4. Post-construction BMPs for all new projects must address all pollutant loads carried by dry weather runoff and first-flush storm water runoff. The DEIR should emphasize the importance of Project alternatives that utilize the principles of low-impact development (LID, see No. 11, below) as part of a comprehensive, community-wide system for protecting water quality standards.

3. The DEIR should recognize that the Project will need to incorporate a discussion of State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ (and subsequent revisions), "General Permit for Discharges of Storm Water Associated with Construction Activity" (see http://www.swrcb.ca.gov/stormwtr/construction.html). This permit is applicable to all redevelopment projects and new construction projects occurring on an area of one acre or more.

4. The Project and Project proponent play a key role in implementation of MS4 permit-driven BMPs, such as those called for in the WQMP, and other non-point source pollution control management measures that will be necessary for compliance with pending Total Maximum Daily Loads (TMDLs). The DEIR should recognize this relationship. TMDLs are regulations that limit and allocate the loading of specified pollutants that can be discharged to impaired surface waters, i.e., waters that do not meet the water quality standards specified for them. The aim of TMDLs is to bring about improvements in water quality so that surface waters attain compliance with the standards assigned to them. Several water bodies within the San Bernardino County portion of the Santa Ana River Watershed are impaired and are scheduled for TMDLs. Impaired waters in the Project area, listed in accordance with Clean Water Act (CWA) Section 303(d), include:

- Santa Ana River Reach 4 (from the I-10/SR-215 interchange in San Bernardino south to the Mission Avenue Bridge in Riverside) is impaired by pathogens. The Regional Board anticipates action on a pathogen TMDL for Santa Ana River Reach 4 in 2006.
- Big Bear Lake, impaired by metals and nutrients.
- Grout Creek, impaired by metals and nutrients
- Knickerbocker Creek, impaired by metals, pathogens;
- Chino Creek, impaired by nutrients, pathogens, coliform;
- Cucamonga Creek, impaired by coliform;
- Lytle Creek, impaired by pathogens;
- Mill Creek Reaches 1 and 2, impaired by pathogens;
- Mountain Home Creek, impaired by pathogens.

5. The DEIR should include direction that the Project be used to advise the development, construction, and business communities throughout the part of the County that are in the Santa Ana River watershed of the need to obtain waste discharge permits from the Regional Board for various waste discharges to waters of the state, including:

California Environmental Protection Agency
developing Chino Hills and Chino Creek watersheds, the foothill watersheds of the San Bernardino Valley and San Bernardino Mountains communities. The Project should require that hydrology reports for each proposed land development project address the potential for the project to hydromodify both onsite and downstream drainages. Unintended hydromodification cumulatively causes physical degradation of drainage systems through channel instability, erosion, scour, and sedimentation, and impairment of water quality standards in downstream waters.

9. The DEIR should address how the Project will be used to prevent hydromodification of natural or naturalized surface drainages. Unintended and destructive hydromodification frequently accompanies land development that not has been required to evaluate and address its effect on local hydrology in a comprehensive manner. The DEIR should also direct the Project toward mechanisms that will mitigate for and reverse hydromodifications that have already led to loss of beneficial uses and impaired receiving waters. Examples of these mechanisms might include creation of storm water retention and metering facilities and use of existing drainages, in lieu of "improving" drainages with concrete and riprap, removing concrete and riprap channel armor, creating streambed and embankment restoration opportunities, etc.

10. The DEIR should direct the Project to encourage seek opportunities to restore beneficial uses to previously impacted waters and their channels through creation of mitigation banks.

11. The DEIR should recommend that the Project actively support implementation of the principles of Low Impact Development (LID), which makes use of project-level features to manage urban runoff quantity and quality, while conserving water. LID is among the Ahwahnee Water Principles for Resource Efficient Land Use, adopted in 2005 by the Local Government Commission to incorporate management of stormwater and other non-point source runoff from compact urban developments into general plans. These "community" and "implementation" principles are intended to lead to reversal of the trend of increasingly paved and constructed areas that alter the rate and volumes of surface water runoff and groundwater recharge (see www.lgc.org ). SWRCB management has expressed support of the Ahwahnee principles and LID as useful to address all major goals and objectives of the Water Board.

12. The DEIR should recommend that the Project include development and construction project guidelines designed to protect, and if possible improve, the quality of underlying groundwater subbasins, groundwater management zones, and the beneficial uses of groundwater. Within this context, the DEIR and Project should acknowledge that there are several converging groundwater contaminant plumes throughout the San Bernardino Valley, and that there are ongoing groundwater cleanup activities to address them. This could be done with map exhibits and a generalized status report.

13. We believe that the DEIR should lead to a Project General Plan that restricts proposed development that relies on onsite subsurface disposal systems (OSDS), i.e., septic tank/leach field and/or seepage pit installations and mound systems, for sanitary wastewater disposal, in deference to extending sanitary sewers to all future development projects. The Basin Plan currently prohibits use of OSDS on lots of less than ½ acre, and limits OSDS to one system per ½ acre. We urge that new development with densities higher than one Equivalent Dwelling Unit per ½ acre, such as those that may occur on subdivisions approved prior to the Regional Board's ½ acre minimum lot size requirement, not be permitted where sewer service cannot be provided. An exception may be areas where the County continuously operates a Designated Maintenance Area (DMA) and permits, monitors, and requires regular maintenance of OSDS. Depending on local conditions, on-going discharges from OSDS can constitute a significant source of groundwater (and, in the case of location with soils poorly suited for OSDS, surface water) pollutants. Consequently, we
believe that the DEIR should weigh whether the Project should include policy statements aimed at connecting existing OSDS discharges in community plan areas to existing or planned community sewer systems. OSDS are known to be prevalent in unincorporated communities such as Big Bear City, Baldwin Lake, Bloomington, Devore, Muscoy, and even largely built-out communities such as San Antonio Heights.

14. The DEIR should recommend that that the Project preserve and protect areas of native vegetation to the maximum extent possible and that clearing of native vegetation should be strictly limited. Among other water quality and environmental benefits, native vegetation assemblages are effective at reducing slope erosion, filtering runoff, and providing habitat for native animal species, thereby supporting water quality beneficial uses. Established native riparian vegetation buffers along and within broad floodplains and drainage systems will modulate storm flow, lessen erosion and subsequent sedimentation, and as a result, protect water quality standards. The DEIR and Project should encourage the proactive replanting and hydroseeding of native vegetation in most operations.

15. The DEIR should reflect that the preservation of natural and naturalized drainage systems, water bodies, and undisturbed slopes reduces impacts to water quality and may lessen development’s impact on water quality standards. The project should be directed to avoid impeding wildlife movement and affecting the WILD water quality beneficial use, by calling for roadways or pipelines to be carried over ravines, arroyos, washes, and other drainages by bridges or wide, poen-bottomed arched culverts. A policy of including riparian wildlife corridors into large-scale planning processes should be supported by measures that require generous mitigation for construction impacts to natural drainages and other surface waters of the state and of the United States. By facilitating wildlife movement through riparian corridors, the Basin Plan’s wildlife habitat beneficial uses are served. This policy support may lead to streamlining the issuance of CWA 401 water quality standards certifications and waste discharge requirements, as well as aid the Proponent’s compliance with habitat conservation plans. The DEIR should consider whether to recommend that the Proponent adopt an arroyo protection ordinance similar to that of the City of Riverside, whereby arroyo segments providing beneficial uses are delineated on aerial photographs and used as a planning tool.

If you have any questions, please contact me at (951) 782-3234, or Glenn Robertson of my staff at (951) 782-3259.

Sincerely,

Mark G. Adelson, Chief
Regional Planning Programs Section

cc: Scott Morgan – State Clearinghouse

Q: Planning/Groberts/Letters/CEQA/DEIR- County of San Bernardino- General Plan Update Oct. 2005
LEAD AGENCY RESPONSE TO COMMENT LETTER S.5
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, OCTOBER 30, 2006

RESPONSE S.5-1
The County acknowledges the Regional Board’s appreciation of the County’s overarching policy foundation that filling, alteration, and hydromodification of natural, naturalized, and ephemeral surface drainages be avoided. The General Plan policies and EIR mitigation provide programmatic, not project specific, guidelines. Project specific guidelines will be, or already are, developed and implemented by various County departments. The draft policy regarding preservation of 75% of existing natural water resources has been re-examined in light of other policies. The County agrees that the protection of natural water sources is an important issue for biological protections.

RESPONSE S.5-2
The County also supports the far-reaching possibilities for water quality protection for beneficial uses. In review of the draft policy regarding preservation of 75% of existing natural water resources, re-examined in light of other policies and your comment, the County agrees that the protection of natural water sources is an important issue for biological protections and that this mitigation measure however is inappropriately drafted. The intent was to establish quantifiable criteria for the development community while establishing a generous basis for protection of natural water resources. Given breadth and depth of other water quality and habitat protection policies, coupled with statutory requirements of the Regional Water Board and others, Mitigation Measure BIO-4 has been deleted from Section IV-D of the EIR, relocated to Section IV-H and redrafted as follows.

Mitigation HWQ-16
The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.

RESPONSE S.5-3
The County is committed to the protection of water quality resources. As such, the County will comply with all applicable laws and Section 401 requirements. Further, as this EIR is a programmatic document (see Categorical Discussion #1), Section 401 Permit references will be incorporated, where applicable. The County will encourage all applicants for County permits to confirm if a Section 401 permits is also required and work with the Regional Water Quality Control Board on the placement and timing of mitigation per Clean Water Act and State requirements.

RESPONSE S.5-4
The County agrees that the language of policy CO 5.4.4 be rewritten to clarify that the intent is that development that alters the alignment or course of any blue line stream in flood plains. The County appreciates the intent of the Board to expand this to all “broken blue line” streams and “locally significant” drainages also, however given the vast expanses of the County in semi-arid and desert conditions, the County respectfully disagrees with expanding this policy at this time. The County is open to considering expanding the defined areas in the future; however, additional field research would be necessary to validate any proposed inclusions. Further, SBCFCD is examining this issue in their hydromodification mapping project currently on-going.

The element section and the executive summary will be reviewed for consistency and CO 5.4.4 will be replaced with the following policy,

Allow no development, which would alter the alignment, direction, or course of any blue-line stream, in designated flood plains [see Existing Policy OR-62d].
RESPONSE S.5-5
The County appreciates the intent to become more specific in rule making. However in the General Plan and the programmatic EIR (see Categorical Discussion #1), the County is intending to establish a broad policy framework for implementing such rules as they are established and updated from time to time. These rules would include the NPDES Permit CAS618036, Waste Discharge Requirements for the San Bernardino County Flood Control District as may be modified in the future. As the General Plan provides programmatic policy, the County will review this section to provide additional specifics and clarity concerning the San Bernardino Co MS4 Permit. The County will comply with applicable requirements of the permit including a model water quality management plan, a more specific program document.

RESPONSE S.5-6
The County initiated the Community Plans based as part of this General Plan program to re-establish this policy layer for communities that previously had a community plan that were eliminated with the 1989 General Plan update and had specific characteristic related to an independent presence geographic scale, etc. These policy layers establish an additional layer of policies that would be unique to these communities. These policies are in addition and not preemptive of the broader regional and countywide policies in the General Plan. Unincorporated areas such as San Antonio Heights, Montclair, Crafton Hills, and west Fontana are within spheres of influences of adjacent cities and the Countywide and regional policies as proposed adequately lay out an effective policy framework for the establishment of programs or standards to address the water quality concerns for these areas.
October 12, 2006

Jim Squire, AICP, Supervising Planner
Land Use Services Division, Advance Planning Division
County of San Bernardino
385 North Arrowhead Avenue, 1st Floor
San Bernardino, California 92415-0182

RE: Draft Environmental Impact Report for the Update of the County of San Bernardino General Plan.

Dear Mr. Squire:

Thank you for including the City of Fontana on your interested parties list for the County of San Bernardino General Plan Draft Environmental Impact Report. As you are aware, City staff regularly attended the General Plan Advisory Committee (GPAC) monthly meetings and has met with staff from San Bernardino County on occasion to discuss land use and development standards within the City of Fontana Sphere of Influence (SOI).

Although our comments are not necessarily related to DEIR they are pertinent to the General Plan and should be considered goals and/or policies. The following statement under the Mitigation Measures heading on page IV-103 of the DEIR suggests the same, “There are no significant Land Use and Planning impacts identified and therefore no mitigation measures are required. However, it should be noted that the policies of the 2006 General Plan function as issue mitigation. General Plan Policies are mitigation in other topical areas while for land use and planning, they are addressed as part of the project.” Staff’s comments are as follows:

- Goals and policies should include language regarding Community Standard Districts (CSD) within the sphere areas of incorporated cities. These districts should incorporate the development standards of the city in which they are in.
- Goals and policies should support and encourage agreements that would require developers to pay standard city development fees for projects within the sphere areas. It is recognized that development within these sphere areas will be enhanced and facilitated by the investment of public funds into the public infrastructure which is necessary to support such development.
- Goals and Policies should support a cooperative design/project review effort which includes city comment for projects within sphere areas.

City staff would like to thank the County of San Bernardino representatives for their cooperation and efforts regarding the many issues involved in land use, service plans and future development within the SOI of the City of Fontana.
Thank you again for including the City of Fontana in the public comment review period.

Respectfully,

COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION

[Signature]

Don Williams, AICP
Director of Community Development

cc: Debbie Brazill, Deputy City Manager
File
LEAD AGENCY RESPONSE TO COMMENT LETTER L.1
CITY OF FONTANA, OCTOBER 12, 2006

RESPONSE L.1-1
The County acknowledges that the City’s letter does not offer comments on the EIR, but rather provides comments on the proposed 2007 General Plan. Those comments are responded to herein.

RESPONSE L.1-2
The County will work individually with each city that has unincorporated areas within the city sphere of influence based on Board of Supervisors direction. Following the adoption of the General Plan Update, staff will work with the Board of Supervisors to identify those areas warranting a sphere standards overlay. Areas will be prioritized based on various criteria including history and extent of inconsistencies in development standards between jurisdictions, level of development activity, workload, et cetera. The overlay will establish a set of standards that the County will adopt and include in the Development Code based on a collaborative review process between City and County Planning staff. Individually crafted standards will assist with creating seamless boundaries, provide certainty to the developers and landowners and be transparent. Staff anticipates that the Fontana Sphere of Influence will be one of the first priorities.

RESPONSE L.1-3
The County would be happy to work with the City to discuss development fees in the Fontana sphere subsequent to the adoption of the County General Plan. This subject would be appropriate to consider during discussions on Sphere Development Standards.

RESPONSE L.1-4
Policy LU 9.2 in the updated General Plan encourages the County to adopt city standards as well as to encourage the annexation of unincorporated sphere areas into the cities.
October 23, 2006

VIA ELECTRONIC MAIL

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA. 92415-0182
Attn: James Squire
Phone: 909-387-4147
Fax: 909-387-3223

Re: Draft Environmental Impact Report for County of San Bernardino General Plan Update and Associated Community Plans

Dear Mr. Squire;

These comments are submitted on behalf of The Wilderness Society (TWS) on the combined Draft Environmental Impact Report ("DEIR") for the San Bernardino County General Plan Update Program (SCH# 2005101038), including the Associated Community Plans, and revision to the Development Code accompanying the General Plan Update Program ("the Project").

We wish to provide comment on the Environmental Impact Report. The EIR does not adequately analyze and disclose the impacts of fire hazards on the community. The DEIR fails to disclose many negative environmental effects that will result from the implementation of the Draft Development Code. The Draft Development Code creates many significant hazards to the community because it permits development in fire prone areas with limited restrictions. The County has a duty to mitigate the project’s significant adverse effects on fire hazard. Enforceable and valid mitigation standards are best imposed through the County Development Code Update. This Draft Development Code Update is inadequate with respect to fire management. Please see specific comments below.

The proposed development code calls for:
(e) Subdivisions. When 25 percent or more of a subdivision project site is located on natural slopes greater than 30 percent, the subdivision shall be submitted concurrently with a Planned Development application appropriate project design in consideration of topographic limitations provision shall not apply if all of the areas on the site with natural ungraded 30 percent are permanently restricted from structural development.

The code should call for:
When 25% or more of a proposed subdivision is located on slopes greater than 30%, the project should prescribe additional requirements for setbacks, fire-safe building materials, sprinkler systems and other mitigation measures. Slopes greater than 30% allow both radiant and convective processes to preheat fuels in front of a flaming front. This in turn
may greatly increase both rate of spread and resistance to control. 30% is also the upper limit for safe and efficient use of line construction equipment such as bulldozers.

The proposed development code calls for:
(B) The natural, ungraded, slope categories to be computed are zero percent to less than 15 percent, 15 percent to less than 30 percent, and 30 percent or greater. The minimum area (polygon) used for slope calculation shall be 5,000 square feet.

The code should call for:
The minimum area (polygon) used for slope calculation shall be 43,560 square feet (1 acre). This would give you a radius of 117.75 feet from the center point of a structure. Thus, such a measurement protocol would prevent homes from being built within roughly 90 to 100 feet of steep ravines.

The notion that you can predict fire behavior based on your proposed tenth of an acre on which the structure sits would mean you could ignore the effects of a fire burning within a radius of 37.24 feet from the center point of a structure. Thus you could conceivably build a wood frame house within about 20 feet of a ravine with slopes of 70% or more, what firefighters call a ‘chimney.’ Research (Cohen et al) has shown that fires within this radius can and do ignite structures by radiant heat and mass transfer. The code as written will not prevent homes from burning.

The proposed development code calls for:
(6) Fuel modification areas.
(A) A permanent fuel modification area shall be required around a development project or portions thereof that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. In no case shall this area be less than 100 feet in width as measured from the development perimeter. Where feasible, the area shall be designated as common open space rather than private open space. The recommended width of the fuel modification area shall be determined based on a fuel modification plan filed in compliance with Subsection 82.13.040.(f)3 (Application Requirements - Fuel modification plans), above.

The code should call for:
A requirement that fuels adjacent to structures be actively managed for landscaping that resists fire and the invasion of noxious flammable weeds.

The proposed fuel modification plan would allow a developer to clear an area of natural vegetation and to allow that cleared area to re-vegetate with non-native annual grasses, mustards and other highly flammable noxious weeds. As proposed by the County, this section could actually increase the rate of spread of a fire.

The proposed code calls for:
(7) Setback requirements. Each proposed structure shall comply with the following
setback requirements as applicable, in addition to the setbacks required by the applicable primary land use zoning district, and the building separation requirements in Subsection C. (Building separation), below.

(C) National Forest boundary. Each structure on a lot that was created after March 9, 1988 and abuts a boundary of the San Bernardino National Forest shall be set back at least 30 feet from the boundary.

And

(c) Building separation standards. The intent of the following exterior wall separation standards is to reduce the exposure and risk from adjacent structural fires and to reduce the potential spread of fire from structure to structure.

(1) Building separation standards in FS1 and FS2 areas. In FS1 and FS2 areas, the following shall apply:

(A) Each building on a parcel shall have exterior wall separations of at least 30 feet.

The code should call for:

According to the United States Department of Agriculture, Forest Service Rocky Mountain Research Station Research Note RMRS-RN-23-3-WWWSeptember 2004

"Flames of high intensity canopy fires can be within 100 feet of a flammable surface to cause home ignition."

Thirty feet is an entirely inadequate setback for both boundaries of public land and adjacent structures. In either case, the radiant heat and mass transfer from a fire can easily ignite structures built under this proposed code.

The minimum setback for public land should be 100 feet. The setback for adjacent structures should vary by the expected radiant heat generated by that structure.

On behalf of The Wilderness Society, I appreciate the opportunity to comment on this DEIR. If I can be of further assistance, please contact me at (951) 659-3985.

Sincerely

Richard Fairbanks
Fire Program Associate
The Wilderness Society
PO box 72
Idyllwild CA 92549
The Fire Safety Overlay requires a combination of fire resistant construction standards for residences and other types of structures and special project requirements for single-family residential subdivisions or multi-family residential developments. Residential developments are subject to density reductions based on slope categories. Density is limited to one dwelling unit per three acres on slopes exceeding 30%. This density provides substantial structural separation and considerable defensible space. Additionally, residential developments must have adequate fire flow, hydrant spacing, two points of ingress/egress, and mandatory fuel modification areas.

Fuel Modification Areas (FMA) specific to the development must be established with each proposed project. The FMA addresses existing site-specific fuels, their reduction and long-term maintenance, and includes live fuel clearances around proposed construction sites. Also if planting is required, drought tolerant and fire resistive plant palettes are reviewed prior to implementation. A Fuel Modification Plan is required to be submitted at the time of development application so that project review can site specific slope analysis in relation to development sites along with the proposed fuels treatment in a comprehensive manner.

The County believes that these are prudent and provide sufficient mitigation for wildfire threats.

The application of your proposed minimum polygon protocol for slope calculation will not produce the result of achieving 100-foot setbacks from steep ravines for structure construction. The minimum polygon in the County’s formula is used for slope-density determination. The minimum polygon is a conservative estimate of structure footprint for a single-family residence in the mountains. The County’s Fire Safety Overlay reduces the allowable density, i.e. number of dwelling units per acre (d.u./ac.), according to increasing slope steepness. As noted in the response above, allowable density is reduced to 1 d.u. per 3 acres for slopes greater than 30%. This calculation is used to determine the maximum allowable numbers of dwelling units for a specific project on a specific project site. Other fire safety development standards and other design standards, such as the new hillside grading ordinance combine to produce project designs with sufficient setback for natural fuels and steep terrain, including the setback requirements noted below and the fuel modification cited in the preceding response. The Development Code requires the following:

“Where structures are proposed or within two hundred (200) feet of slopes that are greater than thirty percent (30%) prior to grading and where such slopes are at least thirty (30) feet in height, the vegetation on such slopes shall be treated in such a manner that it becomes a fuel modified area. Such fuel-modified areas shall be maintained for either the entire slope, or one hundred (100) feet, or to the property line, whichever distance is less. (Note: this is an area that is not less than 100 feet of a fuel modification mitigation, Section 82.13.060, (6) (A) of the General Development Standards, Fuel Modification Areas states in the second sentence: “In no case shall this area be less than 100 feet in width as measured from the development perimeter.” (emphasis added)

In addition, according to the International Code Council (ICC) 2003, Table 603.2, required defensible space in an Urban-Wildland Interface Area within an area noted as being in an Extreme Hazard area, the fuel modification distance is 100 feet. This is the most restrictive setback delineated for fuel modification mitigation. The ICC was developed in an effort to bridge the gap between enforcement of the
The County has a comprehensive weed abatement program specifically to reduce fire danger from noxious weeds and grasses. If the Conditions of Approval for a project don’t require a fuels management plan (FMP), or if the FMP is not being conducted properly, County Code Enforcement, Weed Abatement Division is under contract to County Fire and is responsible for the maintenance and removal of weeds and grasses that can rapidly transmit fire. Annually, the Weed Abatement Division inspects every parcel within the jurisdiction of the Central Valley Fire District plus other jurisdictions that have contracted with the County and issues approximately 60,000 notices of violation per year. For every notice sent, the Division conducts a follow-up inspection. In all, the Division conducts approximately 6,000 actual abatements of the conditions that are creating a fire hazard per year. With the enhanced changes to the Public Resources Code related to improved fuels management, the County will be implementing programs to provide consistency with the State requirements.

The Fuel Modification Plan required for new development includes the following provisions with regards to fuels treatment and replacement vegetation: continual maintenance of such areas; soil erosion and sediment control measures to alleviate permanent scarring and accelerated erosion; and a list of recommended landscape plant materials that are fire resistant. Additionally, the new Hillside Grading Standards, in the Development Code at Chapter 83.08 (Section 83.08.040 (a)) provides for landform grading and vegetation standards which include (1) the basic and plan flows with the natural topography rather than against it, and Section (2) (4) Landscaping shall be applied in patterns resembling native plant distribution. These standards ensure that development will complement the existing character and topography of the land (83.08.040 (b) (2), page 3-80. Furthermore, the new Landscaping Standards in the Development Code, Section 83.10.070 (a) (1), requires that planting design shall coordinate new plant materials and their growth requirements with the climate, soil, orientation, water courses, *existing vegetation, fire prevention needs* (emphasis added), related natural resources and man-made facilities. Landscaping shall be an integral part of the overall project design and not simply located in excess space after parking areas and structures have been planned.” Also, Section 8310.070 (b) (5) – Plant Materials, states, “native plant materials or locally adaptable drought-tolerant plantings capable of surviving the prevailing climatic and soil conditions with a minimum of supplemental water shall be emphasized.”

The County respectfully disagrees with the comment. In the forested mountain communities it is impractical to require 100 foot setbacks from tree stands that can support a canopy fire regardless of the ownership of that tree stand. Regardless if it is on National Forest System lands or privately held lands, a crown fire can develop. The County believes that the U.S. Forest Service (USFS) has a responsibility to develop an adequate plan to maintain a healthy forest, which is a more fire resistant forest within 100 feet of developable lands. Through MAST, the USFS is now prioritizing and initiating fuels management projects that focus on “border zone” properties. Although the Natural Resources Conservation Service, whose primary mission is on private lands, has financed several of these projects they have been coordinated and managed by the USFS staff.

When President Bush signed the Healthy Forests Restoration Act (P.L. 108-148), federal support for fuel reduction efforts increased, not just on federal lands but also on state, private, and tribal lands. One important feature of the law is the priority consideration it affords to fuel reduction on nonfederal lands if they are identified in collaboratively developed Community Wildfire Protection Plans (CWPP’s). CWPP’s, when recognized by the Board of Supervisors, provide a forum for engaging citizens and local officials in confronting the problem. Currently, in San Bernardino County, there are three existing plans,
the Wrightwood Community Wildfire Protection Plan, Arrowhead Community Wildfire Protection Plan, and the Mill Creek Canyon Community Wildfire Protection Plan.

The California Fire Authority uses 1.5 miles as its estimate of the distance a firebrand can carry on the wind as a means of determining where houses may be in danger. Fire management considers the area in terms of the intermingling of structures with vegetative fuels, the potential for the structures themselves to become fuels that heighten the fire risk, and issues involving the emergency response, such as access and weather conditions. The General Plan Update and Development Code have considered this data with regards to managing the fuel load in the interface (the area where development meets wildland or in the case of “intermix”, where an area of development and the wildland intermingle) an absolute essential component of wildfire mitigation within the Fire Safety (FS) Overlay.
Oct 23, 2006

-- Via Electronic Mail (and subsequent postal service) --

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA, 92415-0182
Attn: James Squire

Re: San Bernardino County Plan Update, Draft Environmental Impact Report

Dear Mr. Squire,

These comments are submitted on behalf of the San Bernardino Mountains Group of the Sierra Club as part of our review of the Draft Environmental Impact Report (“DEIR”) for the proposed San Bernardino County General Plan and its related policies and documents (“GP” or “project”).

Members of our Group have been participating with the County and other mountain community members for several years now regarding this Plan, and we have taken an active and positive interest in its development.

Although we were disappointed not to have the full 60 days to review the DEIR as originally promised by the County, we hope that our comments are concise, helpful, and clearly expressed.

Because of the breadth and complexity of the DEIR, we have chosen to separate our comments into topical sections. Although issues do not always cooperate (they often “spill” into multiple areas) we hope this structure will assist more than confuse.

Forthwith:

DEIR Comments for the San Bernardino General Plan Update
San Bernardino Mountains Group Sierra Club
General Plan Alternatives Analysis

The DEIR does not adequately articulate or evaluate the alternatives to the proposed General Plan.

In addition to the flexible “rule of reason” cited at the beginning of the EIR Alternatives Chapter to govern the scope and nature of the alternatives analysis, CEQA section 15126.6 (d) provides that (highlight added):

“The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.”

And Section 15126.6(g):

“...The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.”

The alternatives analysis in the San Bernardino General Plan DEIR is clearly insufficient for a meaningful, informed evaluation.

As example, consider Alternative 3, “Development and growth in the Spheres of Influence of incorporated cities within the County”. The description is not only inadequate, the environmental impacts that have been described are misrepresented and misleading.

In particular, Alternative 3 was not analyzed as to where and how growth would be focused with any detail or mapping. Without a map identifying those areas that would most likely “benefit” from not being developed, and a helpfully broad analysis of the contrasts between the preferred project and Alternative 3, the public and decision makers cannot honestly claim that a meaningful comparison can be made.

The values (pro and con) of Alternative 3 were not revealed. For example, comparing the Circulation impacts of concentrating growth versus proliferating sprawl were not recognized or discussed. Other merits of concentrating growth were likewise not identified, although the benefits (economic, environmental, and quality of life improvements) are some of the reasons centralized growth is one of the tenets of the recent trends in “Smart Growth” advocacies of recent planning literature.

Moreover, the rejection of Alternative Three (as insufficiently described as it is) is erroneously based on this section’s conclusion that it is an environmentally inferior alternative. The justification for that is apparently based on Table V-1. Relative Comparison of Environmental Impacts Among General Plan Alternative, but the evaluations in the table are unexplained and unjustified, internally inconsistent and, in several cases, intuitively wrong.
For the purposes of this comment section, let's be clear about the Alternatives being compared to the preferred project, the proposed General Plan:

1) Continue to use the old General Plan (The “no-project” alternative)
2) Similar to the proposed GP, but with a targeted projection for less growth, and
3) Similar growth as the proposed, but with development steered toward land within the city sphere-of-influence (SOI) areas within the county

So, for example, in the first Table V-1 comparison, the Potential Aesthetic Impacts, the following is claimed:

“Alternatives No. 1 and 3 would create greater impacts on aesthetics than the proposed project or Alternative 2 would since these Alternatives would provide for more development in the unincorporated County area, impacting more scenic highways and vistas. Alternative No. 2 could create fewer aesthetic impacts since slightly less than half the development would be allowed by this Alternative which would only occur within city sphere-of-influence areas, adjacent to exiting (sic) land uses in these areas.”

Few of these claims are substantiated.

1) How does concentrating growth in SOI areas increase development in unincorporated areas?
2) If Alt 3 concentrates growth more toward urbanized environments, how can you assume there will be “more” impacts on scenic highways and vistas? Common sense tells us that scenic areas are more normally associated with unincorporated, non-SOI areas.
3) The last sentence appears to conflate Alt’s 2 and 3 into one alternative that combines reduced growth with focused growth. The conclusion is nonsensical.

Essentially, the Table is wrong. Without substantiation to the contrary, common sense would assume that Alternative 3 is environmentally superior to the preferred Plan.

Let's review the second impact, Loss of Agricultural Resources:

Here the DEIR makes the following claim:

“Alternatives No. 1 and 3 would create similar impacts on agricultural resources since these Alternatives would allow for similar amounts of development as the proposed project. Alternative No. 2 would create less of an impact on these resources since less than half of the amount of development would occur than would if the proposed General Plan update were approved. Also, new land uses would only be developed in city’s sphere-of-influence areas that are generally located close to existing cities in the County and away from areas used for agricultural production.”
Again, this analysis is unsubstantiated and logically confusing. More it contradicts the analysis of the impact immediately above:

1) Here it is claimed that Alt 1 “allows for similar amounts of development as the proposed project”. With respect to Aesthetic Impacts, the claim was made that Alt 1 “would provide for more development than Alt 2. This is internally inconsistent and an obvious indicator that the CEQA-mandated alternatives analysis was not given enough focus.

2) Again, Alt 2 has been conflated with Alt 3.

Let’s move on to the next impact (Degradation of Air Quality) (#3):

“Alternative No. 1 and 3 would create emissions that would degrade the air quality in the County by about the same amount as the proposed project would since these alternatives would allow similar amounts of new development as the proposed project. Alternative No. 2 would degrade the air quality of the County less than Alternatives No. 1 and 3 since less than half the new development would be allowed by this Alternative, reducing the amount of air emissions created by development allowed under this Alternative. Development allowed by Alternative No. 2 would still exceed state and federal air standards since the County is in currently in non-compliance for ozone and PM10 and any new development would make compliance with these standards more difficult.”

Once again, the analysis is patently wrong.

1) Notice that equating growth of Alt 1 to the proposed plan again contradicts the claim made in the Aesthetics analysis.

2) Here, the emissions resulting from Alt 3 is equated to the preferred plan because population growth numbers are similar. However, no recognition is made of the intuitively obvious reduction in commuter distances and vehicle trips if growth is not allowed to sprawl into non-city-SOI areas. By “directing growth into city SOI areas” County land use policies (especially commercial and industrial policies that greatly affect job creation) could have a dramatic and positive impact on air quality. By concentrating development near current and future “city” residents, the new General Plan could be used to improve and not just accept current problems.

This is an excellent example of the environmental benefits of Alt 3 that are not recognized in this GP Alternative comparison.

This Table is not looking very good.
Let’s review the next impact identified, “Loss of Biological Resources” #4:

“Alternative No. 1 would create the greatest impact on biological resources since this Alternative allows for more development in the County than the proposed project would. Alternative No. 3 would allow slightly less development than Alternative No. 1 so fewer biological resources would be impacted by new development allowed by this Alternative. Alternative No. 2 would create the least amount of impact on these resources since less than half the development would occur under this Alternative. Also, development that would occur as part of Alternative 2 would occur in city’s sphere-of-influence areas that are close to existing cities where biological resources are not as abundant as they would be if development were to occur throughout the County.”

Again, the DEIR is internally inconsistent and confusing.

1) Here, Alt 1 “allows for more development in the County than the proposed project”. This contradicts impacts #2 and #3 now, but it is at least consistent with #1 (Note: Still, it is very unclear how this decision is determined, since biological impacts are more a result of policies that direct the requirements for location and development standards of specific proposals than on the number of residents supported by them.

2) Once again, the benefits of Alt 3 are not articulated or explored, though, by implication, the conflated description of Alt 2’s growth reductions and Alt 3’s growth concentrations, one can probably assume the impacts of Alt 3 over the preferred plan is obvious.

3) Strictly from a Biological Resource perspective, the concept of concentrating growth and (by inference, the subsequent protection of currently undeveloped lands) Alternative 3 is very attractive and much preferable over the preferred Plan.

This is thoroughly discouraging. Rather than continuing to examine each impact at length, we ask the County to take responsibility instead. Please review and correct this egregious comparative analysis.

To summarize our concerns, not only about the individual analyses of the impacts, but about the rather obvious “mistake” that the proposed project is environmentally superior to Alternative 3, here is a minimum list of Alt 3 comparisons to the Preferred General Plan that should be changed:

1) Potential Aesthetics Better, not worse
2) Loss of Agriculture Better, not the same
3) Air Quality Better, not worse
4) Loss of Bio Resources Better, not worse
5) Hazards At least the same, but not worse, or why?
6) Hydrology and Water Concerns Better, not worse
7) Noise Less, not the same (new noise in quiet areas has more negative impacts)
As a result, of these corrections, it becomes obvious that Alternative 3 should be the preferred project. Not only does it apparently meet all growth challenges and economic needs as the current project, (no evidence to the contrary is supplied by the DEIR), **Alternative 3 is the environmentally superior alternative.**

In reviewing the rest of the Table, it quickly became obvious that we should include some other examples where the impact analysis is almost laughable.

Consider Hazards:

“Alternatives 1 and 3 would expose the most new development allowed by these Alternatives to existing hazards since they would both allow almost the same amount of development as the proposed project. Alternatives No. 1 would also result in the transport, use and storage of more hazardous materials as this Alternative would allow more new development than the propose project. Alternative No. 2 would expose the least amount of new development to existing hazards in the County and generate the least amount of hazardous materials since less than half of the amount of new development would be allowed by this Alternative than by the proposed project.”

1) This analysis appears to be not just inconsistent with other impact statements, but “internally” inconsistent as well:
   First sentence: Alt 1 (and 3) “would allow **almost the same** amount of development as the proposed project”

   Next sentence: “Alternatives (sic) No. 1 would allow **more** new development than the propose (sic) project”.

2) There is no justification for the determination that Alt 3 has less impacts than the proposed Plan, but the table reflects that decision. Why?

Consider Hydrology:

“Alternative No.1 would expose the greatest amount of new development to existing hydrology concerns in the County since this Alternative would allow more new development than the proposed project would. Alternative No. 3 would allow the same amount of new development as the proposed project would, although this development would be limited to city’s spheres of influence where hydrology conditions may not be as significant as in other areas of the County. Alternatives No 1 and 3 would generate the most water quality concerns since they would allow as much new development as the proposed project would. Alternative No 2 would generate the fewest hydrology and water quality concerns because less than half of the new development would be allowed as would be by the proposed project.”
1) Here, a case is made for hydrology impacts for Alt 3 being, first, about the same as the preferred Plan, because the development numbers are about the same, though, it would probably occur where conditions “may not be as significant” (same or less impact, wouldn’t you say?) but then, water quality concerns are raised because Alt 3 “would allow as much new development as the proposed project”. Hard to understand why the same development cause “more” problems, but apparently, it is “just so”. Why? Because the Table indicates, overall, Alt 3 Hydrology impacts are greater! This analysis is schizophrenic! It precludes informed public participation and informed decision making.

The GP DEIR Alternative analysis, is not only too simple, it is inconsistent and contradictory. Table V-2 is confusing and borders on insulting. The County should not accept the DEIR Alternatives analysis as adequate for an informed basis to approve the new General Plan.
Circulation

The Draft EIR fails to use appropriate modeling values to evaluate the traffic circulation capacity and Level of Service (LOS) conditions of the Mountain Region roads.

The DEIR then compounds that problem by not reasonably reflecting the County’s projected population growth in future traffic volume projections.

Fundamentally, the first problem stems from the County’s decision to use Generalized Traffic Tables from the Florida Department of Transportation. These tables, based on the Federal TRB 2000 Highway Manual are standardized and perfectly valid for many traffic-planning applications.

However, they should not be used to evaluate the capacities and implied Level of Service values for the roads and highways in the Mountain Regions of San Bernardino.

After reviewing the Florida’s DOT 2003 Quality/Level of Service Handbook, it is apparent that Table 4-2 (Areas over 5,000 Population, Not in Urbanized Areas) has been used for the Desert and Mountain Regions.

The following caution is taken from the FDOT Handbook, Chapter 4 (highlights added):

"Because FDOT’s Generalized Level of Service Tables (Tables 4-1 through 4-9) make extensive use of statewide default data, use of the tables generally should be limited to:

- Statewide or regionwide analyses where consistency in approach is more important than accuracy on any given roadway,
- As a screening device for initial problem identification,
- Analyses of future years where roadway, traffic and signalization characteristics are uncertain,
- Quick LOS estimates, and
- Use by lay people with little transportation analysis experience"

None of these are appropriate, and together, they explain why Table 4-2 should not be used in the first place.

In spite of repeated oral comments concerning these issues during Planning Commission hearings on the General Plan and EIR, County Traffic Consultants consistently ignored the underlying basis of the objection, choosing only to misrepresent the comments as a slight on the qualifications of the Florida Department of Transportation. They simply endorsed the usage of nationally recognized Florida’s Tables as acceptable common practice. Common practice is fine, but they should not be treated as universally applicable.
Road capacities are determined by the set of input characteristics used to profile the roads, and LOS values are determined by formulae, based on the assumed capacities. But the default characteristics of Florida’s Tables are not applicable to the Mountain Region. Possibly the Desert and Valley Regions, yes. But not the Mountain Region.

1) Florida’s Tables assume level terrain. (the Florida software program that generates the tables (LOSPLAN) only allows for 2 values, (level or rolling) because Florida doesn’t even have mountain conditions. Yet even a “rolling” value would decrease the capacity of the pertinent road entries. When contacted directly, a representative from the Florida DOT confidently expressed that the Federal TRB Highway Manual would not only recognize the more challenging characteristics of mountain roads, but that its recommendations for determining mountain road capacities would lower them below even the reduced “rolling” values generated by the Florida program model.

2) Examining the list of Florida Table defaults, one discovers the capacity calculations assume that the 2-lane road entries used to model the Mountains boast left-turn lanes. This is not true of most of the mountain roads analyzed, and in the absence of turning lanes, the assumed capacities would be reduced accordingly. Along with the determined LOS measures.

3) Finally, if one reviews the section on “Adjustments” to the FDOT tables, the capacity for 2-lane roads considered “Arterial” should be reduced a further 20%. This is a significant reduction. And since each Mountain Community Plan lists the majority of the monitored roads as Arterial, most of the capacities and LOS levels generated from the measured Average Daily Traffic (ADT) numbers should be reduced by this 20%. (See, for example, column one in Table 4, p. 33, in the Lake Arrowhead CP)

4) We also believe there should be some consideration of the unusual meteorological challenges Mountain roads face: snow, rain, and especially fog.

Finally, it is alarming that in spite of projections for up to 80% growth in the Mountain Region; the ADT’s for future 2030 traffic projections are remarkably unaffected. This is counter to reason, and should be explained (or more appropriately) corrected.

Projections for job growth are lower than population growth. This would “appear” to imply there will be increased commuting down the mountain, not less (as is inferred) by the projected traffic count tables.
Best example of this pervasive problem? See Table 4, p. 33 Lake Arrowhead CP. Observe that in a community that is expected to see 80% growth, Daley Canyon traffic is projected to grow by only 5%! Daley Canyon is one of only three arterials that lead off the mountain from Lake Arrowhead, and it is the closest and shortest path to Rim Forest, which is a significant commercial district, which makes this route very popular. Without a very convincing explanation as to why the public should accept such optimistic traffic forecasts, common sense and the “rule of reason” compels one to reject them.

For other examples, look at Highway 138 from Crest Forest to the 18, Lake Gregory Drive, Kuffel Canyon etc. This is a pervasive problem.

Additional Miscellaneous Comments on the DEIR Circulation analysis:

For the DEIR, the Circulation Background Report, and the Community Plans, the Mountain Road CMP Peak Load analyses are based on Sanbag’s CMP reports (primarily the CMP 2003 Update, but occasionally a 2001 update is referenced, though the source data is unchanged)

It should be noted directly that Sanbag’s Peak Load traffic counts used in the analysis of Mountain Region roads in the proposed 2006 General Plan were actually collected in 1999. (See: San Bernardino County CMP, 2003 Update, Appendix A, Table A-6 – … Two-Lane and Multilane Highway Level of Service)

Characterizations of “current” vehicular traffic should be appropriately “adjusted” for this time lapse, especially as the years from 1999 to 2006 saw a dramatic increase in mountain population.

See, for example, the Lake Arrowhead Community Plan, Table 5, CMP Facility Levels of Service, on p. 35. The data does not reflect an accurate measure of current use and is therefore misleading. The DEIR should not base its Circulation Infrastructure Impacts based on these numbers. (Nor the similar data and tables for the other Mountain Community roads.)

Based on all of the above traffic and road inaccuracies and mischaracterizations, it is exceedingly difficult for the public to review and evaluate the true projected environmental impacts of the proposed General Plan growth policies.

The Circulation elements of the General Plan and the DEIR Impact analyses based on them should be corrected and redone with a more accurate analysis. The DEIR should be recirculated with the higher and more proper traffic counts and degraded conditions so that the public can review and comment on the EIR in an informed way.

DEIR Comments for the San Bernardino General Plan Update
San Bernardino Mountains Group Sierra Club
10/25/2006
The Mountain Circulation Maps are inconsistent and poorly defined. There is no definition of Mountain Primary and Secondary Highways, much less of any policies or regulations or standards that might assist the public in interpreting or evaluating the appropriateness of these apparently arbitrary designations. For example, Burnt Mill Rd and Dart Canyon in Crest Forest are “unpaved”, as is the Fawnskin road out of Green Valley Lake, but each is still defined as a secondary highway.

This is confusing and suspicious, particularly when one reviews the Capacity Tables published for Mountain highways. There is no distinction made between the capacity of paved and unpaved roads. This should not be practiced, as it misrepresents the true road conditions of the Mountain Region, and ultimately the accurate analysis of environmental impacts of embracing new growth and approving new development.

**** IMPORTANT NOTE ****

These Circulation comments apply to all Mountain Roads in all of the Mountain Region. The DEIR Circulation Background report is faulty as well as the Roadway Condition Tables in each of the Mountain Community Plans.
Safety and Evacuation

The DEIR does not address the public’s expressed safety worry of the adequacy of the mountain communities’ emergency evacuation routes (based on their frightening experiences of the 2003 Old Fire). They worried not only if the roads are sufficient for the current mountain population but more importantly, for the projected growth the County is planning for.

Specific references in (at least) the Hilltop, Arrowhead, and Crest Forest (mountain) Community Plan documents that accurately highlight these evacuation concerns (as example, the following, from the Arrowhead CP, p. 76, highlighting added):

B. Evacuation Routes

Residents’ primary concerns regarding safety in their community revolve around fire protection and the need for improved evacuation routes.

In spite of this, page II-9 of the DEIR, in the discussion of identified public concerns, this unambiguous issue has been reduced to:

6. PUBLIC SAFETY

Mountain community residents identified emergency access and safety as two of their primary concerns. Fire protection services are also constrained due to the mountainous topography of the region and inadequate emergency access to communities in this area of the County.

Fire protection is an issue in the Mountain communities. The danger is especially high due to bark beetle infestation and forest densification that has led to insect and disease caused tree mortality with the corresponding heavy fuel loading.

A police/sheriff response time to calls was also identified by many residents in all three Planning Regions of the County as an issue of particular concern.

The county is correct to acknowledge that emergency access/egress is important for new development in the mountains and the residents are grateful for the implementation of the new fire safety overlay district that puts firmer safety constraints on design layout and building materials.

Please note that in addition to the police/sheriff response time to calls, (identified in paragraph three above) the mountain community meetings also expressed a clear and unambiguous desire for swift and dependable fire and medic response times.

However, for mountain residents, escaping our local development or immediate neighborhood is only half of the issue: Ultimately, we have to get down, off the mountain. And for this, the limited, constrained alternatives (Highways 18, 330, 138 at the macro level, and the congested mountain arterials and major intersections at the community level: Daley Canyon, Grass Valley Road, Hwy 189, Crest Forest Drive, Kuffel, Lake Gregory Drive, etc) are critical to
public safety and should have circulation and safety policies that both evaluate their adequacy and protect them accordingly.

It is exemplar of this evacuation issue that for three weeks in October 2006, at the height of the mountain fire season, of the four major emergency route roads identified in the DEIR background report to get off the mountain, two were closed. Highway 173 has been closed for over 3 years. Highway 330 has been closed off and on, for months and months.

It is not surprising that each of the Mountain Community Plans currently includes (from the Lake Arrowhead Plan, as example), the following Goal:

LA/S 2 Ensure that emergency evacuation routes will adequately evacuate all residents and visitors in the event of a natural disaster.

But there is a problem. There is no Policy or Program or Development Code that evaluates the ability of the evacuation routes to accomplish this very important public safety responsibility of the County.

Without an analysis of the capacity, and logistical adequacy of our roads, no amount of excellent and necessary planning policies like

LA/S 2.1 The County Fire Department shall work with the Public Works Department and Caltrans to ensure that an adequate road system and proper access are provided to ensure safe and efficient evacuation for residents and visitors of the mountain communities.

LA/S 2.2 Work with the various fire agencies, the Fire Safe Councils, Caltrans, the United States Forest Service, and the community to ensure the development of an effective firebreak system.

LA/S 2.3 Work with the United States Forest Service to explore opportunities to develop access routes for evacuation purposes only through the National Forest. Evacuation routes through the National Forest would only be used in the event that primary evacuation routes are found to be inadequate.

…will allow County planners or the public to make informed and reliable decisions about public appropriateness of new development and continued growth in our mountains, because there is no measurement or model of the required service.

As opposed to other critical infrastructure services, (like water, sanitation, etc), the County is reduced to guessing about the appropriateness of growth with respect to public safety. It is not sufficient to impose density, building, circulation and local egress/access standards at the parcel or subdivision level, it is also important to measure the impacts of growth on the ability of the larger infrastructure of the mountain’s evacuation route system to protect the public from catastrophic events.
There is extensive modeling software available for local planning of emergency scenarios that can be used. It should be incumbent on the County to preserve the safety of its residents by using appropriate tools and technology to measure/model evacuation route effectiveness of not only our current but also any proposed communities and developments. Thresholds of acceptable “risk” and capacity should be explicitly defined and quantified in the same manner as water, sanitation, and circulation. Without it, the public is uninformed and responsible planning is hamstrung.

The California 2003 General Plan Guidelines, (Chapter 4, Safety Element, p. 91) states, (emphasis added):

“Fire Hazard

The safety element must identify urban fringe and rural-residential areas that are prone to wildland fire hazards. It must also analyze systems, such as adequate evacuation routes and peakload water supplies, that can reduce fire hazards.”

The Guidelines suggest “topics for consideration during the data collection and analysis phase of preparing a safety element....”

*Emergency evacuation routes as they relate to known fire and geologic hazards*

◦ Evaluate the adequacy of access routes to and from hazardous areas relative to the degree of development or use (e.g., road width, road type, length of dead-end roads, etc.). (CI, O)
◦ Identify potential improvements necessary to avoid unreasonable community risk.

This issue should be part of the General Plan. It isn’t.

It also should be evaluated in the EIR in terms of the General Plan policies (or lack thereof) for how they will impact public safety.

The Initial Study for the General Plan EIR does identify this impact (in Section VII Hazards, subsection g, p.16):

*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan*

The Initial Study concluded there was no significant impact because of mitigations.

Yet, this impact was not identified in the DEIR. And of course, because the impact is missing, there is no description of the mitigations that are referenced in the Initial Study and used to justify reducing the impact to insignificant.
The DEIR should be corrected before it is used to review and approve the new General Plan project.

It is hard to imagine how the County’s planned growth projections for the mountain (up to 80% in Lake Arrowhead) will not impact (or impair as the Initial Study acknowledges) the ability of local agencies (like MAST, for example) to plan, prepare or execute an emergency evacuation plan.

The EIR should identify and evaluate the very significant and worrisome potential impacts of such significant growth. Especially with the knowledge that Caltrans has publicly stated that (within the timeframe of the proposed General Plan) there are no foreseeable expansions of any of the mountain’s major evacuation routes.

Ultimately, there are two ways to balance infrastructure with growth: increase the infrastructure or control the growth. If the County is unable to assure its residents that road and evacuation capacity is or will be sufficient for their safety, then the County should be developing policies that will manage projected growth instead.

It is also not appropriate for the County to defer responsibility for public safety infrastructure requirements to other agencies. Just because the infrastructure is not under county jurisdiction, does not absolve them from responsibly planning according to the constraints of the “real world”, whether they be water availability problems, pollution problems, geography or road infrastructure dependent on a State Agency like Caltrans. Planning, new development decisions, and the public’s safety are the responsibility of the County.

Without a proper EIR analysis of the adequacy of the current mountain’s emergency evacuation route system, and without an analysis of the impacts of the County’s planned projected growth in the mountain on that route system, developing reasonable General Plan policies to ensure mountain goals for public safety will be impossible.
Other Miscellaneous Comments on Evacuation Routes:

It is not sufficient for the County to simply identify evacuation routes and leave it at that. The General Plan update should include specific policies and development code that defines how the county will support and protect these routes from degradation to ensure their continuing effective use for evacuation. For examples, special egress/access conditions, recommended or minimum shoulder and right of way requirements, clearance and paving standards, etc should and could be implemented. Evacuation route *signage* should be considered. (As is discussed in the California 2003 Guide to General Plans)

In the absence of any “special considerations” for development and policy decisions that might protect the functionality of identified evacuation routes, there is no assurance that County Planners will act to do so. Without specific policies to guide the determination of the need for protecting evacuation routes from development impacts, the County is implicitly endangering the public. Unintentionally perhaps, but clearly, unnecessarily.

The DEIR should examine this lack of policy and standards for evacuation routes (especially in the Mountain Region.) This is a potentially serious breach of responsibility by the County, entrusted with the public’s safety.
Open Space Overlay Map (and District?)

The Draft EIR fails to adequately address the lack of policy and standards in the General Plan and Development Code as they might (and should) apply to the “grandfathered” 1991 Open Space Overlay Map incorporated into the proposed updated General Plan. (see page 1-7)

The public and the County should be concerned about the impacts of the new General Plan Goals and Policies on the critically important surviving wildlife corridors (and linkages) remaining in San Bernardino County. These corridors are the basis for a healthy, sustainable wildlife population, not just for the rare or endangered species, that are protected by State and Federal regulations, but for the common and not-yet-threatened wildlife that defines the natural environment that so enriches the County’s quality of life.

In spite of specific language in the 1989 General Plan that highlighted the importance of protecting these life-sustaining pathways in our mountain communities, We were dismayed to see that the proposed General Plan policies and Development code apparently ignore this important Overlay, including any of its attendant management requirements to prevent the impacts of new development on these resources.

The County’s apparent lack of interest in protecting natural habitat and preserving sustainable migration and movement corridors for animals not protected by state and federal law, is reflected in the glaring omission of even a working definition for wildlife corridor in any of the EIR or General Plan documents.

In spite of an occasional passing reference, the General Plan has essentially relegated wildlife corridor concerns to other agencies. This is not an appropriate response to the challenge of protecting our County’s important resources.

In spite of the General Plan’s specific inclusion (page 1-7) of the 1991 Open Space Overlay, the proposed Development Code contains no reference to it. As example, from the Development Code, notice the omission:
Table 82-2
Overlay Districts

<table>
<thead>
<tr>
<th>Overlay District Symbol</th>
<th>Overlay District Name</th>
<th>Applicable Development Code Chapter/Section Overlay Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>Additional Agriculture</td>
<td>82.09</td>
</tr>
<tr>
<td>AP</td>
<td>Agricultural Preserve</td>
<td>82.10</td>
</tr>
<tr>
<td>AR</td>
<td>Airport Safety</td>
<td>82.11</td>
</tr>
<tr>
<td>AH</td>
<td>Alternate Housing</td>
<td>82.12</td>
</tr>
<tr>
<td>BR</td>
<td>Biotic Resources</td>
<td>82.13</td>
</tr>
<tr>
<td>CP</td>
<td>Cultural Resources Preservation</td>
<td>82.14</td>
</tr>
<tr>
<td>FS</td>
<td>Fire Safety</td>
<td>82.15</td>
</tr>
<tr>
<td>FP</td>
<td>Flood Plain Safety</td>
<td>82.16</td>
</tr>
<tr>
<td>GH</td>
<td>Geologic Hazard</td>
<td>82.17</td>
</tr>
<tr>
<td>HW</td>
<td>Hazardous Waste</td>
<td>82.18</td>
</tr>
<tr>
<td>MR</td>
<td>Mineral Resources</td>
<td>82.19</td>
</tr>
<tr>
<td>NH</td>
<td>Noise Hazard</td>
<td>82.20</td>
</tr>
<tr>
<td>PR</td>
<td>Paleontologic Resources</td>
<td>82.21</td>
</tr>
<tr>
<td>SR</td>
<td>Scenic Resources</td>
<td>82.22</td>
</tr>
<tr>
<td>SC</td>
<td>Sign Control</td>
<td>82.23</td>
</tr>
<tr>
<td>SS</td>
<td>Sphere Standards</td>
<td>82.24</td>
</tr>
</tbody>
</table>

* It should be noted that Table 82-2 references to Code sections are "off"

Based on this omission, it is apparent that the new General Plan will (at least indirectly) result in increased destruction of these key open areas. This impact is not recognized or analyzed in the DEIR and should be. The loss of wildlife corridors and areas of special habitat and/or special policy requirements is significant. The public and decision makers should be informed of the ramifications of this "new" direction of non-protection by the County.

This new County "attitude" of dismissing the importance of open space and habitat protection (for unlisted species) is underscored by the proposed General Plan’s glaring lack of new constructive improvements in the definition, identification, evaluation, or prioritization of these important open space areas.

From the public’s point of view, how can someone understand the County’s concerns about preserving wildlife, and wildlife linkages, and corridors, if it declines to provide a meaningful explanation of what they are, along with a meaningful explanation of their importance and vulnerabilities, especially with respect to the (unanalyzed) planning decisions impacts of inappropriate development?
It is not reasonable to “generically” declare the General Plan’s biological impacts as significant and accept them as not mitigatable. (See DEIR Cumulative Impacts, Chapter VI) (language, copied as published):

**D. LOSS OF BIOLOGICAL RESOURCES**

Conclusion: Significant and Unavoidable Cumulative Impacts.

Rationale: The expected increase in population addressed in the General Plan is considered cause a (sic) significant unmitigated irreversible impact to biological resources.

In fact, specific policies can be developed that would address well-defined concerns such as protecting the county’s few remaining wildlife movement corridors from irreversible damage by inappropriate development intrusion and land use conversion (buffer requirements, zoning conversion, density restriction, etc.)

This claim of cumulatively significant impacts that cannot be mitigated is in direct contrast to the DEIR’s Chapter IV analysis of the:

“Biological Impacts of the proposed General Plan.

...Bio-7 Impact “...will not adversely affect directly or indirectly, candidate, sensitive or special status plant and animal species that may occur within the Mountain Region of San Bernardino County.”

The wildlife corridors and special county policy areas identified in the 1991 Open Space Overlay are not limited to federal lands. Development approvals and growth policies that are in the County’s purview will directly affect “candidate, sensitive, or special status plant and animal species”. Wildlife corridors span federal and county lands. A chain, a road, a path is only as good as its poorest or weakest point. If the county does not proactively endorse policies to protect the so-called “federal-land-based” corridors as they cross into the county lands of the Mountain Region’s urbanizing “canopy”, then these corridors will be non-functional and San Bernardino will not only be contributing directly to the loss of “listed” species, but to the degradation of more common species as well.

We recognize that the following DEIR Biological Impact analysis (p. IV-50) specifically mentions wildlife corridors and special policy areas as needing attention:

**Impact BIO-8**
The General Plan implementation within the Mountain Region will have the potential to adversely affect directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. While the majority of the land within the Mountain Region is under jurisdiction of the USFS, several specified habitats occur on private land that is subject to the County General Plan. The General Plan Update retains a number of policies at the interface between federal or state lands will provide minimum adverse effects on riparian and other sensitive habitats. Loss of sediment or artificial increased deposition of sediment and alteration of the natural flood cycle will affect downstream riparian habitat. The General Plan
will continue to implement state and federal protections to minimize adverse effects to water quality that would affect downstream riparian and other sensitive habitat. Several wildlife corridors and special policy areas are recognized on the Open Space Diagram. These areas require special review for impacts to biological resources on a project-by-project basis.

The problem is there don’t appear to be any DEIR Impact Mitigations that address this. And, more to the point, there are no Goals or Policies or Development Codes that ensure this “review” occurs.

The re-adoptions of the 1991 Open Space Map (containing the only specific identification of corridors in the Plan) is insufficient for a new 2006 General Plan. Without accurate, up-to-date information, and a program of continuous monitoring and modification of the viability of these important county resources, destructive developments will continue to be approved because there is no meaningful threshold of significance in evaluating impacts to wildlife corridors and similar areas.

The DEIR is unsatisfactory because it fails to analyze the impacts of this intentional omission.
Mitigation Monitoring (DEIR, Chapter VIII)

The Draft EIR fails to adequately inform the public as to how the EIR Impact Mitigations are related to the actual identified Impacts, making it nearly impossible to understand or analyze the sufficiency of the mitigations and the General Plan policies that implement them.

In spite of the conceptually helpful cross-referencing report described in Chapter 8 of the EIR, there is, in fact, no specific information provided in the Draft EIR that supplies the apparently “intended” disclosures. It is a “draft” format sample only and insufficient to aid the public review of the adequacy of the DEIR.

In terms of making this section truly meaningful, the cross referencing correlation should include the nexus relating the original Impacts as well as the Impact Mitigations to the General Plan policies.

Further, in spite of CEQA’s mandate to define and implement monitoring of the proposed mitigations of the project’s impacts, there is no defined commitment for many of these mitigations that will ensure an ongoing review and validation of the efficacy and enforcement of the proposed mitigations. Without establishing the specific linkages from Impact Mitigations to project General Plan policies, there is no validated “enforcement” of the mitigations. This appears to be in violation of CEQA requirements.

**CEQA Section 15126.4 (2)** Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.

One of the primary purposes of the EIR process is to provide the opportunity for informed public discussion and comment on proposed projects. It is the intent of CEQA, we believe, to require clear and reasonably helpful analysis. By not completing this section, the County has deprived the public with a reasonable tool to understand the General Plan’s environmental ramifications.

The Draft EIR should be updated, completed, and re-circulated with an adequate analysis of the relationships between the project’s Impacts, Mitigations, and the General Plan policies that address them. Only then, will the public be properly informed and able to fully evaluate the adequacy of the DEIR.
Cumulative Impacts (DEIR Chapter 6)

Recognized Cumulative Impacts identify the loss of biological and other natural environment resources as unavoidable and significant.

This section recommends the following:

"The expected increase in … will require the loss of native habitat, additional resource acquisition, and indirect effects based on residential and commercial actions. While the County cannot control population growth, efforts should be made to restrict residential and commercial land use conversion of natural areas. Unrestricted growth and urban sprawl will result in a significant adverse impact that cannot be mitigated. The increase in population will require the loss of resources and habitat that currently support native plants, animals, and habitat within the County and in areas that provide the County with resources such as electricity, water, and fuel.

As members of the public, keenly interested in the sustainability of the natural ecosystems in our county’s undeveloped areas as well as the extensive public lands that border it, we are unsure why a sensible mitigation of restricting growth on natural areas has not been identified in the GP EIR as a mandatory environmental mitigation for approval of the General Plan.

Please highlight this cumulative impact in the DEIR Executive Overview and Chapter IV with the appropriate mitigations required to address it."
Conclusion

In summary, the current DEIR is not internally consistent, accurate, or complete enough to merit acceptance. Because of the significant corrections that should be made, the DEIR should be updated and re-circulated so that the public as well as the County’s own internal staff and public servants can make better, more properly, more fully informed evaluations and decisions about the environmental impacts of the proposed General Plan.

Thank you for your consideration of our comments. We look forward to receiving a revised and more accurate EIR.

Sincerely,

Steven Farrell
Sierra Club, San Bernardino Mountains Group
RESPONSE O.2-1
The County respectfully disagrees with this comment. Although we believe the discussion of alternatives is adequate we will respond to this point through the following comments.

RESPONSES O.2-2, O.2-3, O.2-4
The County respectfully disagrees with this comment. CEQA Guidelines Section 15126.6(a) states, “There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason”. The County is providing a “matrix displaying the major characteristics and significant environmental effects of each alternative” to “be used to summarize the comparison” of alternatives per CEQA Guidelines Section 15126.6(d). Finally, the EIR does not reject Alternative 3. The EIR includes this Alternative in the EIR and evaluates it. Based on that evaluation, the EIR finds that the Alternative is not environmentally superior. The decision whether to reject alternatives will be made by the Board of Supervisors as the decision-making body.

RESPONSE O.2-5
The County acknowledges that Aesthetic impacts are largely subjective; following is the rationale for the conclusions presented in the Draft EIR.

Spheres of Influence are described in detail on page 1-116 of the Draft Land Use Technical Report. This Technical Report was included as an attachment to the project Draft EIR. Figure 1-12 (City and Sphere of Influence Index) in this Report shows the SOI for the 19 cities with SOI in the County. Under proposed Alternative No. 3, all new development proposed by the update to the General Plan would only occur in these areas. This new development would result in an increase in the future development of County unincorporated areas, i.e. Those areas which are adjacent to incorporated cities, but not yet annexed to the respective city.

A review of Figure 1-12 shows that SOI are located adjacent to the cities of Adelanto, Apple Valley, Barstow, Big Bear Lake, Hesperia, Needles, Twentynine Palms, Victorville and Yucaipa outside of the urban areas of the County. People traveling to and from those areas will be traveling on a number of scenic highways that have views of scenic vistas. The other ten cities that have SOI are located in urban areas that have a limited number of scenic highways or vistas, so residents/motorists in these areas will not significantly impact these scenic resources.

The aesthetic impacts of Alternatives No. 2 and 3 have not been mixed together (“conflated”) on Table V-1. Alternative No. 2 would result in less development in the County than Alternative No. 3 would, thus creating fewer aesthetic impacts associated with new development on undeveloped/underdeveloped land.

RESPONSE O.2-6
The County agrees that Alternative 3 would likely have less of an impact on Agriculture Resources than the 2007 General Plan. The rationale for this conclusion is that concentrating development in urbanizing Sphere of Influence areas would be less likely to disturb existing agricultural soils in more “rural” areas. Alternative 1 has more population and development than the project or the other alternatives while alternative 2 has about half the population and housing as the plans and alternative 3 is similar to the proposed project. Table V-1 has been revised to report “Loss of Agriculture Resources” as follows.
**IMPACTS**

<table>
<thead>
<tr>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of Agricultural Resources</td>
<td>Alternative No. 1 would create similar impacts on agricultural resources since these Alternatives would allow for similar amounts of development as the proposed project. Alternative No. 2 would create less of an impact on these resources since less than half of the amount of development would occur than would if the proposed General Plan update were approved. Under Alternative 3, new land uses would only be developed in city’s sphere-of-influence areas that are generally located close to existing cities in the County and away from areas used for agricultural production.</td>
</tr>
</tbody>
</table>

**RESPONSE O.2-7**

The County as Lead Agency respectfully disagrees that under “Degradation of Air Quality” on Table V-1 that equating growth of Alternative No. 1 to the proposed plan contradicts the claim made in the aesthetics analysis in this Table. The statement in this Table says that Alternative No. 1 and 3 would create emissions that would degrade the air quality in the County by about the **same amount** as the proposed project. Alternatives No. 1, 3 and the proposed project would all allow for new land uses that would support up to 400,000+ new residents that would generate air emissions that would degrade the air quality in the County.

The County agrees that air emissions generated under Alternative No. 3 could be less than the 2007 General Plan because of the reduction in commuter distances and vehicle trips if future growth was only allowed in SOI areas. Therefore, **Table V-1 has been revised to report “Loss of Agriculture Resources” as follows**

<table>
<thead>
<tr>
<th>IMPACTS</th>
<th>ALT #3 FUTURE GROWTH IN CITIES SPHERE OF INFLUENCE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degradation of Air Quality</td>
<td>Alternative No. 1 would create emissions that would degrade the air quality in the County by about the same amount as the proposed project would since this Alternative would allow similar amounts of new development as the proposed project. Alternative No. 2 would degrade the air quality of the County less than Alternative No. 1 since less than half the new development would be allowed by this Alternative, reducing the amount of air emissions created by development allowed under this Alternative Air emissions generated under Alternative No. 3 could be less than the 2007 General Plan because of the reduction in commuter distances and vehicle trips if future growth was only allowed in SOI areas. Nevertheless, development allowed by the 2007 General Plan or any of the three Alternatives would still exceed state and federal air standards since the County is in currently in non-compliance for ozone and PM10 and any new development would make compliance with these standards correspondingly more difficult.</td>
<td></td>
</tr>
</tbody>
</table>

**RESPONSE O.2-8**

The background explanation at the September 21, 2006 Planning Commission hearing regarding a holding zone concept of the 1988 Bear Valley Community Plan was provided for historical context of current land use designations that have been carried forward. It does not interject a new policy into the community plan and it has no application in the current plans. The inclusion of this information does not provide exceptions to the policies contained in the 2006 BVCP. The discussion is included to provide a context bridge to the 1988 Plan. The 2006 Community Plan is intended to establish clearly defined
community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. The intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan.

The “holding zone” concept is a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies, as well as, fire safety considerations. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing.

**RESPONSE O.2-9**

The County acknowledges the commenter’s opinion that Alternative 3 is the “environmentally superior alternative.” As is often the case in evaluating alternatives, this alternative would increase some impacts and decrease others. Based on the analysis in the EIR, Alternative 2 has been selected as the environmentally superior alternative. The commenters' statements regarding Alternative 3 will be considered by the Board of Supervisors as the decision making body when they decide whether to adopt or reject the alternatives which are set forth in the EIR.

Section 15126.6 of the CEQA Guidelines states the requirement for establishing an “environmentally superior” alternative as follows: “If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Since Alternative 1, the “no project alternative” is not characterized as “environmentally superior”, the cited CEQA reference does not apply. In any event, the Board of Supervisors’ decision on the 2007 General Plan, and certification of its Final EIR, will be guided by Section 21081 of the Public Resources Code, which requires findings of fact for each potential impact, based upon substantial evidence.

**RESPONSE O.2-10**

The most significant constituent of “Hazards” impacts is “development in fire hazard areas”; this impact cannot be mitigated to a level below significance (Impact HAZ 6). Alternative 2 is considered less of an impact than the 2007 General Plan due to lower overall population buildout; Alternative 3 is considered less of an impact due to less population growth focused in rural areas. Nevertheless, this Impact should not be considered mitigated to a level below significance for any of these three Alternatives. There does appear to be an inconsistency in the EIR statements about whether alternative 1 allows more development or the same amount as other alternatives. Alternative 1 does in fact contain more population, housing units and jobs that what was previously presented.

**RESPONSE O.2-11**

All Hydrology and Water Quality Impacts of the 2007 General Plan were judged to be mitigated to a level below significance, with the imposition of mitigation measures and General Plan policies stated within Section IV-H of the EIR. The relatively greater degree of impacts explained in Table V-1for Alternatives 1 and 3 do not imply that either of these Alternatives involves Hydrology and Water Quality Impacts that cannot be mitigated to a level below significance.
RESPONSE O.2-12
The County respectfully disagrees with this comment. As previously stated the County believes the discussion of alternatives is adequate, as modified above, and the County has responded in detail to all comments.

RESPONSE O.2-13
As explained in the response to comment O.2-14, the values used to evaluate the traffic circulation capacity and LOS conditions of the Mountain Region roads are appropriate for the long-range planning purposes of a General Plan. As explained on page IV-172 of the Draft EIR, the forecast future traffic volume projections for the circulation system are based on a regional travel demand model developed by the Southern California Association of Governments (SCAG), which is the designated Metropolitan Planning Agency (MPO) for southern California. This official model and its traffic projections are used in the development of the Regional Transportation Plan (RTP), the official long-range transportation planning and programming document for southern California. The traffic volumes used in the analysis of future conditions include trips generated from the County’s projected population, employment and commercial growth according to the land uses in the Land Use Element as well as additional regional and through trips generated from the official growth forecasts for other counties in the region contained in the SCAG model.

RESPONSE O.2-14
As shown in Table IV-O-8 of the Draft EIR, the level of service (LOS) thresholds applied to daily traffic volumes in the Mountain Region were those listed for a “Major City/County Roadway, Transitioning and Non-Urbanized Area” in Table 4-2 of the Quality/Level of Service Handbook published by the Florida Department of Transportation (FDOT). As explained in the introduction to the level of service tables in the Handbook, the tables are appropriate for “Generalized Planning Analysis,” which is defined as “a broad type of planning application such as statewide analyses, initial problem identification, and future year analyses” (p. 81 of the Handbook). Generalized planning can be contrasted with site-specific analysis or preliminary engineering. It is precisely the type of analysis conducted for a General Plan. A more detailed level of localized analysis with more precision is beyond the scope of a long-range planning study for such a large geographic area as San Bernardino County, which is the largest County in the United States by land area.

The text from the Handbook cited in the comment supports the use of the generalized level of service tables in the Draft EIR analysis. Specifically, two of the recommended applications cited are relevant to General Plan analysis: “as a screening device for initial problem identification,” and “analyses of future years where roadway, traffic and signalization characteristics are uncertain.” The General Plan analysis of year 2030 circulation conditions can be characterized as a screening analysis for problem identification. The approximately 10,000 miles of roadway in the County are analyzed to determine those most likely to experience level of service deficiencies under future conditions. The purpose of this analysis is to identify problem areas to guide policy-level decisions regarding development and infrastructure needs, not to identify specific design-level improvements required at individual locations.

Furthermore, the General Plan analysis is by its nature and definition a generalized analysis of future years with uncertain characteristics. Although the County has used the most up-to-date employment and population forecasts and a sophisticated regional travel demand model, traffic forecasting with a 24-year time horizon is necessarily an appropriate generalized level of analysis, which is uncertain at the localized level. Similarly, future roadway characteristics are uncertain. Localized improvements will almost certainly occur on at least some roadway segments in the Mountain Region before 2030; however, these locations cannot be foreseen at this time.
Use of the generalized LOS tables from the Handbook has long been accepted by transportation planning agencies in San Bernardino County. Tables from the Handbook are incorporated in Appendix A (“Level of Service Analysis Procedures”) from the County’s Congestion Management Program (CMP). The CMP is administered by San Bernardino Associated Governments (SANBAG), the County’s regional planning organization and its designated Congestion Management Agency (CMA). The County’s Public Works department regularly reviews and approves traffic studies prepared according to CMP guidelines.

Under Impact TR-1, the Draft EIR concludes that no roadway segments in the Mountain Region under County jurisdiction are projected to operate at unsatisfactory levels of service, except that “certain roadway segments of limited length in the Mountain Region may experience congestion and deficient levels of service in the future. It is anticipated that congestion from these deficient segments are relatively localized in nature, and as such are not considered significant environmental impacts in the context of the countywide traffic analysis. Furthermore, these localized deficiencies may ultimately be resolved through certain operational solutions such as signalization, lane striping, access control, additional road widening, etc. Overall, the impact is not considered significant on a countywide basis.”

The level of service (LOS) thresholds that the Draft EIR applies to daily traffic volumes to reach this conclusion are appropriate for the Mountain Region roads under County jurisdiction. The roads under County jurisdiction provide local access to the Mountain communities, as opposed to the State highways, which provide regional and subregional connectivity and carry mostly regional traffic. The County roads do not carry a substantial amount of truck traffic that would be negatively impacted by roadway grade. The Highway Capacity Manual procedures alluded to in the comment do not provide any adjustment to LOS calculations for grade for passenger vehicles, which are able to maintain their speed on grades.

The presence or absence of left turn lanes on the Mountain Region roads is precisely the type of roadway characteristic that is uncertain for 2030 conditions. As development occurs in the region, it is anticipated that localized roadway improvements will be implemented. The addition of left turn lanes is one of the types of operational solutions mentioned in the Draft EIR that are expected to be used to address potential future localized capacity deficiencies. Since such improvements can be used to address localized deficiencies, it is reasonable to consider that overall roadway performance will not be affected by such local deficiencies.

The comment’s assertion that the capacities for 2-lane arterials should be reduced by 20% appears to be based on a misunderstanding of the tables in the Handbook. The reduction referred to in the Handbook is based on the absence of left turn lanes, which is addressed above.

The capacity of all roadways is reduced by meteorological conditions, such as snow, rain and fog. Motorists expect additional delay under such circumstances. It is not reasonable to evaluate the overall adequacy of a regional circulation system based on such transient conditions. General Plan Circulation Elements and associated environmental analyses are based on “typical” and prevailing traffic conditions. Traffic analysis for long-range planning documents such as Circulation Elements and EIRs should not be conducted for unique weather, or special event and traffic conditions.

Under Impact TR-2, the Draft EIR concludes that extensive segments of state highway in the Mountain Region will experience capacity deficiencies by 2030. Adjustments to the capacity calculations to reflect the impact of terrain or of the presence or absence of left turn lanes would not change this conclusion.

**Response O.2-15**

As explained in the response to comment O.2-13, the future traffic volume projections are based on a regional travel demand model developed by the Southern California Association of Governments (SCAG). The traffic volumes used in the analysis of future conditions include the County's projected
population growth according to the land uses in the Land Use Element. Projected population, employment and commercial growth are not evenly distributed throughout the Mountain Region, and growth in traffic volumes is not linearly related to growth in population or employment. Some roadways will experience greater growth in traffic volumes than others, based on the growth in the area they serve. The greatest increase in traffic volumes in the Mountain Region will be concentrated on the State highways, which provide access to the region as a whole and also carry regional and through trips that do not necessarily correlate with projected local growth but are also influenced by growth in the surrounding areas. A review of the projected traffic volumes on the State highways in tables such as Table 4 of the Lake Arrowhead Community Plan shows forecast growth on many State highway segments of 30% to 80% (e.g., State Route 189 from SR-18 to Bear Springs Road). Also, the generalized nature of the regional travel demand model used for the General Plan Circulation Element and the EIR is such that it contains relatively large traffic analysis zones and a broad generalized highway network that does not include all collector and local roads. Some of the local trips that are made in these models by definition and design are intra-zonal trips that stay within the zone, are made on the local and collector streets and are not reflected and shown on the arterial and State Highway network.

**Response O.2-16**

It is not clear why the comment infers that the Draft EIR suggests that there will be less commuting down the mountain in the future. To the contrary, under Impact TR-2, the Draft EIR concludes that all State highways between the mountain and the San Bernardino Valley will experience increases in traffic volumes and capacity deficiencies in 2030, including SR-18, SR-38, and SR-330.

**Response O.2-17**

As described in the response to comment O.2-15, growth in traffic volumes will not be evenly distributed throughout the Mountain region. Growth on an individual road depends not on existing development in the area it serves, but on the amount of additional development expected in the future, plus growth in other surrounding areas as well as through traffic. While traffic volumes on Daley Canyon Road are not forecast to grow substantially, traffic volumes on parallel routes are expected to grow quite a bit. For example, Table 4 of the Lake Arrowhead Community Plan (referred to by the comment), projects a 60% increase in traffic volumes on SR-173 between SR-189 and SR-18, and a 49% increase on Kuffel Canyon Road through the same area.

Highway 138 from Crest Forest to SR-18 is forecast to experience a 36% increase in traffic volumes. Traffic volumes on Kuffel Canyon Road were described above. The forecast future traffic volume on Lake Gregory Drive presented in the Draft EIR is valid. However, the relative increase compared to existing traffic volumes is understated because a roadway detour was in effect during the period that the counts were conducted for the traffic volume that was used to determine the existing volumes. Thus, the existing volume on Lake Gregory Drive is overstated.

**Response O.2-18**

The County acknowledges this information. The Congestion Management Plan is revised every two years. However, much of the traffic count data is not updated between revisions. The Circulation Background Report and much of the Community Plan analysis were prepared prior to the release of the 2003 revision of the CMP.

**Response O.2-19**

The County acknowledges this background information.
RESPONSE O.2-20
The County acknowledges this information. The Lake Arrowhead Community Plan states that the data in Table 5 are from the 2001 update of the CMP. These were the most recent data available in early 2003 when the development of the Community Plans and the General Plan was initiated. The circulation impacts identified in the Draft EIR are not based on these data. Rather, the impacts are based on the forecast traffic volumes for 2030 from the regional travel demand model, which includes the forecast future traffic from the projected Land Use Element as well as regional growth in surrounding areas and through traffic on major facilities and State Highways.

RESPONSE O.2-21
The County respectfully disagrees with the comment claiming there is a need to re-circulate the Draft EIR. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 6.

The County respectfully disagrees that the traffic analysis “should be corrected and redone with a more accurate analysis.” As noted in the response to Comment O.2-20, the Community Plans and the General Plan identify the year during which the data concerning existing conditions were collected. The data used were the most recent data available in early 2003 when the development of the Community Plans and the General Plan was initiated. The circulation impacts identified in the DEIR are not based on these data. Rather, the impacts are based on the forecast traffic volumes for 2030 from the regional travel demand model, which includes the forecast future traffic from the projected Land Use Element as well as regional growth in surrounding areas and through traffic on major facilities and State Highways. Under the methodology used to forecast future volumes, which follows standard practices for regional traffic forecasting, the use of more recent data to document existing conditions would not result in a change in the forecast future volumes or the identification of project impacts.

RESPONSE O.2-22
Policy CI 5.1 states that the County will implement appropriate design standards for all types of highways as shown in Chapter 83.23 of the Development Code. The correct reference is to Chapter 83.12 of the Development Code, and the EIR has been revised appropriately. Chapter 83.12 defines the right-of-way and roadway widths for Mountain Major Highways, Mountain Secondary Highways, and other roadways specified on the circulation maps.

The County respectfully disagrees that the EIR’s traffic analysis, by not having a distinction between paved and unpaved roads prevents an “accurate analysis of environmental impacts of embracing new growth and approving new development.” Consistent with standard engineering practice, the roadway designations on the circulation maps do not reflect a roadway’s current status. Rather, they reflect the roadway’s planned, ultimate configuration, when the circulation plan is fully implemented at a long-range future horizon. All roadways shown on the circulation maps will be paved.

RESPONSE O.2-23
The County respectfully disagrees with the comment. Responses to Comments O.2-18 through O.2-22 address this comment.

RESPONSE O.2-24
The County respectfully disagrees with the comment. The issue of evacuation routes is addressed in the Draft EIR. The Draft EIR considers the evacuation routes that have been identified in General Plan Regional Goals V/S 1, M/S 1, and D/S 1 and Policies V/S 1.1, M/S 1.1, and D/S 1.1. The topic of
wildland fire as a public safety hazard is addressed in Chapter IV, Topic G., Hazards and Hazardous Materials beginning at page IV-71 of the Draft EIR. Impact HAZ-6 specifically evaluates safety hazards to the public residing in and visiting the mountain region of the County. Mitigation Measure HAZ-18 calls for the use of the Fire Safety Overlay requirements contained in the County Development Code as the primary method of reducing impacts of wildland fires on future development within the mountain region. Also refer to Categorical Response No. 3. The significance conclusion for impacts related to safety hazards at page IV-83 provide disclosure to decision-makers and the public that, in spite of extensive fire safety development requirements, there still remains a significant unavoidable safety impact due to the inherent risks associated with residing in high fire hazard areas.

Evacuation routes were evaluated more directly as a traffic circulation issue in the Transportation/Traffic impact discussion in Chapter 4, Topic O beginning on page IV-141. The specific issue of evacuation routes is addressed in Impact TR-6 at page IV-177. Transportation Mitigation Measure TR-18 specifically addresses programmatic mitigation to reduce potential safety impacts related to adequate evacuation routes. Mitigation Measures TR-1, TR-12, TR-13, TR-14, TR-16 and TR-18 all contribute collectively to creating and maintaining a safe and efficient circulation network that, in turn, provides for safe and effective evacuation routes. The issue of evacuation routes is not an isolated issue that can be considered independent of the entire fire safety approach taken by the County. Evacuation routes are part of the physical infrastructure that, in turn, supports the institutional infrastructure of fire safety and evacuation planning. The pre-planned evacuation strategy prepared by the Mountain Area Safety Task Force (MAST) in early 2003, prior to the occurrence of the Grand Prix and Old Fires, was instrumental in the successful evacuation program for these two catastrophic wildland fires. Various evacuation scenarios were considered in the strategy and incorporated pre-planned routes that facilitated the successful evacuation of the affected mountain areas.

MAST was formed in late 2002 to promote fire safety in the mountain communities. MAST is comprised of seven local, state and federal agencies consisting of San Bernardino County Fire Department, California Division of Forestry and Fire Protection, U.S. Forest Service, State & Local Office of Emergency Services, San Bernardino County Sheriff’s Department, California Highway Patrol and MAST was utilized for critical, strategic, and tactical decisions throughout the pre-planning and post-fire evaluation process. The MAST effort proved critical to a successful evacuation effort when winds shifted and blew the fire into the mountain communities. 70,000 citizens from the communities of Arrowhead Springs, San Bernardino, Del Rosa, Devore, Crestline, Crest Forest, Rim Forest, Running Springs, Highland, Skyforest, Cedarpines Park, Valley of Enchantment, Twin Peaks, Summit Valley, Lake Arrowhead, Los Flores Ranch, Holcomb Valley, Oak Springs Ranch, Blue Jay, Cedar Glen, Hook Creek, Green Valley Lake, Arrowbear, Lucerne Valley, Apple Valley, Squint Ranch, Silverwood Lake, Baldy Mesa, Oak Hills, and South Hesperia were evacuated. At the height of the fire over 4,000 firefighters were assigned to the fire and were successful in protecting over $7.5 billion in residential and commercial infrastructure. The Old Fire was contained by November 4, 2003.

RESPONSE O.2-25, RESPONSE O.2-26

Evacuation planning is an important consideration of MAST. As an active member, Caltrans has been the lead in improving evacuation routes. MAST specifically identified all major highways and local arterials for dead tree and fuels clearances. Numerous cooperative multi agency projects that address improving evacuation routes have been undertaken by Caltrans, USFS, CDF, National Resource Conservation Service and both the County Transportation and the Fire Department. Most notably, when the Cal Trans budget could no longer support these projects, the NRCS initiated funding on both private lands as well as on USFS right of ways. The most notable projects were Hwy 18 from Waterman Canyon to Lake Gregory Drive, State Route 330 from Forest Falls Drive to the Big Bear Dam; and all of SR 138 to Silverwood Lake. These projects have improved all evacuation routes and other mountain arterials and substantially
reduced the potential for evacuee entrapment through the reduction of fuels along these routes and the elimination of potential traffic blocking obstructions.

Caltrans has continued to aggressively augment construction projects that reinforce and repair all State Routes. These improvements include work on Hwy 18 at the Narrows, slope stabilization just above the Crestline Cut Off, and the reinforcement of State Route 330 just above Highland below the lower passing lane.

Fire Safe Councils have ongoing public education programs to provide information on the location and use of evacuation routes. These programs have elements that include both resident populations as well as tourists. The Big Bear Fire Safe Council through the Big Bear Chamber of Commerce provides information related to evacuations. To enhance these programs the County Board of Supervisors approved a contract with a public relations firm to expand the reach of public education programs related to all aspects of the emergency and including issues such as evacuation education and training.

The Sheriff’s Office and local Fire Agencies working through the Mountain Mutual Aide Committee and in cooperation with MAST have implemented advanced emergency evacuation strategies that are now becoming the model in other areas of the Country. Traditional evacuation methodologies involve evacuating citizens at risk just before the fire threatens. Rather than waiting until the last minute and evacuating as an immediate need, MAST agencies in the Incident Command determine strategic trigger points well in advance of the fire front. This practice serves two functions. First and foremost it maximizes the population that can safely evacuate and gives them more time to consider the evacuation and results in less if not no panic. Secondly, it allows for a much safer and effective fire fighting response because streets and roads are not clogged with evacuees and are open for swift and efficient emergency equipment deployment.

**RESPONSE O.2-27, RESPONSE O.2-28**

The County is very concerned about the safety of the mountain communities, especially in a disaster response situation. There are many variables to evacuation of mountain top areas including the type of disaster, the location of the disaster, lead-time in evacuating, the cooperation of the citizenry, etc. The County's growth policies have been designed around the physical characteristic of the mountain areas, setting densities, and reducing densities based on slope, setbacks, “pay your way infrastructure,” etc. Therefore, the County believes it is tailoring growth to the characteristics of mountain areas. In addition, road improvements in conjunction with Caltrans improve egress from the mountain. The road closure and reconstruction of State Route 330 was a strategic reinforcement effort of the roadway perform by Caltrans directly related to emergency planning with the objective of improving the road integrity during a flood event. While it is impossible to predict fire emergencies and evacuation needs and possible road closures, contingency planning by MAST anticipated possible trigger points (fire front proximity to mountain communities) and choke points (roadway constraints or blockages) in developing evacuation strategies during planning that occurred prior to the Grand Prix and Old Fires. The planning and execution of evacuations during the two wildfire incidents were assisted by GIS applications. According to the Blue Ribbon Fire Commission report, the applied science and agency coordination proved to be the formula for success for fire incident management, including evacuations. Emergency responders, operations commanders, government officials, and others used GIS software for daily briefings and strategy sessions. Some of these sessions included the use of ArcGIS 3D Analyst 9 software’s ArcGlobe application to provide 3D mapping of fire areas and communities. Officials viewed and analyzed 3D GIS data while navigating landscapes in a virtual environment. The technology helped firefighters and fire managers become quickly oriented to factors such as vegetation types, slope characteristics, and values at risk. In addition, ArcGlobe was used to help organize evacuations, locate fire lines and model fire progression, and help predict fire behavior. Fire, law enforcement, local, state, and federal officials and others worked with a common spatial database and visualization tool for decision making and
collaboration. This collaborative evacuation planning process will continue in the future under the responsibility of MAST and the County Office of Emergency Services (OES). See Response O.2-29 below regarding the addition of a program to formally acknowledge this process in the General Plan.

**RESPONSE O.2-29**
The County respectfully disagrees with the assertion that the issue of Emergency Evacuation Routes is not addressed in the General Plan. To the contrary, General Plan Goal S9 (see below) and supporting policies S9.1 and S9.2 provide continued assessment of emergency access needs and to ensure that future development provides no less that two points of emergency evacuation. This goal and Policy S9.2 are further implemented by Programs 1 and 3 requiring compliance with provisions of the Fire Safety Overlay requirements of the County Development Code for evacuation access during wildland fires. Program 4 under this policy requires consideration of topographic and landform constraints on emergency access design. Program 2 under Policy S9.2 addresses emergency access issues associated with a major earthquake. Program 4 also applies to Program 2. Also see Responses O.2-25,26,27 and 28 regarding analysis and adequacy of the evacuation routes. With regards to consideration of areas that are prone to urban fringe and rural-residential wildland fires, the Safety Section of the Draft Background Report identifies the Figures 7-17A, B, and C depict spatially the SRA-Fire Hazard Severity Zone’s for the Valley, Mountain, and Desert Regions.

**GOAL S 9.** The county’s emergency evacuation routes will quickly and efficiently evacuate all residents in the event of wildland fires and other natural disasters, and will ensure adequate access of emergency vehicles to all communities.

**POLICIES**

- **S 9.1** Maintain projected emergency access needs in the annual review and approval of the county's Capital Improvement Program.

- **S 9.2** Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

**Programs**

1. Require compliance with the provisions of the access standards of the Fire Hazard Overlay District, the Subdivision Design and Improvement Standards of the county Development Code and, where applicable, Planned Unit and Planned Residential Development standards.

2. Access for development projects will be considered in conjunction with the location of active faults through the development review process. Access across faults will be discouraged where point(s) of access can feasibly be located outside of fault areas.

3. Through the provisions of the Fire Hazard Overlay District and the development review process, require projects to provide immediate vehicular access to the perimeter of structural development within projects adjacent and exposed to wildlands.
4. In areas with predominant natural slopes greater than 30 percent and in canyon mouths and ridge saddles. Access roads will be the shortest length feasible. Grading for roads will be the minimum necessary to provide adequate access.

However, in order to provide enhanced attention and focus on evacuation planning to that currently included in the General Plan, the County is adding an additional Program 5 to implement Safety Element Policy S 9.1. This program will institutionalize, and carry forward into the future, the evacuation planning that has been preformed by MAST, which has been thoroughly described above. Program 5 to Policy S 9.1 is added to the EIR as mitigation measure HAZ-20.

**Mitigation HAZ-20**

The Office of Emergency Service (OES) shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

**Response O.2-30**

The policies and programs cited in the response above, combined with implementation of the Fire Safety Overlay requirement of the Development Code serve as the mitigation for the impact identified in your comment. Furthermore, County Fire Department personnel serve on the Mountain Area Safety Taskforce and review and improve emergency evacuation procedures on a continuing basis.

**Response O.2-31, O.2-32**

In addition to the continued commitment on the part of MAST and the individual agencies that comprise the organization to planning for future wildland fire incidents and associated evacuation needs, there are several growth management policies contained in the Land Use Elements and Circulation/Infrastructure Elements of the mountain community plans that provide continued vigilance on the part of the County to evaluate future growth. These policies commit the County to ensuring the infrastructure keeps pace with development. Both state planning and zoning law and CEQA require monitoring of the status and implementation of the General Plan and of mitigation measures, respectively. These state requirements compel the County to fulfill its responsibilities to monitor and manage development consistent with the General Plan policies.

**Response O.2-33, O.2-34**

The County agrees with the comment regarding roadway management. Both the General Plan circulation/infrastructure policies and the Development Code standards address the very road design specifications that are cited in the comment as important. Potential evacuation routes are published on the MAST website, however, permanent signage is not practical as the execution of a specific evacuation plan will vary depending on the specific location of a particular fire and relationship to a particular community. A variety of methods are actually employed to direct people to proper routes, including radio announcements, official websites, door-to-door notification, drive-by announcements by loudspeaker from County Sheriff’s, Highway Patrol or other official vehicles, safety officers posted at key intersections directing traffic, signs that are posted for the specific incident at hand, and others.
RESPONSES O.2-35, O.2-36, O.2-37

The County disagrees that the EIR fails to address policies as they apply to the existing open space overlay map that the EIR omits any definition of wildlife corridor, and relegates to other agencies, and the Development code does not reference the overlay. The plan includes a number of policies to be implemented by the County as land use regulatory agency. Also, protecting biological resources necessarily involves other agencies because of the jurisdiction of agencies such as DFG and USFWS. The County continues to be committed to protecting biological resources.

RESPONSE O.2-38

The County disagrees that the EIR should not find impacts to be unmitigatable. Even with mitigation to be applied in implementation of these plan policies through particular projects, and even with County participation in long range plans, there is going to be some development that is going to affect habitat and species. The appropriate and cautious approach under CEQA is to find those impacts to be significant and unavoidable with mitigation to lessen the impact.

General Plan implementation in the Valley, Mountain, and Desert Regions has the potential to adversely affect local, state, and federal protected wildlife and plant species and their habitats (e.g. desert tortoise, Mojave ground squirrel, and so forth). The Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 – 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 – 9 in Attachment 1).

General Plan implementation in the Valley, Mountain, and Desert Regions has the potential too: Result in direct (e.g., destroy individuals, mortality, removal, and so forth resulting from grading, excavation, etc.) and indirect (e.g., temporary displacement due to noise, dust, and vibration from development-related activities) adverse impacts to numerous relatively common native and non-native plant and animal species, as well as migratory birds, raptors, and other local, state, and federally protected species; Restrict wildlife and plant usage of the Valley, Mountain, and Desert Regions including species movement and dispersal corridors, including buffers associated with local, state, or federally managed lands; Deter individual animals from utilizing the Valley, Mountain, and Desert Regions for foraging or nesting until the disturbance conditions are eliminated or the individuals become accustomed to the disturbance; Change local migration or foraging patterns and habitat availability within the Valley, Mountain, and Desert Regions; Disrupt breeding activities and annual production within the Valley, Mountain, and Desert Regions; Disturb or degrade the local quality or quantity of potentially Clean Water Act (CWA) and/or California Department of Fish and Game (CDFG) Code 1600 (et seq) jurisdictional features (e.g. wetlands and drainages) and modify habitat connectivity (e.g., upland and breeding connectivity, movement corridors, landscape linkages, and so forth) within the Valley, Mountain, and Desert Regions; Increase the amount of a series of often irregularly planned ecological light pollution events (e.g., direct glare, chronically increased localized illumination, and temporary, unexpected fluctuations in lighting) events

---

5 Ecological light pollution may potentially cause wildlife to experience orientation, miss-orientation, or disorientation from additional illumination (Longcore and Rich, 2004). Wildlife can be attracted to, or repulsed from, the light altered environment, which in turn may affect foraging, reproduction, communication, and other behavior factors (Longcore and Rich, 2004; Hill, 1990; and Schwartz and Henderson, 1991).
and the quantity of non-native species within the Valley, Mountain, and Desert Regions; Modify local, state, or federal administered lands that possess wildlife movement and dispersal corridors, and rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance (see Table 9 in Attachment 1); Alter noise and light regime (frequency and duration) within portions of the Valley, Mountain, and Desert Regions thereby affecting long-term occupancy and productivity for many wildlife species; and Reduce wildlife intra-species communication distances and distort sounds (TNCC, 1997) within the Valley, Mountain, and Desert Regions.

As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, or compensate for adverse impacts to the aforementioned protected wildlife/plant species, and CWA / CDFG jurisdictional features. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals (see County of San Bernardino 2007 General Plan; Section V–11 Conservation Element) which is consistent with other regional planning documents. Nonetheless, the intended use of this section of the EIR is to disclose and evaluate the environmental baseline conditions for the San Bernardino County General Plan. This section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. The General Plan does not address specific development proposals; it establishes an overall policy framework that the County will use as a means of evaluation. To that end, the EIR section focuses on the broad policy implications of implementing the General Plan as a whole. Therefore, it cannot be concluded at this time with reasonable certainty that General Plan implementation’s within the Valley, Mountain, and Desert Regions will be mitigated to a level below significance.

RESPONSE O.2-39
The County agrees that corridors are not limited to federal lands. San Bernardino County has been identified as having important landscape linkages that support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). Additionally, General Plan implementation within the Valley, Mountain, and Desert Regions may conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (see attached Table 7 - 9). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors in addition to protected wildlife/plant species. Furthermore, the County has supported and/or participated in the following adopted comprehensive planning documents: City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly; Upper Santa Ana Wash Land Management and Conservation Plan; Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan.

RESPONSE O.2-40
The General Plan does not address specific development proposals; it establishes an overall policy framework that the County will use as a means of evaluation. General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals and
determining whether subsequent projects will be required to include surveys and/or specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the movement and dispersal corridors, protected wildlife/plant species, and so forth. Please review the General Plan Section V–11 Conservation Element for a detailed description of the aforementioned Goals and Policies. Specifically, CO 1.1 which states that “the County will coordinate with appropriate agencies and interested groups to develop, fund and implement programs to maintain the County’s natural resources’ base;” and CO 2.1 which asserts that “the County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.”

**RESPONSE O.2-41**

The County respectfully disagrees with this comment. The Mitigation Monitoring Program will be provided in its entirety concurrent with the County of San Bernardino Board of Supervisors’ certification of the Final Environmental Impact Report (FEIR) as authorized in Section 21081.6 of the Public Resources Code. Also, the County respectfully disagrees with the need to re-circulate the Draft EIR. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 5. In addition, including mitigation requirements as policies in an adopted general plan has been upheld as a means of complying with mitigation monitoring requirements, because the mitigation measures are then legally binding. See “Rio Vista Farm Bureau v. County of Solano (1992) 5 Cal. App. 4th 351.”

**RESPONSE O.2-42**

The County agrees that cumulative impacts affect biological and other natural environment resources.

**RESPONSE O.2-43**

The County respectfully disagrees with the need to re-circulate the Draft EIR. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 6.
October 23, 2006

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Attention: James Squire

RE: Draft Program Environmental Impact Report
San Bernardino County 2006 General Plan Program, SCH #2005101038

Dear Mr. Squire,

The San Bernardino Valley Audubon Society appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the revision of the County General Plan, which includes various new community plans and an updated Development Code.

We commend the County for the extensive research, public participation and thoroughness that went into the preparation of this comprehensive document. We recognize that the organization, clarity and accessibility of the contents are a distinct improvement from the original. This is an epic achievement overall, for which the advanced planning staff deserves considerable recognition and appreciation.

Of course it is also a monumental undertaking for the public to carefully review and properly digest such an enormous document and its background reports in the effort to constructively critique the results. We believe the County was unnecessarily stingy in the limited time that was granted to the public for reviewing and studying such a massive document. By the time that the compact discs were fully available to the general public, there were less than forty days for this process, for which a full sixty days would have been more appropriate.

Nevertheless, we have identified a few areas where we believe the DEIR and the Plan should be strengthened in order to avoid inconsistencies and increase the potential of achieving the stated goals. In regard to Audubon's special focus on biological resources and the County's primary mission of ensuring public health and safety, our comments are chiefly directed to these areas. They include: the need for habitat conservation plans in the mountains and the valley, discrepancies between the stated goals for biological resource protection and the resultant policies and practices, inadequate attention to the importance of wildlife corridors, insufficient acknowledgement or evaluation for the extreme danger of wildfire in the Mountain Region, failure to address the critical issue of evacuation potential in the mountains, inconsistencies between goals/policies and zoning, and an unsatisfactory discussion of alternatives.
Improvements in these areas will improve the effectiveness of the General Plan and better ensure that the unique quality of life in the County will be adequately maintained into the future.

Habitat Conservation Plans
While we notice that a major habitat conservation plan is underway for the West Mojave Desert area, Audubon is disappointed that the prospect for a valley habitat conservation plan has been lost in the transition from the old General Plan to the revised General Plan. This is an issue that is not adequately addressed in the DEIR. Whereas the prior General Plan acknowledged the immediate need and value of regional comprehensive habitat conservation plans, the revised Plan downplays this issue significantly. We believe that the DEIR needs to offer an explanation why there has been such a major divergence between the two General Plans on this important question. Certainly long-range regional planning would be greatly facilitated and enhanced, if advance efforts were made to identify areas of significance and devise cooperative methods for protection, compensation and mitigation.

Old policy BI-5 stated that "there is an immediate need to establish long term comprehensive plans for native species." It further indicated that "such programs or plans shall be prepared according to guidelines outlined..." in the previous General Plan's Environmental Impact Report. In the new General Plan a similar policy is toned down in policy CO2.3 to read "the county will establish long-term comprehensive plans for the county's role in the protection of native species..." Program 1. under this policy states: "Prepare or participate in Habitat Conservation Plans when there is sufficient support of such plans, and adequate funding for their preparation, and a strong likelihood of success."

The DEIR states on page IV-48 in the section, Impact BIO-6, that: "The General Plan implementation relies on the development of Habitat Conservation Plans and mitigation habitat site creation by others to mitigate adverse effects of development." It further states that "The General Plan does not include any specific Habitat Conservation Plan, policies, or ordinances for any wildlife or plant species or habitat." These statements are repeated for each of the three county regions.

The county's prior history in this regard is not directly referenced. In the past, the County entered into a process with government agencies and local cities to lay the groundwork for a Multi-Species Habitat Conservation Plan, but later abandoned the process. While certain conclusions can be inferred from the change in policy, the DEIR for the revised General Plan seems like the appropriate place to explain more specifically why such a major planning effort was no longer being considered. If particular problems were encountered in the former process, it would be helpful to point out how they are being addressed differently in the new Plan. Also considerable data was collected as part of the Valley Region habitat conservation planning process. It would be valuable to know how that data is being incorporated into the new Plan.

Audubon believes that the original goals, the data, and the lessons that resulted from this important planning process should be evaluated in the analysis of the impacts of the newly revised General Plan. They represent an important component of the conservation planning process.
It is noted in the new General Plan's Conservation Element on page V-2 in the section on "Purpose" under the subheading of input from the public that "The adjoining County of Riverside is developing and implementing a Multi-Species Habitat Conservation Plan," explaining that it addresses both development needs and conservation opportunities to protect diverse biological resources. The unstated but implied question that arises from the reference to this particular fact seems to be "why isn't San Bernardino County also considering this option?" We have noticed that newspaper articles annually list the dramatic difference between how much state and federal money goes to Riverside County for land conservation purposes versus how very little goes to San Bernardino County by virtue of their different planning efforts. Is San Bernardino County subjecting itself to avoidable significant adverse impacts by not being more proactive in this area?

Biological Resources Protection

The DEIR for the revised County General Plan indicates that impacts to biological resources resulting from current zoning and future development projects allowed by the Plan cannot be mitigated to a level of non-significance. This conclusion follows out of the recognition that the goals and policies contained in the Plan are not sufficient to fully mitigate the inevitable environmental impacts of converting natural lands into future developments. Although this is an understandable conclusion, Audubon is disappointed by the lack of evaluation about the strength or effectiveness of old policies versus new and whether the policies are as effective as possible in implementing the intended goals.

For example, Goal CO 2. states: "The county will maintain and enhance biological diversity and healthy ecosystems throughout the county." This is an admirable goal that preserves the intent of the former goals C-76 and C-7, which respectively set the purpose of: "Preserve rare and endangered species and protect areas of special habitat value," and "Conserve populations and habitats of commonly occurring species." The new policy CO2.1 specifies that: "The county will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat values, as well as conserve populations and habitats of commonly occurring species are reflected in reviews and approvals of development programs."

Our primary observation is that this basic policy for enhancing healthy ecosystems, biological diversity and the conservation of commonly occurring species is largely ignored in practice. In our experience it has been ineffective in achieving the stated purpose. Biological reviews and reports as prescribed by the county and incorporated in the EIRs prepared for specific projects typically ignore the purpose indicated by this policy in favor of adopting only the bare minimum adherence to CEQA guidelines, which include a very narrow interpretation of "significance" relating exclusively to endangered species. As a consequence, county policy does no more than merely restate existing state and federal law. It is unclear whether the county's actual intent is to achieve some level of enhancement above and beyond established environmental law. This is particularly true in regard to common species.

If the county's actual intent is truly to "enhance biological diversity and healthy ecosystems" as well as "conserve populations of commonly occurring species," then there needs to be additional
language describing more specifically the desired results and their prescribed implementation. Otherwise merely requesting reports and reviews allows minimalist interpretations of basic law.

In this regard, the DEIR acknowledges in Impact BIO-1 (pg. IV-45) that "Despite the imposition of certain mitigation measures presented in Section 4 below, this impact cannot be fully mitigated to a level below significance." Per the discussion above, the DEIR's Mitigation BIO-10 (pg. IV-55) does not in any way mitigate the issue of commonly occurring species. The measure merely states that: "The county shall coordinate with state and federal agencies and departments to ensure that their programs to... conserve populations and habitats of commonly occurring species are reflected in reviews and approval of development programs." As mentioned this adds up to no special protections of commonly occurring species at all. It appears to be a policy that offers attractive ideas and words, but nothing meaningful in the way of action.

The same observation pertains to "areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay," which simply generate a report but no more from present county policies or from Mitigation BIO-11 of the DEIR.

Wildlife Corridors
A similar problem as pointed out above also holds true for goals and policies intended to help protect wildlife movement corridors. In the Mountain Region of the Open Space Element for the new General Plan there is Goal M/OSS2, which states: "Improve and preserve open space corridors throughout the Mountain Region." This is an important and necessary objective for protecting critical wildlife values. However the supporting policies, which are essentially carry-overs from the prior Plan, do not seem to receive appropriate application commensurate with the stated intent. Instead wildlife corridors in current mountain projects, such as the Royal Rangers Adventure Camp and the Hawarden housing project in Twin Peaks and Lake Arrowhead respectively, have seen the value of the corridors mapped for those areas completely dismissed. Again, unless it involves an endangered species specified by law, the EIRs for these projects typically disregard this policy.

This is particularly true in respect to the directive for "improving" or "enhancing" wildlife or open space corridors. In our experience during the lifetime of the current General Plan, it is difficult to find any examples of such improvements taking place in the Mountain Region. It would seem that the assignment of lower density land use designations would be an appropriate step to implement in the Mountain Region to achieve multiple policy objectives for habitat protection, open space corridor enhancement and fire safety. Audubon is disappointed that no analysis was made in the DEIR regarding overall compatibility and consistency of the goals and policies for biological resources and open space values in relationship to zoning patterns. Many potential adverse impacts could be greatly reduced by adjusting zoning designations in areas of critical biological, scenic and open space resources. For example, it would be logical to designate all large acreage parcels adjacent to National Forest lands as Resource Conservation.

Wildfire Danger
Audubon was disappointed that the issue of wildfire in the Mountain Region was not addressed with more depth and significance. It is not unusual for a hundred lightening fires to be started in a given season. Most are suppressed quickly and efficiently. However it is a widely
acknowledged fact that wildfires are inevitable in the mountain area. The ecosystem is designed by nature in such a way that it is dependent on wildfire. The San Bernardino Mountains are recognized to be one of the most hazardous wildfire areas in the nation.

As mentioned above, county policies would be more effective if land use designations were more consistent with the General Plan. This is particularly true with mountain zoning, where the threat of wildfire is uncommonly extreme. Upon attending a session of the state Biodiversity Council held in Lake Arrowhead following the historic Old Fire, it was observed by one of the leading fire officials making a presentation about the local mountains that:

Decisions for development currently are made by jurisdictions that are not accountable for the impacts of those decisions and are not fiscally responsible for their mitigation. Those impacts have:

--impaired forest and watershed health
--reduced water quality and supply
--increased soil erosion and flooding
--increased the cost of wildland fire suppression
--increased risk to civilians, firefighters, law enforcement and emergency workers.

The jurisdiction referred to was primarily the County. It is evident that the ratio of structures to wildland in the Mountain Region is already excessive in such an extreme fire hazard area. Yet there are insufficient policy actions in the DEIR and new General Plan to address this major problem. Impact HAZ-6 in the DEIR acknowledges that: "Development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas." It is further recognized that "structures may be damaged or destroyed during major wildland fire conflagrations" and that "People occupying these structures during a wildland fire will also be subject to injury or death." It is noted that: "The majority of catastrophic wildland fires occur in the mountain region and impact both mountain and foothill communities."

In response to these facts, the DEIR concludes that: "Despite the imposition of certain mitigation measures presented in Section 4 below, the impact cannot be fully mitigated to a level below significance."

The only mitigation suggested for this tremendous on-going threat to mountain residents and visitors is Mitigation HAZ-18 in the DEIR. It states:

The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County's Development Code, Chapter 82.13, shall be strictly enforced. New development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.

This is a rather minimalist approach for mitigating major wildfire threats to public safety, particularly in view of the serious adverse impacts pointed out by a leading fire professional at
the state level conference referenced above. The danger is further highlighted by the fact that the county has produced a cautionary "red zone" guide for internal firefighting purposes, which delineates many substandard and hazardous subdivisions in the mountain region, where public safety is at elevated risk.

Audubon believes that these impacts should not be so quickly dismissed simply as an item that "cannot be mitigated below significance" and therefore not warranting any further serious effort to reduce these potentially extreme threats to public safety. It is commendable that specific slope density allowances have been recently incorporated into the General Plan and Development Code. These are a definite improvement on behalf of public safety. However, a reference in the Development Code to a more stringent policy in the Rancho Cucamonga Sphere of Influence of the county raises the question whether these policies might be strengthened further. It appears that zero densities are allowed on slopes above 30 percent in that part of the county.

This is another category where mountain zoning designations on large acreage should be reclassified as Resource Conservation on the basis of public benefit and public safety. Also language added to the Bear Valley Community Plan, after the issuance of the DEIR, referencing a "holding zone concept" in respect to lands once deemed "suitable" for residential development 20 years ago under different conditions should be eliminated as inappropriate. Without first addressing the outmoded holding zone concept in the DEIR and analyzing its antecedents, impacts and ramifications (especially wildfire) for properly informed public disclosure, it should not be incorporated into the Plan independently from the EIR process.

In the past decade there have at least ten major wildfires in the mountain region. The list includes the Mill Fire, the Willow Fire, the Hemlock Fire, the Bridge Fire, the Old Fire, the Grand Prix Fire, the Plunge Fire, and the recent two fires at the eastern perimeter of the mountains. In such a dangerous context, there needs to be greater mitigation for such a potentially catastrophic threat.

Evacuation

Evacuation in the mountain region is another issue that has not been afforded the seriousness, which it deserves. In 2003 for the first time the entire mountain population had to be evacuated during the Old Fire. Such an event should stand out as a stern warning for the potential of a repeat event in the future with the possibility of much greater consequences.

The 2003 evacuation was a unique example of extraordinary preparation that cannot be counted upon to be replicated in the next major wildfire. Highly proactive Fire Safe Councils held a dozen major town meetings, the Mountain Area Safety Taskforce of coordinated agencies was a rare model of efficiency and effectiveness, and citizen awareness and participation was at an all time high. Most of the 2003 residents will soon have moved off the mountain and been replaced by new citizens ignorant of the fire dangers. The MAST and Fire Safe Councils may not achieve a similar level of involvement in the future. The circumstances that produced such a perfect evacuation in 2003 should not delude us into assuming it can automatically be repeated. It most likely will not.
One glitch in 2003 could have triggered a major disaster. By comparison the Cedar Fire in San Diego County at the same time was more typical of ordinary circumstances. Because similar remarkable preparations were not in place, there were tragic consequences. For these reasons the evacuation issue should be evaluated in more detail. The DEIR simply offers a list of potential evacuation routes. This is not sufficient to assess the true emergency needs of the mountain area. Each route has vastly different characteristics and capacity and should be evaluated accordingly. Past history has demonstrated the possibility that a given route may be closed due to landslides, repairs or vehicle accidents. Various contingencies of this nature need to be taken into account. It is possible that the current evacuation requirements of the mountain may be greater than can be accommodated adequately in a full-scale disaster. Such possibilities may require significant adjustments in the county’s General Plan policies. The General Plan and the DEIR need to more fully address this important issue.

Alternatives
Discussion of the three alternatives in the DEIR is insufficient to warrant a present conclusion that the new revision of the General Plan is the best option among the possibilities. The concept of Alternative 3—that future urban development should be concentrated in the urban spheres of influence and incorporated into city jurisdictions—seems to be logically consistent with the basic distinction between counties and cities. Although we have not researched the subject, it seems logical to assume that urban development is the traditional domain of cities, while low-density rural or agricultural communities should be the purview of counties. In this context, Alternative 3 should be more seriously considered and the comparisons more carefully evaluated.

Likewise Alternative 2, the Reduced Development Alternative, also should be more carefully assessed, because of its potential to lessen future adverse impacts of traffic congestion, pollution, crime, taxes, diminished aesthetics, loss of open space and biological degradation. These are all significant problems in the present time that undercut the quality of life in San Bernardino County. They are likely to become worse as populations and urban densities continue to increase with only limited mitigation. A judicious combination of Alternatives 2 and 3 would have less adverse impacts over the next 25 years and guarantee a higher quality of life for county residents. We believe that the Alternatives Section of the DEIR needs to be better delineated, more accurately evaluated and perhaps the conclusion adjusted accordingly.

Conclusion
The above issues represent the primary concerns that the San Bernardino Valley Audubon Society was able to assess in a preliminary review of the Draft Environmental Impact Report for the new General Plan. We will endeavor to prepare additional comments as the overall evaluation process continues. We are grateful to the county for the large effort involved in producing a new General Plan and Development Code. We thank you for taking these observations under consideration.

Sincerely,

David Goodward
Conservation Chair
The County is very appreciative of the San Bernardino Valley Audubon Society’s accolades, and, in kind, extends its appreciation for the comments and suggestions provided by Mr. Goodward.

The County acknowledges the enormity of the document and the difficulties associated with reviewing such a piece of work. Additionally, the County would like to thank the Audubon Society for utilizing the allotted time to provide the following comments.

Termination of the San Bernardino Valley Multi-Species Habitat Conservation Plan (Valley MSHCP) occurred due to several factors. The planning area of the Valley MSHCP covered approximately 500 square miles of land located within the San Bernardino Valley from Yucaipa, on the east, to Chino Hills, on the west, and from the Riverside County line on the south to the foothills of the San Gabriel and San Bernardino Mountains on the north. Thirteen federally endangered and threatened species and six state-listed species occur within the plan area. Over 53 state species of special concern are also found within the plan area. Fourteen cities agreed to participate in the plan along with the County. The County attempted to take the lead on this plan out of self-interest to solve continuing conflict between special status species and development in unincorporated areas within the Valley and out of an interest in taking a regional leadership role to provide a more comprehensive solution to streamlining the special status species permitting process and ensuring adequate conservation for the Valley Region. The County has limited lands within the area under its jurisdiction. This situation combined with attempting to reconcile the individual interests of fourteen cities proved to be a major factor working against an acceptable plan that was equitable while meeting the needs of all participating entities. While the Valley MSHCP was an innovative concept proposed to respond to the conflicts that local jurisdictions were experiencing between local, state and federal species regulations and development activities, the complexity and diverse interests of the various jurisdictions, along with the difficulty in working with the U.S. Fish and Wildlife Service and California Department of Fish and Game, led to a determination that a comprehensive, multi-jurisdictional program was not likely to succeed. Lack of adequate funding became a major issue in advancing the plan and the two resource agencies withdrew funding based on lack of progress. The effort, however, did produce some biologic data that has been used on a more localized basis, such as supporting the Resource Management Plan that was adopted as part of the Glen Helen Specific Plan.

The County acknowledges Audubon's advocacy of a valley conservation plan. As stated above, the data and the lessons that resulted from the prior planning process are being carried forward in more manageable planning efforts. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals (see County of San Bernardino 2007 General Plan; Section V–11 Conservation Element) which is consistent with other regional planning documents (e.g., Northern and Eastern Mojave Plans, City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Glen Helen Specific
Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan). Additionally, the County has supported and/or participated in the following adopted comprehensive planning documents: City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly; Upper Santa Ana Wash Land Management and Conservation Plan; Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan.

RESPONSE O.3-6
The Background Reports were prepared to provide information on existing conditions as of 2002. The Conservation Background Report correctly acknowledged the County of Riverside habitat conservation plan. This information became part of the context of preparing draft goals and policies for the Conservation Element of the County General Plan. The proposed 2007 General Plan contains a Program to implement Policy CO 2.3 that calls for the County to prepare or participate in HCPs when there is sufficient support of such plans, adequate funding for their preparation and a strong likelihood of success. The County’s participation and support for the West Mojave Plan is a good example of the County’s implementation of this policy. The County realizes that availability of state and federal funding for land conservation is dependent upon a proactive approach to actively secure funds as exemplified by the County of Riverside. The County is being as proactive as it believes practicable given the history of constraints in establishing past Multi-Species Habitat Conservation Plans as indicated in Responses O.3-3 and O.3-4.

REVISED RESPONSE O.3-7 & O.3-8
The County acknowledges that foreseeable impacts to biological resources resulting from the implementation of the General Plan can not all be mitigated to a level below significance for the County. As a means of avoiding, minimizing, and compensating for adverse impacts to biological resources, the General Plan has established Goals (e.g., CO 1 and CO 2), Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) and measures that improve upon the intent and enforceability of the former goals. However, it is beyond the scope of this document to compare and contrast the effectiveness of old goals and polices with those of the present General Plan.

Established goals and policies defined within the General Plan define a framework that the County will use as a means of evaluating future development proposals; and determining whether subsequent projects will be required to include surveys and/or specific mitigation programs to avoid, minimize, and compensate for adverse impacts to special status as well as common species. It is the County’s intent that future projects will be approved based on the framework set forth in the General Plan goals and policies. Specifically, with regards to the conservation of common species, please review the General Plan Section V–11 Conservation Element for a detailed description of the aforementioned Goals and Policies. Specifically, CO 1.1 states that “the County will coordinate with appropriate agencies and interested groups to develop, fund and implement programs to maintain the County’s natural resources’ base,” and CO 2.1 asserts that “the County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs” (underline added for emphasis).

The County’s policies CO 1.1 and CO 2.1 demonstrate the commitment to enhance healthy ecosystems, biological diversity and conservation of commonly occurring species. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. It is the County’s contention that the General Plan, Program Environmental
Report, and Conservation Background Report provide adequate specificity and enforceability at this level in the environmental review process.

**RESPONSE O.3-9**

The current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

**REVISED RESPONSE O.3-10 & 11**

The County agrees that the improvement and preservation of open space corridors throughout the Mountain Region is critical to maintaining wildlife values; however, the County disagrees that EIRs on particular projects have “completely dismissed” the value of corridors. The Valley, Mountain, and Desert Regions have been identified as important landscape linkages in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). According to Mitigation BIO-7 as stated in Categorical Discussion 7, “The County will coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map… for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas.” In addition, Mitigation BIO-8 calls for the inclusion of wildlife crossings for affected wildlife within areas utilized as linkages or corridors. Therefore, the County asserts that measures are set in place to ensure the continued viability of wildlife corridors within the Mountain Region. Whether projects involve state or federally listed species or common species, anything other than full compliance with the goals and policies set forth in the General Plan will not result in project approval during the discretionary authorization process.

In order to improve upon past goals and policies that were designed to improve or enhance biological resources, including wildlife corridors, the County as established Mitigation BIO-7, found in Categorical Discussion 7. This measure calls for the creation of a map that identifies wildlife movement corridors in coordination with local, state, and federal agencies. This map will be used in the preparation of biological assessments prior to permitting land use conversion within the county, and will be included in the Open Space and Biological Resource Overlays. As suggested by the commenter, the County considers the use of the Biological Resource Overlays to be a tool that will limit adverse effects to critical biological resources by requiring biotic resource reports when land use is proposed or existing land use is to increase by more than 25 percent.
A number of policies in the Safety Element of the General Plan, including the Mountain Region policies, address wildland fire issues. Additionally, each of the mountain community plans contains more refined policies for each community relative wildland fire safety issues. The County’s Fire Safety Overlay is a provision in the County Development Code. An Update to the Development Code is a component of the General Plan Update (GPU). As explained in the Draft EIR, the Development is the primary tool for implementing the policies of the General Plan. The Updated Development Code is a part of the program being evaluated in the GPU EIR. The Development Code Update includes a recent revision to the Fire Safety Overlay that was adopted by the County Board of Supervisors in 2004. In response to the catastrophic fire damage of the Grand Prix and Old Fires, the County Board of Supervisors formed a Post-Disaster Reconstruction Task Force in 2003 to outline reconstruction procedures for fire victims in an effort to assist affected residents in rebuilding as expeditiously as possible. A separate sub-committee of the Task Force was established to focus specifically on changes to the County’s fire safety building and development requirements to enhance fire safe communities in the future. This sub-committee, consisted of staff from the County Fire Department, the Building and Safety Division, and the Advance Planning Division, California Division of Forestry, U.S. Forest Service, Crest Forest Fire District, Running Springs Fire Department and Big Bear City Fire District and various interested individuals, groups, and agencies to examine the County’s current fire safety related building and development design standards in order to incorporate “lessons learned” from the recent fires. The sub-committee met several times with Fire Chiefs and/or Fire Prevention Officers from the affected fire districts, affected residents, and representatives of mountain Fire Safe Councils, the building industry and mountain building associations. The feedback provided at the meetings resulted in an ordinance that had broad support.

Based on the recommended changes, the Board of Supervisors adopted a Development Code Amendment that revised the existing Fire Safety Overlay provisions, and a General Plan Amendment to reflect changes to the hazard overlay maps delineating the revised Fire Safety Areas. The Development Code Amendment included new standards that required the use of noncombustible and/or fire-resistant materials and other building requirements so as to mitigate the potential for future conflagrations. The City of San Bernardino (City) was also severely impacted by the Old Fire, and, as a result, adopted an ordinance to establish enhanced building standards for the areas of the City affected by the fire. The County’s changes to its Fire Safety Overlay incorporated standards similar to those adopted by the City and applied them to the Del Rosa area and other unincorporated areas along the valley foothills.

A summary of the revisions is as follows:

Fire Safety Designations and Organizational Changes: In order to emphasize the new standards implemented with the proposed changes, the designation for the Fire Safety Overlay District has been changed from Fire Safety Review Areas (FR) to Fire Safety Areas (FS). The building standards and project design requirements have been completely restructured to make them easier to understand and locate in the Code.

Redefining Fire Safety Areas:

a. Fire Safety Area 1 (FS1). Fire Safety Area 1 includes those areas within the mountains and valley foothills. It includes all the land generally within the National Forest boundary and is characterized by areas with moderate and steep terrain and moderate to heavy fuel loading contributing to high fire hazard conditions.

b. Fire Safety Area 2 (FS2). Fire Safety Area 2 includes those lands just to the north and east of the mountain FS1 area in the mountain-desert interface. These areas have gentle to moderate sloping terrain and contain light to moderate fuel loading. These areas are
periodically subject to high wind conditions, which have the potential of dramatically spreading wildland fires.

c. Fire Safety Area 3 (FS3). Fire Safety Area 3 includes lands just to the south of the mountain FS1 area. These lands are primarily within the wildland-urban interface of the Valley Region and consist of varying terrain from relatively flat to steeply sloping hillside areas. Present and future development within FS3 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FS1. These areas are subject to Santa Ana wind conditions, which have the potential of dramatically spreading wildland fires during extreme fire behavior conditions.

Roof Covering: All three areas within the Fire Safety Overlay District require that roof coverings shall be either noncombustible or shall be fire retardant material not composed of organic fiber with a minimum Class A rating, as defined in the California Building Code. This means that wood shake or shingle roofs are now prohibited within all three areas.

Exterior Walls: Exterior wall separation standards are designed to reduce the exposure and risk from adjacent structural fires and to reduce the potential spread of fire from structure to structure.

a. For FS1 and FS2: All residential structures shall have interior side yard setbacks of 20% of the lot width. Interior side yards shall not be less than five feet and need not exceed 15 feet. Wherever possible, exterior wall separations shall not be less than ten feet for all buildings, including those on adjoining parcels.

b. When exterior walls of residential and accessory buildings or portions thereof are within 15 feet of interior side or rear lot lines, or the exterior wall separation is less than 30 feet, the outside of all such exterior walls or portions thereof shall be constructed with the modified one-hour construction. Where building separations are less than ten feet, additional mitigation measures may be required by the responsible fire authority.

c. For FS3: Exterior walls shall be constructed of noncombustible materials or shall provide the equivalent one-hour fire-resistance-rated construction on the exterior side. Interior side yards shall not be less than five feet. Within the Mountain Planning Area, building separation and side yard setbacks shall be as described in FS1/FS2 areas.

Eaves: In FS1 and FS 2, eaves shall be solidly filled with tight-fitting wood blocks at least one and one-half inches thick. In FR3, eaves shall be enclosed with a minimum 7/8 inch stucco or equivalent protection.

Exterior Glazing: Exterior windows, window walls and glazed doors, and windows within exterior doors, shall be multi-layered glass panels (dual- or triple-paned), tempered glass, or other assemblies approved by the Building Official. Vinyl window frame assemblies shall be prohibited, except when they comply with specific construction characteristics.

Exterior Doors: All exterior doors made of wood or wood portions shall be solid core wood.

Insulation: Paper-faced insulation shall be allowed in attics or ventilated spaces only if the paper is not exposed to the attic open space. Cellulose insulation is required to be fire retardant.

Additional Requirements: Dependent upon specific conditions of the site, such as fire flow, building separation, road conditions, slope, vegetation, etc., or combination thereof, the responsible fire authority may require all structures to meet more stringent construction standards as additional mitigation to the fire
threat. Such standards include, but are not limited to, full perimeter exterior walls to be constructed to the modified or full one-hour construction standards, sprinklers, soffitted eaves, etc.

**Fences:** Where wood or vinyl fencing is used, there shall be a minimum of five foot separation between the wood or vinyl fencing and the wall of the nearest structure except on those properties where previous construction occurred pursuant to a previous code. Fencing within the five foot separation area shall be of noncombustible material or modified one-hour fire-resistance-rated construction. All fences or walls required adjacent to fuel modification areas or wildland areas as conditions of approval for a development project shall be constructed of noncombustible materials as defined in the California Building Code.

**Residential Density in Sloped Terrain:** Reinstates standards from community plans designed to reduce fire hazards and prevent erosion. The density of development in sloping hillside areas shall be in accordance with the following criteria: One to four dwelling units per gross acre on slopes of 0-<15%, two dwelling units per gross acre on slopes of 15-<30%, one dwelling unit per three gross acres on slopes of greater than 30% gradient. In the West Valley Foothills Planning Area, residential development on slopes of greater than 30% gradient is prohibited.

**Fuel Modification Areas/Plans:** A permanent fuel modification area shall be required around development projects that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. The recommended width of the fuel modification area shall be determined based on the Fuel Modification Plan, but in no case shall it be less than 100 feet. All final plans shall be reviewed and approved by the responsible fire authority in conjunction with the County Fire Marshall. A preliminary or final plan shall be submitted concurrently with the development application to the Land Use Services Department for review in conjunction with the project design review. Fuel Modification Plans shall address the following factors, including, but not limited to:

a. The natural ungraded slope of the land within and adjacent to the project;

b. Fuel loading;

c. Access to the project and to the fuel modified area;

d. The on-site availability of water that can be used for fire fighting purposes;

e. The continual maintenance of such areas;

f. The soil erosion and sediment control measures to alleviate permanent loss of top soil and accelerated erosion; and

g. A list of recommended landscape plant materials that are fire resistant.

**Response O.3-13**

The County acknowledges that the Commentator has correctly interpreted the maximum allowable residential density within the slope-density provisions of the Fire Safety Overlay. In the interest of achieving consistency of fire safety standards within Spheres of Influence of adjacent cities, the County imposed the same standard as the City of Rancho Cucamonga for slopes exceeding 30%. The City specifically requested this action during the revision of the Fire Safety Overlay in 2004. As is mentioned in the preceding response, the County formed a Task Force to review and revise the Fire Safety Overlay. The Cities of Rancho Cucamonga and San Bernardino were part of the Task Force. The County’s changes to its Fire Safety Overlay incorporated standards similar to those adopted by both Cities and applied them to the unincorporated areas along the valley foothills. The County has imposed a density
reduction to one dwelling unit per three acres for slopes exceeding 30% in light of the number of other fire safety mitigation measures that were added to the overlay, including a comprehensive fuel medication requirement for new development.

**RESPONSE O.3-14**
The background explanation that was included in the Bear Valley Community Plan (BVCP) at the September 21, 2006 Planning Commission hearing regarding the holding zone concept of the 1988 BVCP is provided for historical context of current land use designations that have been carried forward as part of the General Plan Update. It does not interject a new policy into the community plan and it has no application outside of the BVCP. The inclusion of this information does not provide exceptions to the policies contained in the 2006 BVCP, the discussion is included to provide a context bridge to the 1988 Plan. The 2006 Community Plan is intended to establish clearly defined community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. With regards to Policy BV/LU 1.1, the language does not mean that future Land Use Zoning District changes cannot be approved, on the contrary, the intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan. The carry over of the “holding zone” concept was a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies, as well as, fire safety considerations. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing and then considered by the County Board of Supervisors.

**RESPONSE O.3-16**
The County respectfully disagrees with the comment. The issue of evacuation routes is addressed in the Draft EIR. The Draft EIR considers the evacuation routes that have been identified in General Plan Regional Goals V/S 1, M/S 1, and D/S 1 and Policies V/S 1.1, M/S 1.1, and D/S 1.1. The topic of wildland fire as a public safety hazard is addressed in Chapter IV, Topic G., Hazards and Hazardous Materials beginning at page IV-71 of the Draft EIR. Impact HAZ-6 specifically evaluates safety hazards to the public residing in and visiting the mountain region of the County. Mitigation Measure HAZ-18 calls for the use of the Fire Safety Overlay requirements contained in the County Development Code as the primary method of reducing impacts of wildland fires on future development within the mountain region. Also refer to Categorical Response No. 3. The significance conclusion for impacts related to safety hazards at page IV-83 provide disclosure to decision-makers and the public that, in spite of extensive fire safety development requirements, there still remains a significant unavoidable safety impact due to the inherent risks associated with residing in high fire hazard areas.

Evacuation routes were evaluated more directly as a traffic circulation issue in the Transportation/Traffic impact discussion in Chapter 4, Topic O beginning on page IV-141. The specific issue of evacuation routes is addressed in Impact TR-6 at page IV-177. Transportation Mitigation Measure TR-18 specifically addresses programmatic mitigation to reduce potential safety impacts related to adequate evacuation routes. Mitigation Measures TR-1, TR-12, TR-13, TR-14, and TR-16 all contribute collectively to creating and maintaining a safe and efficient circulation network that, in turn, provides for safe and effective evacuation routes. The issue of evacuation routes is not an isolated issue that can be considered independent of the entire fire safety approach taken by the County. Evacuation routes are part
of the physical infrastructure that, in turn, supports the institutional infrastructure of fire safety and evacuation planning. The pre-planned evacuation strategy prepared by the Mountain Area Safety Task Force (MAST) in early 2003, prior to the occurrence of the Grand Prix and Old Fires, was instrumental in the successful evacuation program for these two catastrophic wildland fires. Various evacuation scenarios were considered in the strategy and incorporated pre-planned routes that facilitated the successful evacuation of the affected mountain areas.

MAST was formed in late 2002 to promote fire safety in the mountain communities. MAST is comprised of seven local, state and federal agencies consisting of San Bernardino County Fire Department, California Division of Forestry and Fire Protection, U.S. Forest Service, State & Local Office of Emergency Services, San Bernardino County Sheriff’s Department, California Highway Patrol and MAST was utilized for critical, strategic, and tactical decisions throughout the pre-planning and post-fire evaluation process. The MAST effort proved critical to a successful evacuation effort when winds shifted and blew the fire into the mountain communities. 70,000 citizens from the communities of Arrowhead Springs, San Bernardino, Devore, Crestline, Crest Forest, Rim Forest, Running Springs, Highland, Skyforest, Cedarpines Park, Valley of Enchantment, Twin Peaks, Summit Valley, Lake Arrowhead, Los Flores Ranch, Holcomb Valley, Oak Springs Ranch, Blue Jay, Cedar Glen, Hook Creek, Green Valley Lake, Arrowbear, Lucerne Valley, Apple Valley, Squint Ranch, Silverwood Lake, Baldy Mesa, Oak Hills, and South Hesperia were evacuated. At the height of the fire over 4,000 firefighters were assigned to the fire and were successful in protecting over $7.5 billion in residential and commercial infrastructure. The Old Fire was contained by November 4, 2003.

**REVISED RESPONSE O.3-17 & O.3-18**

The County respectfully disagrees that the discussion of the three alternatives in the DEIR does not warrant the conclusion that “the new revision of the General Plan is the best option.” As indicated in Response to Comments O.3-2 to O.3-4 to the San Bernardino Mountains Group Sierra Club, CEQA Guidelines Section 15126.6(a) states, “There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason”. The County is providing a “matrix displaying the major characteristics and significant environmental effects of each alternative” to “be used to summarize the comparison” of alternatives per CEQA Guidelines Section 15126.6(d). In accordance, it is the County’s contention that the alternatives section is sufficiently well delineated to support the County’s conclusion.

The County acknowledges the commentator’s opinion that Alternative 3 is the “environmentally superior alternative.” However, Section 15126.6 of the CEQA Guidelines states the requirement for establishing an “environmentally superior” alternative as follows: “If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Since Alternative 1, the “no project alternative” is not characterized as “environmentally superior”, the cited CEQA reference does not apply. In any event, the Board of Supervisors’ decision on the 2007 General Plan, and certification of its Final EIR, will be guided by Section 21081 of the Public Resources Code, which requires findings of fact for each potential impact, based upon substantial evidence.
FRIENDS OF FAWSKIN
P.O. Box 422
Fawnskin, California 92333
www.friendsofawnskin.org
friendsofawnskin@earthlink.net
909-878-3091

22 October 2006

County of San Bernardino
Land Use Services Department
Advance Planning Div.
385 N. Arrowhead Ave, First Floor
San Bernardino, CA. 92415-0182

Attn: James Squire

VIA Fax: 909-387-3223 and email: jsquire@lusd.sbcounty.gov

RE: Draft Environmental Impact Report for the County of San Bernardino General Plan Update and Associated Community Plans

Dear Mr. Squire;

On behalf of the membership of Friends of Fawnskin, we would like to thank the County of San Bernardino Planning Department for the opportunity to comment on this Draft Environmental Impact Report for the County of San Bernardino General Plan Update and Associated Community Plans.

Friends of Fawnskin (FOF) represents a membership of over 600 local residents of and visitors to Fawnskin, California, all of whom would be adversely affected by the negative impacts on aesthetics, water availability, air quality, fire safety and biological resources that would result from the changes that are proposed in this General Plan update with the lack of proper analysis demonstrated in the current Draft Environmental Impact Report.

Some of the inadequacies of this DEIR include:

- Proper analysis has not been done with regard to fire hazards and fire safety within the mountain communities. Especially with experiences from recent fires, the county should be vigorously addressing ways to reduce and mitigate fire hazards in these communities and the limited analysis presented in the DEIR fails to present this as even a serious
consideration to the county’s proposed changes in the General Plan update. For example—
  o The 30-foot set backs from the National Forest are inadequate and there has not had proper analysis presented in the DEIR for what set back criteria would actually present an improvement.
  o There are many exemptions possible from setback requirements and loopholes in the code that make the criteria completely ineffectual.
  o Proper and complete analysis of potential emergency evacuations with existing and potential population projects has not been conducted to establish whether additional density or additional housing can be supported in the General Plan policies and codes.
  o Set backs from the National Forest for development projects of multiple houses should not be included as a portion of the individual parcels but should be established as a set aside to assure that it cannot be built upon in the future.
  
- The General Plan stresses the importance of the surrounding forest and natural habitats to the quality of life and general well-being of the mountain communities, yet, no mountain wide analysis has been completed in the DEIR evaluating the carrying capacity of the National Forest as a whole—how many more home, businesses, roads, tourists, etc. can be added without negatively impacting the surrounding forest and habitats? How much water is actually available to be utilized without negatively impacting the surrounding environs?
  
- The maps referenced throughout the General Plan are difficult to read, nearly impossible to evaluate and overall completely inadequate for the purposes required to determine the overall impacts of the General Plan updates.
  
- The Biotic Resources Overlay map addresses only a miniscule percentage of the actual number of special status species. All these species must be addressed and the impacts analyzed.
  
- The impacts on air quality of the updates being proposed are insufficient and not in line with state and federal regulations. Impacts to air quality in the mountain communities have been on a regular basis ignored or downplayed in the past and this is continuing in the analysis within this DEIR. Proper analysis, impact evaluation and enforceable mitigations must be presented.
  
- There are changing being made to the General Plan that have been completely left out of the DEIR since these changes have been done since the DEIR was released. One change with huge potential impacts that have not been analyzed is the concept of ‘holding zones’. Before this wording can be added to the General Plan update and/or specifically to the Bear Valley Community Plan, the impacts in all categories must be analyzed in detail and mitigations and enforcements for such mitigations presented.
Some specific issues regarding ‘holding zones’ that must be addressed in the EIR analysis include but are not limited to:
  o The concept of ‘holding zones’ pre-dates our awareness of the severe fire dangers within our mountain communities. We have in recent years become more keenly aware of the dangers that communities surrounded by national forest face and also of the fact that the more dense the development is along the forest boundary, the more the fire danger is increased. Because of this, the ‘holding zone’ concept is no longer valid
  o Natural resources and open space are not only ecological considerations of planning within the Big Bear Valley, but are essential elements to the entire character and the quality of life of this mountain community and as such must have every priority placed on maintaining these areas in rural living zones. This
is confirmed in the current (1989) general plan which states that the reason for adopting the changes at that time was to "recognize existing land use commitments as much as possible."

- Section BV1.3.1 of the new plan defines part of the unique characteristics of Bear Valley as "...scenic resources and sense of remoteness from urban life." Since the rural zoning designations certainly must assist with maintaining this "sense of remoteness," the language about low density zoning designations being a mere "holding zone" goes completely contrary to statements both in the current General Plan and the new one discussing the importance of the natural surroundings and desires of the community to maintain the current unique character of the Valley.

- The evaluation for changing existing zoning of a parcel to increase its density needs to be based on much more than simply infrastructure. It must also include topography, geology, natural resources, wildlife habitats, and proximity to the national forest.

- The overall carrying capacity of the national forest, in other words, how much development, traffic, full-time residents, etc., that the surrounding forest can handle without degradation, must be included in any evaluation of increasing density. Already the plan discusses concerns about the potential lack of availability of water for potable and fire flow purposes. Saying that low-density designations are simply a holding pattern do not take any of these issues into consideration.

- The majority of the RL-rural living designations are alongside national forest land and serve as a valid buffer between the forest and mountain community development. Based on what we now know about such things as forest fires and the forest's actual carrying capacity, property adjacent to national forest should be required in this new plan to remain designated as very low-density rural living.

- Continued increases in the existing density will almost certainly have a severe negative impact on local tourism economy by making the mountain communities so similar to communities "down the hill" that it no longer feels like an escape from the city and is no longer worth the drive to come here. This 'holding zone' concept would be disastrous for the local economy.

- The current residents of the Valley who bought property near any of these 'rural living' designations have the right to expect that these areas remain as rural living. The county did not issue a formal disclosure when the surrounding properties were sold saying that this zoning was simply a holding pattern. Adding this new wording takes away the property rights of existing property owners and opens the door to potential legal issues regarding full disclosure.

- There is no analysis of the climate change that is being addressed throughout the world, including with new state measures. The DEIR fails completely to mention this or present analysis for additional impacts from the General Plan updates.

- Mitigation measures throughout the DEIR are completely inadequate. Often mitigation measures are completely lacking. Mitigation measures that are presented are not clearly defined and are not measurable. And no mitigation plan has been presented for how mitigations will be enforced. Considering that the county's past record for enforcing mitigations in the mountain communities is abysmal, these measures must be strengthened, clearly defined and enforceable and methods for enforcement must be spelled out.

In summary, the DEIR needs to be redone so that it includes complete analysis of all potential impacts on all criteria categories of the changes being introduced by the General
Plan update and associated Community Plan. We request that this revised DEIR be recirculated to the public for comment when it is released.

Thank you for the opportunity to comment on this DEIR and for taking these comments into consideration.

Sincerely,

Sandy Steers
for the Friends of Fawnskin Advisory Committee
LEAD AGENCY RESPONSE TO COMMENT LETTER O.4
FRIENDS OF FAWSKIN, OCTOBER 22, 2006

RESPONSE O.4-1

The County respectfully disagrees with this comment, and believes that there has been an adequate analysis of fire hazards and fire safety, including a number of recent code changes that are carried forward into the proposed General Plan and/or Development Code. The County’s Fire Safety Overlay is a provision in the County Development Code. An Update to the Development Code is a component of the General Plan Update (GPU). As explained in the Draft EIR, the Development Code is the primary tool for implementing the policies of the General Plan. The Updated Development Code is a part of the program being evaluated in the GPU EIR. The Development Code Update includes a recent revision to the Fire Safety Overlay that was adopted by the County Board of Supervisors in 2004. In response to the catastrophic fire damage of the Grand Prix and Old Fires, the County Board of Supervisors formed a Post-Disaster Reconstruction Task Force in 2003 to outline reconstruction procedures for fire victims in an effort to assist affected residents in rebuilding as expeditiously as possible. A separate sub-committee of the Task Force was established to focus specifically on changes to the County’s fire safety building and development requirements to enhance fire safe communities in the future. This sub-committee, consisted of staff from the County Fire Department, the Building and Safety Division, and the Advance Planning Division, California Division of Forestry, U.S. Forest Service, Crest Forest Fire District, Running Springs Fire Department and Big Bear City Fire District and various interested individuals, groups, and agencies to examine the County’s current fire safety related building and development design standards in order to incorporate “lessons learned” from the recent fires. The sub-committee met several times with Fire Chiefs and/or Fire Prevention Officers from the affected fire districts, affected residents, and representatives of mountain Fire Safe Councils, the building industry and mountain building associations. The feedback provided at the meetings resulted in an ordinance that had broad support.

Based on the recommended changes, the Board of Supervisors adopted a Development Code Amendment that revised the existing Fire Safety Overlay provisions, and a General Plan Amendment to reflect changes to the hazard overlay maps delineating the revised Fire Safety Areas. The Development Code Amendment included new standards that required the use of noncombustible and/or fire-resistant materials and other building requirements so as to mitigate the potential for future conflagrations. The City of San Bernardino (City) was also severely impacted by the Old Fire, and, as a result, adopted an ordinance to establish enhanced building standards for the areas of the City affected by the fire. The County’s changes to its Fire Safety Overlay incorporated standards similar to those adopted by the City and applied them to the Del Rosa area and other unincorporated areas along the valley foothills.

The issue of evacuation routes is addressed in the Draft EIR. The Draft EIR considers the evacuation routes that have been identified in General Plan Regional Goals V/S 1, M/S 1, and D/S 1 and Policies V/S 1.1, M/S 1.1, and D/S 1.1. The topic of wildland fire as a public safety hazard is addressed in Chapter IV, Topic G., Hazards and Hazardous Materials beginning at page IV-71 of the Draft EIR. Impact HAZ-6 specifically evaluates safety hazards to the public residing in and visiting the mountain region of the County. Mitigation Measure HAZ-18 calls for the use of the Fire Safety Overlay requirements contained in the County Development Code as the primary method of reducing impacts of wildland fires on future development within the mountain region. The significance conclusion for impacts related to safety hazards at page IV-83 provide disclosure to decision-makers and the public that, in spite of extensive fire safety development requirements, there still remains a significant unavoidable safety impact due to the inherent risks associated with residing in high fire hazard areas. Evacuation routes were evaluated more directly as a traffic circulation issue in the Transportation/Traffic impact discussion in Chapter 4, Topic O beginning on page IV-141. The specific issue of evacuation routes is addressed in Impact TR-6 at page IV-177. Transportation Mitigation Measure TR-18 specifically addresses programmatic mitigation to
reduce potential safety impacts related to adequate evacuation routes. Mitigation Measures TR-1, TR-12, TR-13, TR-14, and TR-16 all contribute collectively to creating and maintaining a safe and efficient circulation network that, in turn, provides for safe and effective evacuation routes.

The issue of evacuation routes is not an isolated issue that can be considered independent of the entire fire safety approach taken by the County. Evacuation routes are part of the physical infrastructure that, in turn, supports the institutional infrastructure of fire safety and evacuation planning. The pre-planned evacuation strategy prepared by the Mountain Area Safety Task Force (MAST) in early 2003, prior to the occurrence of the Grand Prix and Old Fires, was instrumental in the successful evacuation program for these two catastrophic wildland fires. Various evacuation scenarios were considered in the strategy and incorporated pre-planned routes that facilitated the successful evacuation of the affected mountain areas.

MAST was formed in late 2002 to promote fire safety in the mountain communities. MAST is comprised of seven local, state and federal agencies consisting of San Bernardino County Fire Department, California Division of Forestry and Fire Protection, U.S. Forest Service, State & Local Office of Emergency Services, San Bernardino County Sheriff’s Department, California Highway Patrol and MAST was utilized for critical, strategic, and tactical decisions throughout the pre-planning and post-fire evaluation process. The MAST effort proved critical to a successful evacuation effort when winds shifted and blew the fire into the mountain communities. 70,000 citizens from the communities of Arrowhead Springs, San Bernardino, Del Rosa, Devore, Crestline, Crest Forest, Rim Forest, Running Springs, Highland, Skyforest, Cedarpines Park, Valley of Enchantment, Twin Peaks, Summit Valley, Lake Arrowhead, Los Flores Ranch, Holcomb Valley, Oak Springs Ranch, Blue Jay, Cedar Glen, Hook Creek, Green Valley Lake, Arrowbear, Lucerne Valley, Apple Valley, Squint’s Ranch, Silverwood Lake, Baldy Mesa, Oak Hills, and South Hesperia were evacuated. At the height of the fire over 4,000 firefighters were assigned to the fire and were successful in protecting over $7.5 billion in residential and commercial infrastructure. The Old Fire was contained by November 4, 2003.

MAST has since evolved and is addressing not only the emergency caused by the drought and the bark beetle epidemic, but several other issues both tactical and strategic that are critical to public safety and forest health. It is important to note that MAST was created in large part in response to the initiative of community-based Fire Safe Councils. As the emergency grew in magnitude and there was no central coordinating agency for all of the issues associated with the emergency. Each individual agency had its own mission, obligations, and authority and with that, it’s administrative restrictions and geographic limitations. Without a single agency to address these issues, the grass roots Fire Safe Councils became the focal point for community involvement and citizen input. The Fire Safe Councils then became the rally points for the various agencies and the leadership of those agencies determined that a central administrative structure, designed around collaboration must be created. MAST was the result. There are several functional groups within the MAST structure that are addressing short term and long term issues that directly relate to public safety and forest health. One component is addressing immediate fuels reduction; there is another component that is addressing future long term forest health. There is also a public education component that will work to educate residents and change human behavior so that the messages of fire safety and forest health will continue. The Board of Supervisors recently authorized the issuance of a Request for Proposals for consultant services to prepare the public education program. In addition, MAST has continued to support the efforts of local Fire Safe Councils. Three Fire Safe Councils have produced Community Wildfire Protection Plans (CWPP) for their respective communities. The complete plans are for Arrowhead Communities, Mill Creek Canyon and Wrightwood. These plans were accepted by the Board of Supervisors earlier this year. These plans provide additional guidance and specific fire strategies for their specific communities.
RESPONSE O.4-2
The County acknowledges the concern about the importance of the surrounding forests and natural habitats to the quality of life and general well being to the mountain communities. Also acknowledged is the request that the County evaluate the carrying capacity of the National Forest as a whole e.g. how many more homes, businesses, roads, tourists, etc. can be added without negatively impacting the surrounding forest and habitats. However, the County does not have any control over how the San Bernardino National Forrest is operated, with that being the responsibility of the U.S. Forest Service (USFS) who has prepared a Forest Service Plan that governs land use within the Forest. The USFS would determine the carrying capacity of the Forest, not the County.

RESPONSE O.4-3
The General Plan and EIR utilize the mapping system that has been in place in the County for a number of years. For clarification of any particular graphics, please contact County Land Use Services staff.

RESPONSE O.4-4
The current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to plant and wildlife species. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE O.4-5
The County acknowledges the concerns of the commenter regarding the air quality in the mountain communities of San Bernardino. The air quality analysis for the update of the General Plan for the County of San Bernardino was sufficiently prepared pursuant to the requirements outlined in the CEQA statutes beginning at Section 21000 of the California Public Resources Code, and also pursuant to the CEQA Guidelines (California Code of Regulations, Title 14, beginning at Section 15000). Therefore, the proper analysis, evaluation of impacts, and identification of feasible mitigation measures has been accomplished in accordance with the appropriate state regulations. For this particular project, there are no federal regulations which govern the preparation of an air quality analysis for the update of the County’s General Plan. The air quality analysis in the Draft EIR does not downplay the importance of the air quality problems in the County of San Bernardino. The findings in the Draft EIR have determined that air quality is significant, with or without the proposed project, and that no feasible mitigation measures have been identified to reduce the impact to a level below significance.
The County, as Lead Agency, wishes to clarify the issue of “holding zones.” The background explanation that was included in the Bear Valley Community Plan (BVCP) at the September 21, 2006 Planning Commission hearing regarding the holding zone concept of the 1988 BVCP is provided for historical context of current land use designations that have been carried forward as part of the General Plan Update. It does not interject a new policy into the community plan and it has no application outside of the BVCP. The inclusion of this information does not provide exceptions to the policies contained in the 2006 BVCP; the discussion is included to provide a context bridge to the 1988 Plan. The 2006 Community Plan is intended to establish clearly defined community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. With regards to Policy BV/LU 1.1, the language does not mean that future Land Use Zoning District changes cannot be approved; on the contrary, the intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan. The carry over of the “holding zone” concept was a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing and then considered by the County Board of Supervisors.

Assembly Bill 32 will create a new regulatory program intended to reduce statewide greenhouse gas emissions to their 1990 level. It is not yet clear how, or if, these future regulations would affect local governments or how they might influence local land use planning decisions. From the background discussion above, it is clear that the issue of greenhouse gas reductions extends well beyond the scope of local government actions incorporated in General Plans. Nevertheless, the County of San Bernardino recognizes the importance of this issue. Goals and policies already incorporated into the General Plan will serve to reduce vehicle trip generation when compared to existing conditions. For further information, please see Categorical Discussion #3.

The County respectfully disagrees that “mitigation measures throughout the DEIR are completely inadequate.” As described in Categorical Discussion 1, the EIR for the 2007 General Plan is programmatic in nature, including the level of analysis and appropriate level of detail of adopted mitigation measures. As the cases cited in Categorical Discussion 1 make clear, the EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, its to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 (“while detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted”); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where "devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will
satisfy specific performance standards articulated at the time of project approval” (internal quotations omitted).

That is the approach taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of their General Plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a Table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists, the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their General Plan Update. For further explanation, please see Categorical Discussion 1.

With respect to the enforcement of the mitigation measures, the mitigation measures recommended in the EIR have been included as policies and implementation measures in the proposed General Plan, as described in Chapter VIII of the Draft EIR. This makes those mitigation measures legally binding, and ensures their implementation, because specific land use projects that are proposed must be consistent with the governing general plan. This is also one of the means specifically allowed by CEQA for making mitigation measures enforceable. Public Resources Code section 21081.6(b).

RESPONSE O.4-9

The County respectfully disagrees with this comment. The Mitigation Monitoring Program will be provided in its entirety concurrent with the County of San Bernardino Board of Supervisors’ certification of the Final Environmental Impact Report (FEIR) as authorized in Section 21081.6 of the Public Resources Code. In addition, the County respectfully disagrees with the need to re-circulate the Draft EIR. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 6.
October 20, 2006

VIA ELECTRONIC MAIL (without Exhibits)
VIA FED-EX (with Exhibits)

County of San Bernardino
Land Use Services Department, Advance Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA. 92415-0182
Attn: James Squire
Phone: 909-387-4147
Fax: 909-387-3223

Re: Draft Environmental Impact Report for County of San Bernardino General Plan Update and Associated Community Plans

Dear Mr. Squire,

I. Introduction.

These comments are submitted on behalf of the Center for Biological Diversity (“Center”) on the combined Draft Environmental Impact Report (“DEIR”) for the San Bernardino County General Plan Update Program (SCH# 2005101038), including the Associated Community Plans, and revision to the Development Code accompanying the General Plan Update Program (“the Project”).

The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 25,000 members throughout California and the western United States, including in San Bernardino County.
II. THE DEIR FAILS TO MEET THE REQUIREMENTS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

An EIR is a detailed statement, prepared under the California Environmental Quality Act, Public Resources Code §§ 21000-21178 ("CEQA"), describing and analyzing all significant impacts on the environment of a proposed project and discussing ways of mitigating or avoiding those effects. Pub. Res. Code § 21100; 14 Cal. Code Regs. ("CCR") § 15362. The purpose of an EIR “is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made.” Laurel Heights Improvement Association v. Regents of University of California, 6 Cal. 4th 1112, 1123 (1993) (emphasis in original) (citations omitted). An EIR should provide decision making bodies and the public with detailed information about the effect a proposed project is likely to have on the environment, to list ways in which the significant effects of a project might be avoided or minimized, and to indicate alternatives to the project. Pub. Res. Code § 21061; 14 CCR § 15002. California courts have emphasized that an EIR should: disclose all relevant facts; provide a balancing mechanism whereby decision makers and the public can weigh the costs and benefits of a project; provide a means for public participation; provide increased public awareness of environmental issues; provide for agency accountability; and provide substantive environmental protection.

Much of the inadequacies of the DEIR results from the failure to provide decision-makers and the public with a substantive analysis of environmental impacts using a thorough analysis of relevant information, and the failure to apply enforceable mitigation measures to address environmental impacts. Because of the combined DEIR for the General Plan Update obscures, rather than illuminates, the environmental impacts of the Project, the DEIR is inadequate to meet both the procedural and substantive mandates of CEQA.

A. Analysis of Environmental Effects Resulting from the General Plan Update

The intended use of the DEIR cannot be achieved because the DEIR fails to analyze with adequate specificity the environmental impacts of the Project. The intended use of this DEIR is to disclose to decision makers and the public, the significant environmental impacts of the San Bernardino County General Plan Update, DEIR at III-9. It is critical that the DEIR address all of the component programs of the General Plan Update Program because the component Community Plans, and Development Code revision are integral parts of the General Plan update. Adoption of the Community Plans and revision of the Development Code must be rigorously explored because they also are actions subject to CEQA review as components of the Project. The updated General Plan, Community Plans, and Development Code will cause a reasonably foreseeable indirect change to the physical environment, and is supported by a public agency, San Bernardino County. Pub Res C §21065; 14 CCR § 15378. Full environmental review and analysis of the combined General Plan Update, Community Plans, and Development Code revision must occur at this stage.

The Center objects to the DEIR based on the inadequacy of the current environmental documents. The DEIR failed to identify and adequately analyze a range of potential
environmental impacts of the San Bernardino County General Plan Update Program, and has
failed to provide enforceable mitigation measures to minimize those impacts. A revised EIR
must be prepared for the Project that properly identifies and analyzes the impacts of the proposed
development and provides specific, detailed, enforceable mitigation measures to minimize
impacts that cannot be avoided.

Much of the deficiencies of the DEIR results from the failure to obtain relevant
information for an adequate analysis, and the tendency of the DEIR to avoid a good faith
substantive analysis. The agency should not be allowed to hide behind its own failure to gather
App. 2002). CEQA applies to revisions of an agency’s general plan and “reaches beyond the
mere changes in the language in the agency’s policy to the ultimate consequences of such
changes to the physical environment.” City of Redlands v. County of San Bernardino, 96 Cal.
App. 4th 398, 408 (Cal. Ct. App. 2002). General plan revisions treated as “first phase” analysis
with later developments having separate approvals and environmental assessments must
necessarily include a consideration of the larger project, i.e., the future development permitted by
the amendment. City of Redlands v. County of San Bernardino, 96 Cal. App. 4th 398, 409 (Cal.
Ct. App. 2002). The Phase-I Scoping Analysis for the General Plan Update recognized that the
General Plan previously did not contain an adequate level of analysis. The 1989 General Plan
EIR was unable to provide useful information concerning growth consequences, and did not
provide any comparison of ground-level impacts associated with alternative growth scenarios.
Hogle-Ireland 2002, Executive Summary at 18. The Phase-I Scoping noted in particular that
impacts to sensitive wildlife, natural resources, traffic and water supply cannot be quantified or
geographically determined. Hogle-Ireland 2002, Executive Summary at 19. However, the 2006
DEIR still uses a similar scale and fails to provide useful information of growth consequences,
especially as related to alternative growth scenarios. Further, there is no quantified analysis of
impacts to sensitive wildlife, natural resources, or water supply. In order to provide the public
and decision makers with information necessary to analyze environmental impacts quantified or
geographically determined impacts must be used.

An adequate EIR for the Project must include, at minimum: (1) identification and
analysis of impacts to biological resources based on detailed, scientifically valid analysis of rare,
sensitive, threatened and endangered plants and animals (infra at § III.A); (2) identification and
analysis of the impacts to essential wildlife corridors in the San Bernardino Mountains (infra at §
III.B.); (3) quantification and analysis of impacts to air quality resulting from the Project (infra at §
IV); (4) analysis of the Project’s contribution of greenhouse gases to the problem of global
warming (infra at § V); (5) detailed analysis of the potential to increase Fire Hazards (infra at §
VI); (6) adequate analysis of the impacts to water supply (infra at § VII), aesthetics (infra at §
VIII), and public utilities (infra at § IX); and (7) specific, enforceable measures to mitigate
impacts to biological resources, air quality, greenhouse gas emissions and other resources in the
project area (infra at §§ II.B., III.D. IV.B., V.E., VI, VII, VIII, and IX).

A lead agency is required to “use its best efforts to find out and disclose all it reasonably
can.” CEQA Guidelines §15144. In addition, “[a]n EIR on a project such as the adoption or
amendment of a comprehensive zoning ordinance or a local general plan should focus on the

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code
October 20, 2006
Page 3 of 41
secondary effects that can be expected to follow from the adoption or amendment.” CEQA Guidelines §15146. The Draft EIR does not adequately address both counts. Adoption of a large scale zoning ordinances and general plan revision will minimize the parcel size of large unincorporated areas. The resulting secondary effects that will result from a project of this scale must be analyzed and disclosed at the initial phase of project approval and the County cannot improperly defer analysis to a later phase. Individual homes or projects will not qualify for the same level of environmental review under CEQA as the current project. Impact must be addressed to a level of sufficient detail at the stage when the Project can be influenced or mitigated, and not deferred.

One particularly troubling example of the DEIR’s failure to address the Project’s impacts is through the failure to analyze the impacts of the “holding zone” concept inserted into the DEIR in the Bear Valley Community Plan. At the September 21, 2006, Planning Commission Meeting planning staff discussed the inclusion of the holding zone language into the Bear Valley Community Plan. San Bernardino County, Land Use Services Department Planning Staff Report, General Plan Update Project, September 21, 2006. This concept allows parcels with low density such as BV/RL-40 (Rural Living, 40 acre minimum parcel size) to increase their density should they be able to provide adequate infrastructure and maintain consistency with general plan goals. This essentially allows upzoning of property contrary to surrounding land uses, and the applicable zoning for the property. The upzoning of property designated for low density use is internally inconsistent with the general plan goals for the area and the principles of the general plan to consistently apply zoning regulations to land uses. The holding zone concept was included at the behest of particular developers, specifically developers of the Moon Camp parcel.

This additional language of the holding zone concept was inserted after the DEIR was completed and released to the public. No analysis of the cumulative impacts of this policy change was addressed in the DEIR. No analysis of the concept could have been performed because the holding zone language was released after the DEIR. The DEIR fails to provide detailed information about the impacts of the holding zones on biological resources, water resources, traffic, air quality, and hazards and improperly defers identification and analysis of those impacts in violation of the California Environmental Quality Act (“CEQA”).

Analysis of the direct, indirect, and cumulative impacts of the holding zone concept must be addressed. By including language permitting higher density development on parcels the County is upzoning parcels and permitting higher density development in areas designated as low density. If the planning designation allows for high-density zoning to occur in areas that were previously lower density, then that higher density use must be analyzed in this CEQA document at this phase not just the lower density use under the zoning now assigned to the area. The County has the obligation to fully disclose and analyze the implications of the conversion of holding zones throughout the County to higher density use, not simply dismiss the impacts.

The DEIR must analyze in a detailed, quantifiable fashion the impacts that will result from the Project and how, specifically, those impacts will negatively affect the environment.
B. Mitigation of Impacts Resulting from the General Plan Update

The mitigation measures provided in the DEIR are entirely insufficient to mitigate the Project’s true impacts. The DEIR recognizes that the project will result in a host of significant impacts to aesthetics, agricultural resources, air quality, biological resources, hazards, and traffic. ES at I-19 to I-24. Recognition of these impacts does not absolve the agency of a good faith requirement to attempt to mitigate the significance of these impacts. The DEIR also asserts that mitigation will reduce impacts to the following resources below a level of significance: biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, recreation, traffic, public utility systems, and public services. DEIR at I-3 to I-18. It is critical that mitigation measures be enforceable and verifiable to be valid.

The majority of mitigation measures imposed in the DEIR are vague and unenforceable, allowing the agency to avoid the substantive mandatory requirements to impose mitigation measures that CEQA requires. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. 14 Cal. Code of Regs. § 15126.4(a)(2). CEQA obligates the city or county to incorporate mitigation measures into the policies of the general plan. Public Resources Code §21081.6. Legally binding, enforceable mitigation measures must be incorporated into the General Plan, Community Plans, and Development Code at this phase because these documents allow the growth related impacts that will result in a host of significant impacts.

Enforceable mitigation measures integrated into the Development Code must be included before the General Plan Update can be approved. When mitigation measures are incorporated into a plan, the agency must take steps to ensure that they will actually be implemented as a condition of later development approved under the plan, “not merely adopted and then neglected or disregarded.” Federation of Hillside Canyon & Canyon Ass’ns v. City of Los Angeles, 83 CA4th 1252 (2000). For mitigation measures that cannot be specifically formulated without a proposal for a specific facility the general plan should include a firm commitment to future mitigation of significant impacts. Rio Vista Farm Bureau Ctr. v. County of Solano, 5 CA4th 351 (1992). Only rarely does the General Plan Update provide a firm commitment to future mitigation by including specific provisions of the development code as examples for mitigation. See e.g. DEIR at IV-55, IV-56. Instead, the General Plan update avoids substantive mitigation and proposes unenforceable future mitigation such as coordination with local, state, and federal agencies, participating in Regional plans, long term planning, and incentives. Unenforceable language riddled with loopholes and exceptions does not provide the type of mitigation required by CEQA. The General Plan Update should include concrete, enforceable conditions in the development code to ensure adequate mitigation of impacts.

The County has not adopted specific design criteria or performance standards as mitigation measures for the Project and ensures no environmental harm will occur until such design criteria are met. See, e.g., Sacramento Old City Association et al. v. City Council of Sacramento, 229 Cal. App. 3d 1011, 1028-9 (1991); Laurel Heights Improvement Assn. v.
Regents of University of California, 47 Cal. 3d 375, 418 (1988). These specific design criteria or performance standards must be included for those mitigation measures that address significant impacts. Failure to include specific design criteria, performance standards, or legally enforceable mitigation language for all mitigation is contrary to CEQA.

The DEIR’s failure to address requisite mitigation is exemplified in by its failure to analyze the mitigation monitoring program, and explain how mitigation measures will be implemented to reduce the significance of impacts. The city or county must adopt a reporting or monitoring program for ensuring compliance with mitigation measures. State of California, General Plan Guidelines, Governor’s Office of Planning and Research (2003) at 196. The DEIR fails to include the proposed mitigation in the Mitigation Monitoring Program. DEIR at Chapter VIII. Indeed the draft mitigation monitoring program is completely blank. The failure to even address the mitigation monitoring program violates the spirit and substance of CEQA.

Omitting any discussion of mitigation monitoring does not inform the public or decisionmakers of how concrete mitigation measures will reduce the significance of impacts. It falls in the basic disclosure requirements of CEQA “to inform the public and its responsible officials of the environmental consequences of their decisions before they are made.” Laurel Heights Improvement Association v. Regents of University of California, 6 Cal. 4th 1112, 1123 (1993). The DEIR’s omission of the mitigation monitoring program also avoids any discussion or analysis of how those mitigation measures will be monitored to ensure they are applied and not disregarded. It does not allow the public or decision makers the opportunity to review the mitigation monitoring to ensure that the proposals are feasible and not simply window dressing to mask a significant impact. Omission of the mitigation monitoring program fails to describe in detail how those enforceable mitigation standards, such as design criteria or performance standards, will mitigate specific impacts. Without a rigorous discussion of the means employed to monitor and implement the mitigation it is impossible for decision-makers and the public to understand the true consequences of the environmental effects of a project.

III. The DEIR Fails To Properly Identify and Analyze The Direct, Indirect, And Cumulative Impacts To Biological Resources.

A. The DEIR fails to properly identify and analyze impacts to rare, threatened, and endangered species and their associated habitats

The General Plan Update process must conform with the California Endangered Species Act (CESA). The CESA has provisions for formal consultations under the CEQA process. Consultation is triggered when a state lead agency under CEQA proposes to authorize, fund, or carry out any project that is likely to jeopardize the continued existence of any state-listed species. Public Resources Code §21104.2.

The DEIR fails to adequately and properly analyze the project’s impacts on biological resources. The DEIR contains no detailed, quantitative analyses of project impacts on populations of special-status species or habitats. It omits any discussion –let alone analysis – of
important edge effects such as domestic pets. The General Plan and the DEIR fail to properly address the potential impacts of implementation of the Project on the biological resources of the surrounding area including, but not limited to, impacts from direct loss of habitat, habitat fragmentation, loss of access to critical water resources, and invasive plant and animal species.

The DEIR does not even attempt to provide meaningful information regarding the potential impacts of the Project on endemic, rare, threatened and endangered species. The body of the DEIR fails to acknowledge or list a host of candidate, sensitive, or special status species. The ones that are listed are not provided a meaningful analysis of how the Project will adversely affect their population or habitat. The CEQA Guidelines require a mandatory finding of significance where the project will, *inter alia*, “substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare, or threatened species.” 14 CCR § 15065.1 The County is attempting to turn CEQA on its head by proposing mitigation measures for impacts to species that have not yet been properly identified or analyzed.

The Conservation Background Report, Appendix H, addresses candidate, sensitive, and special status, but not in the level of detail required to provide an adequate analysis. The Conservation Background report admits that the “study includes an overview of the general habitats” and does not “include all species that are considered locally sensitive but have not been listed by state or federal regulatory agencies as protected or sensitive with the potential for listing.” DEIR App. H at 6-2. This analysis is deficient considering the countywide magnitude and lengthy timeframe. A rigorous analysis of impacts to special status species must be explored to meet the requirements of CEQA.

The Conservation Background Report engages in incorrect assumptions to minimize the level of significance. “It is assumed that most undertakings in San Bernardino County will have associated biological resources evaluations that reflect specific site characteristic studies for that particular region of the County.” DEIR App H at 6-2. This is an incorrect assumption because many projects will be exempt from CEQA review through categorical or statutory exemptions. Unless the County imposes biological resources evaluations for all projects as a mitigation measure for all projects this assumption is not a valid analysis under CEQA. Deferring analysis of impacts to a later stage also defers the cumulative significant impacts that will result from the imposition of the Project. Cumulative impacts must be addressed at the earliest possible phase of the CEQA process. Further, any mandatory findings of significance must be analyzed at this stage.

The General Plan’s approach fails to provide any useful information regarding impacts to biological resources because of the vague analysis “intended merely as a general overview.” DEIR App H at 6-3. This interpretation fails to provide adequate information to inform decision makers, and disregards previous analysis conducted by the County. The Phase-I Scoping for the General Plan Update recognized that the 1989 General Plan EIR did not provide any comparison

---

1 A sampling of special status species that are neglected from a thorough analysis and the adverse affects resulting from the project that will result from the project is included in Appendix A.

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code
October 20, 2006
Page 7 of 41
of ground-level impacts associated with alternative growth scenarios. Hogle-Ireland 2002, Executive Summary at 18. The Phase-I analysis noted in particular that impacts to sensitive wildlife, natural resources, traffic and water supply cannot be quantified or geographically determined. Hogle-Ireland 2002, Executive Summary at 19. The 2006 DEIR fails for similar reasons. There is no ground level analysis of impacts to sensitive species. The analysis is performed at a scale that renders the impacts analysis useless. Further, the DEIR does not provide a quantified of geographically determined metric against which to measure impacts so that a proper baseline is created to measure the effectiveness and implementation of mitigation measures.

The County attempts to avoid analysis by failing to collect necessary information. The agency should not be allowed to hide behind its own failure to gather relevant data. City of Redlands v. County of San Bernardino, 96 Cal. App. 4th 398, 408 (Cal. Ct. App. 2002). “It is intended that this review will be used as an initial understanding of the biological resources associated with the three general county planning areas.” DEIR App II at 6-3. An “initial understanding” does not provide the analysis required under CEQA. There must be a rigorous analysis of impacts to provide decision-makers and the public with the information necessary to truly evaluate a project’s impacts. The County relied upon the 1989 General Plan as background and baseline information for the 2006 DEIR. The “initial understanding of biological resources” was conducted during for 1989 General Plan. Permitting the County to continually provide an initial understanding every ten years when the General Plan update must be revised avoids the substantive analysis required under CEQA.

Moreover, the Phase-I Scoping for the General Plan Update recognizes the inadequacy of the information relied upon by the County. Information used by the County Planning Division is fifteen or more years old and has not been maintained in the County Geographic Information Management System. Updates have been maintained on manually prepared maps. Hogle-Ireland 2002, Executive Summary at 8. Additionally, the information used for the Natural Resources overlay does not provide the public with the necessary access. Planning information regarding Natural Resources overlays has limited accessibility. Hogle-Ireland 2002, Executive Summary at 8. Instead of engaging in a rigorous overhaul and update of information for the 2006 General Plan Update, the County has continued to rely upon outdated and inadequate data.

The General Plan Update and DEIR do not adequately address the impacts to the vast majority of special status species in San Bernardino. As a means of mitigation the County proposes a biotic resources report for projects within the Biotic Resources Overlay District. DEIR at IV-56. The Biotic Resources Overlay Map only addresses five species, the Desert Tortoise, the Mojave Ground Squirrel, the Bald Eagle, the Southern Rubber Boa and the Delhi Flower-Loving Sand Fly. County of San Bernardino General Plan 2006, Draft, at I-7. The California Natural Diversity Data Base indicates that 368 special status species exist in San Bernardino County. CNDDB 2006. Many of these species are threatened or endangered under State of Federal law and have critical habitat designated within San Bernardino County. The Biotic Resources Overlay addresses only 1.3% of special status species that exist in San Bernardino County. This analysis is grossly inadequate. The County cannot propose to address the impacts of special status species throughout the County by considering habitat for only 1.3%
of the total species, fail to propose a mitigation monitoring program to track the effectiveness of these measures, and propose that the analysis is adequate to meet the substantive mandate of CEQA, CESA, and the ESA.

A Biotic Resources Element that addresses all special status species should be compiled to adequately address environmental impacts. At a minimum it should incorporate the habitat range for all special status species. This information can be easily compiled by consulting the California Natural Diversity Database. CNDDB is a rich source of highly accurate, quality-checked data on the locations and status of rare and endangered plants, animals, and natural communities in California. CNDDB data can be digitally integrated using a GIS to provide overlays for a broad array of special status species. Considering the ease in accessing and compiling this information it is inexcusable that the County relies upon 1.3% of habitat types for special status species. Additionally the County should incorporate all Critical Habitat designations that have been published by the Fish and Wildlife Service. Mapping and analysis should include an adequate buffer to prevent the edge effects of development from impacting special status species. This buffer is particularly important around recognizes reserves for threatened and endangered species. For example, The reserves for the Stephens’ kangaroo rat and San Bernardino kangaroo rat, both federally endangered species, should have a ½ mile buffer that has been interpreted as an adequate buffer in the past.

The DEIR and General Plan Update do not adequately analyze impacts to oak woodlands. If a county determines that a project may have a significant effect on oak woodlands, the county must require one or more significant alternatives to mitigate the significant effect of converting oak woodlands. Pub Res Code § 21083.4. The DEIR fails to address impacts to oak woodlands even though the DEIR admits that several types of oak woodlands are present including: Sycamore – Oak riparian forest, black oak woodland, interior oak woodland, coast live oak woodland, and Coast live oak riparian forest. DEIR at IV-37, IV-40. The DEIR admits they are present, but fails to discuss how the Project will impact oak woodlands. Further, the DEIR does not propose “one or more significant alternatives to mitigate the significant effect of converting oak woodlands.” The DEIR must analyze the projects impacts to oak woodlands and propose alternatives that do not affect those resources.

The DEIR fails to address direct, indirect, and cumulative impacts to the Santa Ana river. The DEIR must address the potential to conflict with a local plan implementing protection and conservation of species that rely upon the riparian environment of the Santa Ana River. The County cannot simply ignore pertinent plans that affect resources within its jurisdiction. The Santa Ana Watershed Project Authority (SAWPA) developed a multi-phased planning process called the Integrated Watershed Plan (IWP). This Plan has 3 components, the SARI Planning Study, the Integrated Water Resources Plan, and the Environmental & Wetlands Component. This Plan is closely related to the Southern California Integrated Watershed Program (SCIWP). The IWP has been recently updated in 2005 as an Integrated Water Resources Management Plan (IWRMP). SAWPA 2005. The General Plan’s potential to conflict with components of the

---

2 Important Notice on the Proper use of the CNDDB: The CNDDB... will not in itself meet the requirements of the California Environmental Quality Act (CEQA), and it does not replace the need for conducting field work. CNDDB database at http://www.dfg.ca.gov/wbdub/html/rarefind_notice.html (emphasis added).
IWRMP must be specifically addressed. Much of the growth in San Bernardino County will occur within the Valley region adjacent to the Santa Ana River. Implications of that growth to impact special status species and the provisions of the IWRMP must be addressed.

The County’s duty to mitigate cannot be shifted onto other agencies; therefore its reliance on federal plans is misplaced. For example, the Draft EIR relies upon the mitigation structure of the West Mojave Plan. Draft EIR at IV-49. The West Mojave plan has not been completed and the mitigation structure is unknown. Furthermore, the final completion date of the West Mojave plan was 1995 and is a decade overdue. The fate of the document is far from certain and cannot be relied upon as potential future mitigation for the current project. Appropriate mitigation for this project, independent of the West Mojave Plan, should be identified and adopted as part of the EIR process prior to certification of the EIR. As the County is well aware, mitigation measures should be required at this phase of approval in order for the County to rely on them to reduce the Projects impacts to the environment.

Riparian habitat in the Desert Region is rare, and cannot be replaced. Mitigation banks elsewhere in the region are not adequate, or even effective, mitigation. Existing riparian habitats in the desert region should be completely protected. Desert riparian areas provide essential feeding, breeding and migrating habitat for plants and animals. If left intact, they contain and direct most flash floods, and provide natural groundwater recharge areas. Rather than allow these areas to be lost to development in exchange for protections for existing habitat elsewhere in the region, the County should protect these areas and require new development maintain the form and function of desert riparian areas.

The Center appreciates the provisions of the development code that seek to protect and benefit native plant species. Draft SB Dev Code § 88.01. However, § 88.01 provides exemptions that allow removal of species and must be fully analyzed in the DEIR:

(j) Parcel less than 20,000 square feet developed with primary structure. Removal on parcels that have a net area of 20,000 square feet or less and that are developed with a primary structure, other than a sign structure.

(k) Located within 20 feet of permitted structure. Removal from a parcel of a regulated native plant or tree that is within 20 feet of a structure that was constructed or set down on the parcel under a County development permit.

Draft SB Dev Code § 88.01.030. The DEIR must address how exemptions will impact native special status species.

The DEIR fails to offer adequate information about the number of acres of each habitat existing in the region compared to the historical number of acres, and how many additional acres are proposed for elimination by other projects in the area. The DEIR also provides literally no data about population estimates for the various wildlife and plant species that currently inhabit the County, either before or after project build-out. The DEIR has abjectly failed to provide the public with the information necessary to make an informed opinion as to the project’s likely impacts to biological resources. The “analyses” provided in the DEIR are not quantitative, objective, rigorous examinations of the past and current populations of species in the project area.
and in southern California, and how the project, alone and in tandem with additional past and future development projects in the area, will affect these populations.

The Phase-I Scoping for the General Plan Update recognizes that the General Plan Update must address the Project’s impacts to Biological Resources. Hogle-Ireland 2002, Executive Summary at 23. However, the General Plan Update fails to incorporate the necessary revisions. The Phase-I DEIR states that the County must choose to follow an MSHCP, alternative plan, or revise Natural Resources and open space policies to meet the minimum legal requirements under state and federal law for the protected of threatened and endangered species, wetlands, and water related resources. Hogle-Ireland 2002, Executive Summary at 23. The 2006 General Plan Update does not address the impacts to Biological Resources through any comprehensive planning effort and fails to meet the legal requirements under state and federal law.

The DEIR’s failure to properly identify and analyze the potential impacts of the Project on biological resources renders the DEIR wholly inadequate. Moreover, the imposition of general mitigation measures based on a lack of information fails to comply with CEQA. It lacks a meaningful analysis of alternatives that would avoid impacts to biological resources also renders the DEIR wholly inadequate.

B. The DEIR fails to adequately analyze impacts to Wildlife Corridors.

The General Plan Update will interfere with wildlife movement and impair key linkages within the San Bernardino Mountain, Little San Bernardino Mountains, Granite Mountains, and San Gabriel Mountains by allowing development to proceed in areas identified as essential to wildlife movement. The DEIR fails to adequately analyze and quantify the impacts to wildlife corridors in the project area. As a result the DEIR incorrectly concludes that adverse effects to the movement of any native, resident, or migratory fish or wildlife species, or wildlife corridors can be fully mitigated. The public has made an enormous investment in conservation and has dedicated significant resources to maintaining habitat integrity and areas for wildlife movement in the San Bernardino Mountains, Desert Areas, along the Santa Ana River and its tributaries, and other areas in the County. Existing information is available to the County during the General Plan Update process that can allow analysis of the full range of impacts to wildlife corridors, suggest wildlife corridors that will facilitate the flow of plants and animals between spatial areas, and suggest viable mitigation measures for adoption by the Project.

Habitat corridors are most effective when adjacent uses are compatible with suitable wildlife habitat. Beier and Loe. 1992. Perault and Lomolino. 2000. Urbanization has continually proven to be an incompatible use for wildlife habitat. Lower intensity use such as timber harvesting, recreation or agriculture would be a more compatible use. The project will result in a highly, urbanized use that will significantly impact the wildlife habitat potential of the site.

Intrusion by development into wildlife corridors impedes the migration of species within the corridor and increases the adverse “edge effects” of fragmented habitat. Bond. 2003. The
project’s elimination of wildlife habitat, development over the next 25 years, and increase in traffic flow and population is incompatible with wildlife habitat. The project’s encroachment into Wildlife Dispersion Corridors will create a significant adverse effect upon wildlife migration within the area. These biological effects must be fully analyzed in the EIR to determine the alternative that best suits the needs of the community and existing biological constraints.

Existing Wildlife Corridor maps exist and must be used to analyze impacts to wildlife. The Current Open Space Map for San Bernardino County, Open Space: A Plan of Open Space and Trails for the County of San Bernardino, prepared in 1991 lists wildlife corridors, greenbelt areas, policy areas, and buffer zones to protect open space and natural resources. There is no discussion of how the Project will impact the existing wildlife corridors, or how those wildlife corridors could be used to benefit wildlife movement and migration.

The minimal review of the Open Space diagram is cursory and inaccurate. The DEIR states that “the wildlife corridors identified on the Open Space Diagram will receive evaluation and mitigation under the requirements of the Biological Resources Overlay District,” which will render adverse effects fully mitigated below significance. DEIR at IV-50. As noted above the Biological Resources Overlay only covers 5 species and does not address the full range of sensitive species assemblages. Many of the Wildlife Corridors are outside the Biological Resources Overlay. Furthermore, there is no discussion of what mitigation will be required and how it will be implemented to assure that the adverse effects are fully mitigated. If the DEIR asserts that impacts will be fully mitigated then it must disclose how mitigation will reduce the significance of impact in order to fully disclose information to the public and decision-makers.

In partnership with over a dozen governmental and non-governmental organizations South Coast Wildlands produced a series of reports addressing the biological needs and design for wildlife corridors in the South Coast Ecoregion. The following reports are pertinent to the General Plan Update for San Bernardino County: Southcoast Missing Linkages Project: A Linkage Design for the San Gabriel - San Bernardino Connection; Southcoast Missing Linkages Project: Linkage Design for the San Bernardino-San Jacinto Connection; Southcoast Missing Linkages Project: Linkage Design for the San Bernardino-Little San Bernardino Connection; Southcoast Missing Linkages Project: Linkage Design for the San Bernardino-Granite Mountains Connection. These reports examine key linkages required for wildlife conservation within the San Bernardino Mountains based on careful scientific studies of key species and habitat requirements. Unlike the DEIR, the Linkage Design takes a scientific, conservation based, approach to the landscape and has determined several key areas that are critical to preservation and conservation of the biological resources in the area. The DEIR completely fails to address the issues raised in the Linkage Design.

The DEIR’s discussion of wildlife corridors fails to accurately identify areas that are important for wildlife-movement and is not based on any recent surveys conducted in accordance with scientific protocols. Inevitably, the failure to properly identify the impacts also leads to a complete failure to analyze the impacts on wildlife corridors. The DEIR simply provides no

---

3 The Reports are attached as exhibits to this comment letter and are incorporated by reference.
meaningful basis for decision makers or the public to evaluate the impacts that the Project would have on wildlife movement.

C. Edge Effects

The DEIR failed to evaluate indirect impacts to sensitive habitats, including impacts associated with the establishment of fuel modification zones, unpermitted recreational activities, the introduction of non-native plants, the introduction of pets, lighting, noise, and the loss and disruption of essential habitat due to edge effects.

The DEIR’s “analysis” is inadequate and fails to quantify the effects and to adequately demonstrate how the mitigation will minimize impacts. For example, the DEIR provides no discussion or quantitative analysis about toxics, and therefore the conclusion is utterly baseless. The DEIR makes no effort to compute potential toxic runoff based on average use of toxic chemicals per household and anticipated levels of paved surfaces. This analysis is tractable and feasible. Simply making a statement about no significance without providing any justification does not make the statement true.

The “analysis” on invasive species is similarly inadequate. The DEIR failed to identify and properly evaluate impacts to species and ecosystems from invasive exotics species. Many exotic plant species invade disturbed areas and then spread into wildlands, carried by wind, fire, vehicle tires, etc. Bossard et al 2000, Gelbard and Belnap 2003. Moreover, landscaping with exotic species within the housing units can easily be a vector for introducing invasive exotics into adjacent habitats, regardless of whether the slopes directly adjacent to natural areas are planted with natives.

The discussion on invasive species also completely neglects to mention invasive nonplant species. The best available data on edge effects for southern California habitats document the collapse of native ant population due the invasion of argentine ants up to 200 m (650 ft) from irrigated areas, Suarez et al. 1998, and predation by house cats which decimate small vertebrate populations, Churcher and Lawton 1987; Hall et al. 2000, within 100 to 300 meters (radius of 32 ha home range reported by Hall et al. 2000).

The County must address the whole of the action for which it is issuing the permit. CEQA Guidelines § 15063. The EIR fails to adequately address the full range of biological impacts from the development. There is absolutely no discussion of direct, indirect or cumulative impacts of the increase in traffic (and thus wildlife road mortalities), noise, lighting, fire risk, and other edge effects from urban development on sensitive species and biological resources of the project site and surrounding area, nor is there any discussion of the growth inducing aspects of the project. The EIR must fully disclose, analyze, and mitigate these serious impacts on this important wildlife corridor.

Again, the DEIR simply states that remnant night lighting and noise would not be a nuisance to surrounding wildlife without any substantiation whatsoever. This discussion does
not even come close to any kind of a credible impacts analysis. An adequate EIR must be prepared and the DEIR revised so that it complies with the requirements of the law.

**D. Mitigation of Impacts to Biological Resources**

The County must propose legally enforceable mitigation measures that reduce the significance of impacts to species. Instead of relying upon existing wildlife corridor maps that exist in the Current Open Space Map for San Bernardino County, or the Wildlife Linkages Reports prepared by the South Coast Wildlands Project the County proposes future planning without any enforcement mechanism:

Mitigation BIO-8. The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify wildlife movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdiction.

DEIR at IV-54. Many of these maps already exist and should be relied upon in the analysis. The DEIR does not explain why the existing maps cannot be relied upon to provide existing wildlife corridors. Additionally, the DEIR proposes no enforceable mitigation to reduce impacts for projects within mapped wildlife corridors. The mere preparation of a map without any enforcement mechanism does not mitigate the adverse effects of development on the ground. Restrictions on development in existing and future mapped wildlife corridors should be put into place to reduce the Project's impacts to wildlife.

Specific, feasible, and enforceable mitigation measures for impacts associated with fuel modification zones, unpermitted recreational activities, introduction of non-native plants, introduction of pets, lighting, noise, and the loss and disruption of essential habitat due to edge effects are available but were not incorporated in the DEIR. They include, but are not limited to, the following:

- minimum 300-foot setbacks between developed area, including roads, and sensitive habitat areas
- conditions prohibiting non-leashed outdoor pets (including cats)
- requiring, where appropriate, walls or fences that will inhibit domestic animals from harassing and harming native species including “cat-proof” fencing to prevent feral and house cats from accessing sensitive habitat
- capture programs to control feral cats
- techniques to control non-native invasive species
- prohibiting the use of pesticides and other toxic chemicals around homes and golf courses
- requiring, not simply recommending, the use of native vegetation in landscaping
- providing public education regarding rare, threatened and endangered species and how local communities can help protect them
- requiring gates to restrict access to lands set aside for habitat preservation
IV. Significant Impacts to Air Quality Must be Adequately Addressed and Mitigated

Californians experience the worst air quality in the nation, with annual health and economic impacts estimated in at 8,800 deaths (3,000–15,000 probable range) and $71 billion ($36–$136 billion) per year (Cayan 2006). Ozone and particulate matter (PM) are the pollutants of greatest concern (maximum levels are about double California’s air quality standards) and the current control programs for motor vehicles and industrial sources cost about $10 billion per year. The South Coast Air Basin is already in violation of air quality standards for ozone and PM, as well as other criteria pollutants. As a result, this section of the DEIR is particularly critical, and its flaws particularly alarming.

The DEIR admits in section IV-C that the project will result in significant air quality impacts. This project would exacerbate existing violations of the Clean Air Act and admittedly cause significant air quality impacts even after mitigation. In 2005, the maximum ozone, PM2.5, and PM10 concentrations in San Bernardino County continued to exceed federal standards by wide margins. SCAQMD 2007 AQMP at 2-5. San Bernardino County has repeatedly recorded the highest violations of federal ozone standards in the South Coast Air Basin over the past decade. SCAQMD 2007 AQMP at 2-7, 2-10. San Bernardino County violated the federal maximum annual average and federal maximum 24-hour standard for PM2.5 in 2005. SCAQMD 2007 AQMP at 2-13, 2-14. Contributions to levels of PM10 pollution cannot be must be fully analyzed and mitigated because the 2005 Maximum Annual Average PM10 Concentrations in San Bernardino County barely achieved the federal standard, by 1 percentage point. SCAQMD 2007 AQMP at 2-12. Despite these significant impacts the DEIR provides a cursory analysis of the impacts to air quality and overlooks substantial information.

A. The DEIR Fails to Adequately Analyze Air Quality Impacts

The County must provide a good faith analysis of the Project’s impacts to Air Quality, analyzing the project in relation to the current regional, state, and federal standards. An EIR must be prepared with a sufficient level of analysis to provide decision-makers with the information needed to make an intelligent decision concerning a project’s environmental consequences. 14 Cal. Code Regs § 15151. The agency must use its best efforts to disclose all that it reasonably can about a significant impact. Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm’rs, 91 CA4th 1344 (2001). The DEIR fails to address hazardous air pollutants, current federal standards for PM2.5, the applicable South Coast Air Quality Management Plan, any data regarding criteria pollutants, and appropriate mitigation to reduce the significance of impacts.

i. Hazardous Air Pollutants

The DEIR fails to quantify and address the impacts of Hazardous Air Pollutants ("HAPs") on the general population. HAPs are substances that are known or suspected to cause serious health problems such as cancer. The Clean Air Act defined an initial list of substances, and EPA currently identifies 188 HAPs. The list includes relatively common pollutants such as benzene, chlorine, methanol, and asbestos, as well as numerous less common substances.
According to the EPA, HAP emissions in San Bernardino County result in over 40 million pounds per year. EPA 2006. Considering the magnitude of this impact, the DEIR’s failure to address the issue is particularly disconcerting. According to CEQA Guidelines Appendix G a project will have a significant impact on air quality if the project would:

(a) Conflict with or obstruct implementation of the applicable air quality plan.
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
(c) Expose sensitive receptors to substantial pollutant concentrations.

CEQA Guidelines Appendix G, Environmental Checklist Form. This significance criteria was used in the DEIR. DEIR at IV-27.

The release of 40 million pounds of toxic air pollutants annually will “conflict with or obstruct the implementation” of the Air Quality Management Plan for both the SCAQMD and the MDAQMD and “contribute substantially” to the existing violation of the release of hazardous air pollutants. The annual release of 40 million pounds of hazardous air pollutants will result in exposure of sensitive receptors to toxic and carcinogenic compounds. These impacts are significant and must be addressed.

In addition to several criteria pollutants, motor vehicles emit several hazardous pollutants that the U.S. Environmental Protection Agency (EPA) classifies as known or probable human carcinogens. EPA estimates that mobile sources of air toxics, such as cars, trucks, and buses, account for as much as half of all cancers attributed to outdoor sources of air toxics. The gasoline additive benzene, for instance, is a motor vehicle emission and a known human carcinogen (U.S. EPA 2000). Benzene causes leukemia and blood disorders in adults. Short-term exposure to benzene can cause dizziness, headaches, vomiting, unconsciousness, and, at high levels, even death. Id.

The DEIR does address the potential of HAPs to impact sensitive receptors, but fails to quantify and address impacts on the overall population. DEIR at IV-76 to IV-77. People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory and other health problems. In addition to exposure from breathing air toxics, some toxic air pollutants such as mercury can deposit onto soils or surface waters, where they are taken up by plants and ingested by animals and are eventually magnified up through the food chain. Like humans, animals may experience health problems if exposed to sufficient quantities of air toxics over time. Available at http://www.epa.gov/ttn/atw/allabout.html

ii. Federal Standards for PM2.5

The DEIR fails to apply the proper federal standards for fine particulate matter of 2.5 microns or less (“PM2.5”). The DEIR omits the discussion of revised PM2.5 standards, does not adequately disclose the impacts to health and the environment that result from exposure to
PM2.5, fails to analyze the project’s contribution to PM2.5 emissions, and fails to employ adequate mitigation for the significance of those impacts.

The Clean Air Act of 1970 provides the federal government has the authority to establish National Ambient Air Quality Standards (NAAQS) for criteria pollutants for the benefit of human health and the environment. The DEIR acknowledges that PM2.5 is a pollutant subject to regulation by both California and the Federal government. DEIR at IV-25, IV-32. However, the DEIR fails to acknowledge that San Bernardino County is currently in violation of standards for PM2.5, and fails to require adequate mitigation to reduce the significance of the impact.

The revised primary standards issued by the EPA for PM2.5 must be addressed in the DEIR. The 24-hour level of PM2.5 standard has been reduced to 35 micrograms per cubic meter (µg/m³) while the level of the annual PM2.5 standard at 15 µg/m³ has been retained. 40 CFR 50.13, See also proposed rule 71 Fed Reg 2620 (Jan 17, 2006). The DEIR relies upon the outdated standard of PM2.5. DEIR at IV-32. Further, the DEIR does not address the Project’s potential to (1) conflict with or obstruct implementation of the applicable air quality plan for PM2.5; (2) violate the air quality standard or contribute to an existing or projected air quality violation of PM2.5; and (3) result in a cumulatively considerable net increase of PM2.5.

Southern California is far from meeting all federal and state air quality standards and, in fact, is among the worst in the nation. SCAQMD 2007 AQMP at ES-2. Without action by state and local government, the South Coast would fail to reach attainment of old standards for PM2.5. The South Coast Air Quality Management Plan emphasizes the challenges of implementing the new regulations. “Given the huge challenge and the public health threat involved, there is no margin for error in the overall Plan strategy, and there is no room for wavering or hesitation in the implementation of its control measures. Substantial public and private funding is needed to expedite the retirement of older, higher-polluting engines and vehicles. The time for all responsible authorities to expeditiously adopt and aggressively implement effective control strategies is now.” SCAQMD 2007 AQMP at ES-1.

PM2.5 emissions are significant impacts under CEQA because of their impacts to air quality, and human health. A consistent correlation between elevated PM2.5 levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. SCAQMD 2007 AQMP. In recent years, studies have reported an association between long-term exposure to air pollution dominated by fine particles (PM2.5) and increased mortality, reduction in life-span, and an increased mortality from lung cancer. SCAQMD 2007 AQMP. Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use by children and adults with asthma. SCAQMD 2007 AQMP. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter. SCAQMD 2007 AQMP. The elderly, people with pre-existing respiratory and/or cardiovascular disease and children appear to be more susceptible to the effects of PM2.5. SCAQMD 2007 AQMP.
iii. 2007 Air Quality Management Plan

The 2007 Air Quality Management Plan released by the South Coast Air Quality Management district will apply to the General Plan Update upon implementation. The purpose of the 2007 Air Quality Management Plan (AQMP or Plan) for the South Coast Air Basin (Basin) is to set forth a comprehensive program that will lead the region into compliance with federal 8-hour ozone and PM2.5 air quality standards. This Draft AQMP sets forth programs which require the cooperation of all levels of government: local, regional, state, and federal. Each level is represented in the Plan by the appropriate agency or jurisdiction that has the authority over specific emissions sources. Accordingly, each agency or jurisdiction must commit to specific planning and implementation responsibilities. SCAQMD 2007 AQMP at 1-1.

The DEIR fails to address the significance of, and information included in, the 2007 Air Quality Management Plan. Failing to provide the decision-makers and public of the applicable plans and regulations which will govern implementation of the General Plan violates the spirit and letter of CEQA.

iv. Specific Data Necessary for Air Quality Impacts

The DEIR cannot simply rely upon conclusory statements in the EIR as an accurate analysis of impacts to air quality. The EIR must contain facts and analysis, not just the agency’s bare conclusions and opinions. Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Assoc, 42 Cal.3d 929 (1986). The Air Quality Section incorrectly states that “[a]ll future development will undergo a specific CEQA analysis that will evaluate both the operational and construction emissions, as well as potential cumulative impacts.” Statutory and categorical exemptions limit CEQA review and analysis for over 40 types of projects. 14 Cal Code Regs §§ 15061(b)(2), 15354. This type of information is misleading for decision-makers and improperly attempts to place a reliance on future analysis and mitigation that will not occur. The agency fails to address specific air pollutants and the project’s impacts. The agency’s cursory statement that hydrocarbons contribute to the formation of PM2.5 does not provide the specific data necessary to make a meaningful analysis. DEIR at IV-28. There is no discussion of how the PM2.5 standards will meet state or federal standards.

The Draft EIR fails to provide a meaningful evaluation of cumulative air quality impacts to provide a critical baseline for future projects in the County. The General Plan merely states that the project is located in an air basin that is in non-attainment for ozone and PM10, failing to acknowledge non-attainment for PM2.5, and that project generated emissions cannot be fully mitigated below a level of significance. These statements merely make a conclusion with no cumulative analysis associated with it. Merely providing a conclusion that cumulative air quality impacts are significant is not an adequate evaluation and does not afford the Lead Agency the opportunity to provide meaningful mitigation to address cumulative impacts.

The DEIR avoids the Localized Significance Thresholds (LSTs) published and adopted by SCAQMD in June 2003. LSTs were developed by SCAQMD’s Environmental Justice
Program to address localized effects of air pollution on communities affected by project implementation. SCAQMD staff developed LST methodology for use by Lead Agencies to help in determining significant adverse localized air quality impacts. SCAQMD states that LSTs are voluntary designed to help a Lead Agency in determining localized impacts to air quality. Note that all SCAQMD published thresholds of significance are voluntary. SCAQMD goes on to state that “LSTs would only apply to projects that must undergo an environmental analysis pursuant to CEQA or the National Environmental Policy Act (NEPA).” Since the EIR is pursuant to CEQA, this project is subject to the LST analysis, which must be performed.

The DEIR fails to estimate or quantify the emissions that will result from the project, differing emissions that may result from alternatives proposed by the project, and the reductions in emissions that may result from mitigation. Emissions by air basin are projected within the DEIR, DEIR at IV-31 to IV-35, but the DEIR omits entirely any projected contribution of criteria pollutants resulting from the project. Specific data should be presented when necessary for a meaningful analysis of a significant impact and it is reasonably feasible to do so. Berkeley Keep Jets Over the Bay Comm. V. Board of Port Comm’rs, 91 CA4th 1344, 1381 (2001); 14 Cal Code Regs 15144. Where there is evidence that a standard, accepted methodology can feasibly be used to assess a significant impact, the lead agency must assess the impact unless it provides a clear and adequately supported justification for its failure to do so. Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm’rs, 91 CA4th 1344, 1370 (2001). Instead of providing valid forecasting of emissions, the DEIR engages in deceptive deferral of review.

The Air Quality analysis should use accepted methodology to forecast emissions resulting from the project, instead of a cursory analysis of the impacts. The following models are available to assist the CEQA analysis in calculating impacts to air quality:

- Transportation and Land Use Programs Computer Model (URBEMIS 2002 v.8.7.0) - The latest URBEMIS 2002 model (version 8.7.0) estimates air pollution emissions from a wide variety of land use projects, available at [http://www.aqmd.gov/CEQA/urbemis.html](http://www.aqmd.gov/CEQA/urbemis.html)

- Roadway Construction Emissions Model (version 5.1) - Roadway construction emissions model, developed by the Sacramento Metropolitan AQMD, can be used to assist roadway project proponents with determining the emission impacts of their projects (listed under "Mitigating Air Quality Impacts" heading), available at [http://www.airquality.org/ceqa/index.shtml](http://www.airquality.org/ceqa/index.shtml)

- The Hotspots Analysis and Reporting Program (HARP)- HARP is a tool that assists with the programmatic requirements of the Air Toxics "Hot Spots" Program. HARP can be used to evaluate emissions inventory data and the potential health impacts associated these emissions. The use of HARP promotes statewide consistency, increases the efficiency of evaluating potential health impacts, and provides a cost-effective tool for developing facility health risk assessments., available at [http://www.arb.ca.gov/toxics/harp/harp.htm](http://www.arb.ca.gov/toxics/harp/harp.htm)

- California Puff Model (CALPUFF) - The CALPUFF model has been adopted by the U.S. Environmental Protection Agency (U.S. EPA) in its Guideline on Air Quality Models as
the preferred model for assessing long range transport of pollutants and their impacts on Federal Class I areas and on a case-by-case basis for certain near-field applications involving complex meteorological conditions, available at http://www.src.com/calpuff/calpuff1.htm

- California Line Source Dispersion Model (CALINE4, CALINE4, CALifornia LINE Source Dispersion Model, version 4, is the standard modeling program used by Caltrans to assess carbon monoxide impacts near transportation facilities, available at http://www.dot.ca.gov/hq/env/air/index.htm

- EPA's CMAQ modeling system is supported by the Community Modeling and Analysis System (CMAS) Center. The CMAQ model includes state-of-the-science capabilities for conducting urban to regional scale simulations of multiple air quality issues, including tropospheric ozone, fine particles, toxics, acid deposition, and visibility degradation, available at http://www.epa.gov/asmdnerl/CMAQ/index.html

The lead agency must provide adequate data for decision makers to make a meaningful analysis of the impacts to air quality using generally accepted models for analysis.

B. The DEIR Does Not Analyze and Incorporate Adequate Mitigation Measures

The DEIR and General Plan inadequately incorporate mitigation into the Project. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. 14 Cal. Code of Regs. § 15126.4(a)(2). Because the County requires numerous incentives or unenforceable mitigation measures the severity of impacts in not adequately mitigated.

Meaningful mitigation measures are required to reduce the significance of the Project's impacts to Air Quality. Mitigation AQ-1 does not discuss how it will be determined whether areas are susceptible to wind hazards. DEIR at IV-27 to IV-28. These standards should be applied countywide to reduce particulate matter pollution.

Mitigation AQ-2 simply rearranges the deck chairs on the titanic. DEIR at IV-28. Shifting or staggering work schedules will do nothing to reduce the 8 or 24 hour average for criteria pollutants, it will simply extend the amount of vehicle trips over a longer period. Mitigation should be focused on reducing the number of mobile sources that contribute the bulk of pollution.

The mitigation measures imposed in the DEIR completely fail to address any incentives for mass transit, or require any study or analysis of means to increase mass transit to reduce criteria pollutants. The Phase-I Scoping Analysis for the General Plan Update recognized that the need to address mass transit options by stating that the County needed to examine commuter rail density designations. Hogle-Ireland 2002, Executive Summary at 23. These recommendations to improve air quality were overlooked. The County should rigorously explore mass transit options to reduce criteria pollutant emissions and improve traffic congestion.

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code October 20, 2006
Page 20 of 41
While the Draft EIR determined that NOx, ROG, CO and PM10 emissions will result in significant impacts, the Draft EIR did not propose meaningful mitigation to reduce NOx, ROG or CO. SCAQMD recommends several mitigation measures that substantially reduce NOx emissions. These mitigation measures include installing lean NOx catalysts, diesel oxidation catalysts, and/or cooled gas recirculation to construction equipment. SCAQMD also suggests running construction equipment on aqueous diesel fuel to reduce NOx emissions. Requirements that new or substantially retrofitted construction meet LEED certified green building standards will increase energy conservation and decrease criteria pollutant emissions from households and power plants. LEED certification also provides standards to limit the release of total volatile organic compounds. Mitigation should further include the imposition of fees for projects that exceed the significance threshold for impacts to air quality. These fees could be placed in an air quality mitigation bank that can be used to finance projects that reduce criteria pollutant emissions on other projects. The Draft EIR does not propose any of these mitigation measures and does not discuss why they were not considered.

V. The DEIR Fails to Analyze and Mitigate Greenhouse Gas Emissions from the Project

The DEIR makes no mention of climate change, greenhouse gases or global warming. This is a significant omission and must be remedied in a revised DEIR. Concentrations of greenhouse gases are increasing in the earth’s atmosphere, primarily from society’s burning of fossil fuels for energy and destruction of forests for other human activities. These gases cloak the earth like a blanket, absorbing solar radiation that would otherwise be radiated back into space, causing the earth’s climate to warm much like the interior of a greenhouse. This phenomenon is called global warming and is leading to profound changes in the earth’s climate. The world’s leading scientists agree that society’s production of greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), is responsible for the unprecedented rate of warming observed over the past century. (ACIA 2004; IPCC 2001).

Carbon dioxide accounts for approximately 85% of total emissions, and methane and nitrous oxide together account for almost an additional 14%. Because of the persistence and mixing of these gases in the atmosphere, emissions anywhere in the world impact the climate everywhere equally. Therefore, the impact of greenhouse gas emissions produced in California (the 12th largest emitter in the world) will impact not only California, but the rest of the world as well. In the absence of substantial reductions in greenhouse gas emissions, global warming and its impacts on human health, the environment, and the economy will rapidly worsen in this century.

Attached at Appendix B is detailed information on the global implications of climate change and greenhouse gas emissions including the following: the rising temperatures as a result of global warming; the impacts of global warming generally; the impacts of global warming on threatened, endangered, rare, and special status species outside California; and the economic cost of carbon.

A. California Laws Require the Analysis and Reductions of Green House Gases
The DEIR must analyze the impacts posed by greenhouse gas emissions resulting from the implementation of the General Plan Update Program. The State of California recognizes the threats posed by global warming. To address and rectify the State’s increasing contributions to greenhouse gas emissions, the State of California has enacted requirements for state and local agencies to address the issue of global warming by analyzing and reversing the emissions of greenhouse gases. Executive Order S-3-05 calls for greenhouse gas emission reductions and analysis of the impacts of climate change. The legislature and the Governor again reaffirmed their commitment to address the issue of climate change by passing the “The California Global Warming Solutions Act of 2006.” AB 32. Despite the recognized threats posed by global warming and the implications for the community, the EIR fails to completely discuss the projects contribution to greenhouse gas emissions.

California is extremely vulnerable to the impacts of global warming and is also responsible for a significant portion of the U.S. and global emissions of greenhouse gases. The significant risks climate change poses to California as well as the considerable benefits the state could realize if it addresses these risks prompted Governor Schwarzenegger to issue Executive Order S-3-05 on June 1, 2005. See F.Chung et al. 2006 at Appendix 1.7. The Executive Order called for specific emissions reductions and a periodic update on the state of climate change science and its potential impacts on sensitive sectors, including water supply, public health, coastal areas, agriculture and forestry. The Executive Order established the following greenhouse gas (GHG) emissions targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

In response to Executive Order S-3-05, the California Environmental Protection Agency (CalEPA) formed a Climate Action Team with members from various state agencies and commissions. The Team has issued a series of reports, including a March 2006 Climate Action Team Report to Governor Schwarzenegger and the Legislature. This and other reports issued by CalEPA, the California Energy Commission (CEC), Department of Water Resources and other California agencies are available at http://www.climatechange.ca.gov/documents/index.html and should be used by local jurisdictions like the County of San Bernardino in preparing environmental documents under CEQA.

Some of the major impacts identified in recent reports include:

- Reduction of Sierra snowpack up to 90 percent during the next 100 years threatens California’s water supply and quality as the Sierra accounts for almost all of the surface water storage in the state.
- Impacts to the health of Californians due to increases in the frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires: Increasing temperatures from 8 to 10.4°F, as expected under the higher emission scenarios, will cause a 25 to 35 percent increase in the number of days Californians are exposed to ozone pollution in most urban areas. This will slow progress toward attainment of air quality standards and impede many of the state’s efforts to reduce air pollution. Temperature increases are likely to result in an increase in heat-
related deaths. Children, the elderly, and minority and low-income communities are at greatest risk.

- Potential impacts from limited water storage, increasing temperatures, increased carbon dioxide concentrations, pests and weeds threaten agriculture and its economic contribution to the state. Direct threats to the structural integrity of the state’s levee system would also have immense implications for the state’s fresh water supply, food supply, and overall economic prosperity.
- Erosion of our coastlines and sea water intrusion into the state’s delta and levee systems may result from a 4 to 33-inch rise in sea level during the next 100 years. This will further exacerbate flooding in vulnerable regions.
- Increasing temperatures and pest infestations would make the state’s forest resources more vulnerable to fires. Large and intense fires threaten native species, increase pollution, and can cause economic losses.
- Increasing temperatures will boost electricity demand, especially in the hot summer season. By 2025 this would translate to a 1 to 3 percent increase in demand resulting in potentially hundreds of millions of dollars in extra energy expenditures.

CalEPA 2006; Cayan et al. 2006; Chung 2006; Drechsler et al. 2006.

The California Global Warming Solutions Act of 2006 (AB 32), acknowledges the threats of global warming and places a cap on California’s greenhouse gas emissions and thus brings the state closer to meeting these targets. The state of California recognizes the significant threats to the natural environment posed by global warming:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

AB 32 § 38501(a) 2006.

Global warming will also have significant impacts on the California economy, which must be addressed by all levels of government.

Global warming will have detrimental effects on some of California’s largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.

AB 32 § 38501(b) 2006. In order to address the threats and impacts of global warming the California Global Warming Solutions Act requires the state to reduce the levels of greenhouse gas emissions to 1990 levels by the year 2020. AB 32 § 38550.

CEQA requires an EIR analyze any “significant environmental effects” of a proposed project. Pub. Res. Code § 21 100(b)(1); Cal. Code Regs., Title 14, §§ 15126(a), 15126.2(a), 15143. "Significant effect on the environment' means a substantial, or potentially substantial,
adverse change in the environment." Pub. Res. Code § 21068. CEQA also provides that the CEQA guidelines "shall" specify certain criteria that require a finding that a project may have a significant effect on the environment:

"(1) A proposed project has the potential to degrade the quality of the environment, curtail the range of the environment, or to achieve short-term, to the disadvantage of long-term, environmental goals.
(2) The possible effects of a project are individually limited but cumulatively considerable. As used in this paragraph, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
(3) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."


The effects of a project must be fully analyzed and mitigation imposed if any of the above triggers are reached. The Plan under consideration in this DEIR shows a projected 46% increase in population between 2000 and 2010. DEIR at IV-117. Most individuals in unincorporated areas of the County will rely on their automobile for transportation. DEIR at IV-141. In light of the severe impacts cars and trucks have on the level of greenhouse gas emissions in this state, clearly "has the potential to degrade the environment." See id., subd. (b)(1). The cumulative effects of this project on greenhouse gas emissions, when taken in consideration with the impacts statewide of increased population and vehicular travel over the next quarter century, are undeniable. See id., subd. (b)(2). Finally, when considering the impacts of climate change on California, it is impossible to ignore that the impacts of this project will have either direct or indirect effects on human beings. See id., subd. (b)(3). Given the scope of the Plan (both in years, and geographically), the projected increase in vehicle travel that will result, and the fact that it covers one of the fastest growing regions in the State, there is no question that the impacts of this Plan on greenhouse gas emissions and climate change may, and likely will, have significant cumulative environmental impacts for California. These impacts should have been considered and analyzed in the DEIR.

**B. The impacts of Global Warming on California**

The precise nature of the impacts over the next decades will depend upon whether global greenhouse gas emissions continue to increase at current rates, or whether the current rate of increase is slowed, and emissions actually reduced. Scientists model future impacts based on different emissions scenarios (Cayan et al. 2006). Under a low emissions scenario, by the end of this century heat waves and extreme heat in Los Angeles will quadruple in frequency and heat-related mortality will increase two to three times (Hayhoe et al. 2004). Alpine and subalpine forests are reduced by 50-75%, and Sierra snowpack is reduced 30-70% (Hayhoe et al. 2004). Under a higher emissions scenario, heat waves in Los Angeles will be six to eight times more frequent, with heat-related excess mortality increasing five to seven times (Hayhoe et al. 2004). Alpine and subalpine forests would be reduced by 75-90%, and snowpack would decline 74-
90%, with impacts on runoff and streamflow that, combined with projected declines in winter precipitation, could fundamentally disrupt California’s water rights system (Hayhoe et al. 2004).

As of 2002, California’s main source of greenhouse gases was the transportation sector (41.2%) followed by the industrial sector (22.8%), electric power sector (19.6%), agriculture & forestry sector (8.0%), and other sources (8.4%) (CalEPA 2006). Transportation is also the main source of emissions from the Black Bench project. Mitigation of the state’s emissions, therefore, will result from addressing each of the sources, with a primary focus on transportation.

C. The Impacts of Global Warming on Threatened, Endangered, Rare, and Special Status Species in California

Climate change is a leading threat to California and the world’s biological diversity. Species have already been profoundly impacted by the worldwide average temperature increase of 1°F Fahrenheit (0.5°C Centigrade) since the start of the Industrial Revolution (IPCC 2001). Yet the warming experienced to date is small compared with the 2.5-10°F (1.5-5.5°C) or greater warming projected for this century. The ways in which climate change threatens species are varied and sometimes complex. Below we present an overview of impacts observed to date and projections for the future.

Scientists have predicted three categories of impacts from global warming: (1) earlier timing of spring events, (2) extension of species’ range poleward or upward in elevation, and (3) a decline in species adapted to cold temperatures and an increase in species adapted to warm temperatures (Parmesan and Galbraith 2004). A recent survey of more than 30 studies covering about 1600 species summarized empirical observations in each of these three categories and found that approximately one half of the species were already showing significant impacts, and 85-90% of observed changes were in the direction predicted (Parmesan and Galbraith 2004). The statistical probability of this pattern occurring by chance, as opposed to being caused by climate change, is less than one in a billion (Parmesan and Galbraith 2004).

Changes in the life cycles and behaviors of organisms such as plants blooming and birds laying their chicks earlier in the spring were some of the first phenomena to be observed. These changes may not be detrimental to all species, but depending on the timing and interactions between species, may be very harmful.

The Edith’s checkerspot butterfly, which occurs along the west coast of north America, has been severely impacted by such changes in the lifecycle of organisms. The Edith’s checkerspot’s host plant, Plantago erecta, now develops earlier in the spring while the timing of caterpillar hatching has not changed. Caterpillars now hatch on plants that have completed their lifecycle and dried up, instead of on young healthy plants (Parmesan and Galbraith 2004). The tiny caterpillars are unable to move far enough to find other food and therefore starve to death (Parmesan and Galbraith 2004). Because of this, many Edith’s checkerspot butterfly populations have become extinct. Many more populations have been lost in the southern portion of the species’ range than in the northern portion, resulting in a net shift of the range of the species.
northward and upwards in elevation. All these changes have occurred in response to “only” 1.3°F Fahrenheit regional warming (Parmesan and Galbraith 2004).

The southernmost subspecies, the Quino checkerspot butterfly, already listed as endangered under the Endangered Species Act due to habitat destruction from urban development and other impacts, has disappeared from nearly 80% of otherwise suitable habitat areas due to global warming (Parmesan and Galbraith 2004). The Bay checkerspot and Taylor's checkerspot butterflies, also listed under the Endangered Species Act, have been similarly impacted (Parmesan and Galbraith 2004).

Butterfly species are impacted in other ways as well. The northward expansion of the treeline into alpine meadow butterfly habitat can impede dispersal, fragment habitat, and increase mortality via bitterly collisions with the trees (Krajick 2004; Ross et al. 2005).

While theoretically some species can adapt by shifting their ranges in response to climate change, species in many areas today, in contrast to migration patterns in response to paleoclimatic warming, must move through a landscape that human activity has rendered increasingly fragmented and inhospitable (Walther 2002). When species cannot shift their ranges northward or to increased elevations in response to climate warming, they will become extinct (Parmesan and Galbraith 2004). Therefore, the least mobile species will be the first to disappear.  

**D. The DEIR Entirely Overlooks the Project’s Greenhouse Gas Emissions**

The DEIR is inadequate because it neglects to analyze global warming and the project’s greenhouse gas emissions. The CEQA Guidelines provide that, in discussing the environmental effects of a project, an EIR must include “a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences.” 14 Cal. Code Regs. § 15151. The Project will allow foreseeable and quantifiable emissions of carbon dioxide and other greenhouse gases during the lifetime of the General Plan. These emissions, although relatively small in comparison to worldwide greenhouse gas emissions, will contribute directly and cumulatively to the increase in atmospheric greenhouse gases, and will thus contribute directly and cumulatively to global warming.

Under CEQA, it is irrelevant that the emissions associated with the project are small in comparison to total emissions. On the contrary, CEQA’s cumulative impact analysis requirement exists to capture precisely this type of impact that may be individually small but cumulatively significant. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 721. (“The EIR improperly focused upon the individual project’s relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.”) Here, the EIR completely omits any quantification of the project’s cumulative contribution to the emissions of criteria pollutants, hazardous air pollutants, or greenhouse gases.

---

4 Appendix B further documents the impacts of global warming on threatened, endangered, rare, and special status species throughout the world

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code October 20, 2006
Page 26 of 41
A revised DEIR must calculate the project’s greenhouse gas emissions, and then avoid, minimize, and mitigate them to the maximum extent feasible. In fact, many of the actions to avoid, minimize, and mitigate greenhouse gas emissions will benefit the County in the future.

The greenhouse gas emissions for different components of the General Plan must be calculated. For example, construction permitted by the Development Code would include, but not be limited to: (1) the greenhouse gas emissions of construction vehicles and machinery; (2) the greenhouse gas emissions from manufacturing and transporting building materials; (3) the greenhouse gas emissions of planning and design. The operation phase would include but not be limited to: (1) the greenhouse gas emission from the heating, cooling, and lighting the commercial, industrial, and residential units; and (2) the greenhouse gas emissions from the vehicle trips generated by development under the General Plan and development code.

The DEIR’s Air Quality Section (IV-C) does not analyze greenhouse gas emissions, and the document as a whole contains insufficient information for the reader to estimate the project’s total greenhouse gas emissions. Section IV-O (Transportation/Traffic) provides Average Daily Traffic Volumes for the County. DEIR at IV-154 to IV-160. The DEIR should estimate average trip length and average fuel efficiency of the vehicles and then calculate their carbon dioxide emissions. The EPA has many different tools available for calculating emissions. They are available at:
http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterToolsCalculators.html; see also http://pubs.wri.org/pubs_description.cfm?PubId=3756 (which contains calculators for CO₂ emissions from fuel used for heating and transportation, CO₂ emissions from purchased electricity, CO₂ emissions from business travel by air, train, bus and car, and CO₂ emissions from employee commuting). Calculation of the project’s greenhouse gas emissions is the first step to then analyzing and mitigating them.

E. Climate Change Mitigation

The Plan could include mitigation for these impacts. The Governor has recognized, "mitigation efforts will be necessary to reduce greenhouse gas emissions and adaptation efforts will be necessary to prepare Californians for the consequences of global warming." Executive Order S-3-05, June 1, 2005. Increased public transportation, increased support of alternative fuels and technologies, the purchase of carbon offsets (or mitigation "credits"), installation of electric vehicle charging stations, and other affirmative steps to reduce the transportation impacts of CO₂ could be considered as potential mitigation projects. These are real, achievable and available mitigation measures that could be considered when OCTA recognizes its obligations to analyze greenhouse gas emissions and their impact on climate change as part of its long term transportation planning.

There are many avoidance and mitigation measures available to the project proponent. Adopting these measures will benefit the environment, take the state closer to meeting its greenhouse gas emissions reduction targets, and demonstrate responsible development. These measures may also save the project proponent and future residents of the project site money. Measures to minimize greenhouse gas emissions include:
Following the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) or comparable standards for energy- and resource-efficient building during pre-design, design, construction, operations and management. See http://www.usgbc.org and links; Alameda County 2005

- Minimizing and recycling construction-related waste
- Using salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials
- Maximizing water conservation measures in homes and landscaping, using drought-tolerant plants in lieu of turf, planting shade trees
- Installing the maximum possible solar energy array on the building roofs and/or on the project site to generate solar energy for the facility
- Using passive heating, natural cooling, solar hot water systems, and reduced pavement;
- Landscaping to preserve natural vegetation and maintain watershed integrity
- Installing electric vehicle charging stations at the facility
- Constructing the most energy-efficient buildings possible, to decrease heating and cooling costs
- Utilizing the combination of construction materials with the lowest carbon footprint
- Utilizing only Energy Star heating, cooling, and lighting devices, and appliances
- Ensuring that public transportation will serve the site, by constructing bus stops or other facilities and funding the transportation agency if necessary
- After all avoidance and minimization measures have been incorporated, purchasing offset credits for the project’s lifetime greenhouse gas emissions

Once all measures to avoid and minimize greenhouse gas emissions have been adopted, the project’s remaining greenhouse gas emissions should be calculated, and offsets purchased to mitigate for them. There are many options for purchasing carbon offsets (or credits), including but not limited to the following:

- The Chicago Climate Exchange (http://www.chicagoclimatex.com/)
- Climate Care (http://www.climatecare.org/)
- My Climate (http://www.myclimate.org)
- Climate Friendly (http://www.climatefriendly.com/)
- The Carbon Neutral Company (http://www.carbonneutral.com/)
- The Climate Trust (http://www.climatetrust.org/)
- Renewable Choice Energy (http://www.renewablechoice.com/m/index.php)

Purchasing mitigation credits to offset the project’s unavoidable greenhouse gas emissions is entirely feasible, and is in fact becoming quite common. Early in 2006, Whole Foods announced that it would buy wind energy credits from Renewable Choice Energy to offset 100% of its electricity use (other companies purchasing these credits include Johnson & Johnson, DuPont, Starbucks, IBM, and Safeway). FedEx Kinkos announced it would will increase its “green power” commitment by 67.5 percent to an estimated 40 million kilowatt-hours per year, and Walgreens announced it will install solar-power systems at 96 stores and two distribution centers.
centers in California. There is no reason why this Project cannot mitigate for 100% of its greenhouse gas emissions once all avoidance and minimization measures have been incorporated.


Because the project’s greenhouse gas emissions are likely to be significant after calculation given even just the vehicle trips generated, a revised DEIR must consider and adopt feasible mitigation measures and/or an alternative that reduces the project’s contribution of greenhouse gases to the maximum extent feasible. Not only is this required by CEQA, but it will also demonstrate the County’s commitment to environmental and community leadership.

VI. The General Plan Update Fails to Adequately Analyze and Mitigate Fire Hazards

The DEIR fails to adequately analyze and mitigate the hazards resulting from wildland fires. The proposed San Bernardino Development Code update does not protect residents from a real threat of fire hazards. New residents might not be fully aware that their homes are imminent threatened with fire. San Bernardino County, particularly the mountain communities, are in an area of extreme fire hazard. The Bear Fire of 1970, Panorama Fire of 1980, and Old Fire of 2003 burned over 233,000 acres. DEIR at IV-79. Considering the magnitude of the threats to human health, and the economic costs for the private and public sector the County should enforce rigorous standards in the development code.

The Development Code requires a 30 foot setback from the National Forest boundary for buildings constructed after 1988. SB Co Dev. Code 82.13.060(b)(7). This setback is inadequate and does not mitigate the threat posed by fire at the Wildland-Urban Interface (WUI). Research on fire threats and modeling for hazards in the WUI indicate that distances of 20-40 meters are necessary to reduce the threat of wildland fire on residential structures (Nowicki 2002). Effective fire protection setbacks eliminate opportunities for ignition of the house because flames of the burning forest do not provide enough radiant heat to ignite the surface of the structure. Setbacks supported by scientific research to protect homes should be integrated into the plan.

The Code provides a host of loopholes and exemptions to the setback requirements. The minimum setback requirements of this Development Code does not apply to a broad range of structures including fences, decks, awnings, propane tanks, and garages. SB Co Dev. Code 82.13.070(b), 83.02.080. Permitting combustible materials within the setback itself eliminates the purposes of the setback to reduce fire hazard. Exemptions from setback requirements allows radiant heat from wildland fires to ignite structures adjacent or connected to residential structures. Rigorous setbacks should be imposed to reduce fire hazards.

The Development Code allows development within fire safety overlays, areas recognized as hazardous for fire, instead of limiting development that threatens residents and the
surrounding community. The Alternate Hazard Protection Measures section of the code allows
development to proceed contrary to overall Code requirements for safe development in order to
provide greater “design flexibility” for the developer. SB Dev. Code. 82.13.090. These type of
exemptions threaten the safety of the community and should not be allowed. Fire Safety
Overlays map the significant threat of fire. Reducing habitation within recognized hazard zones
protects the public health and safety. If the code seeks to provide design flexibility then it should
establish a uniform metric against which to rate the safety features of the project. Instead the
approval is left to the Fire Authority without a clear definition of what standards will be used to
determine if “approved alternative measures provide the same or a greater level of protection or
are as effective as the established standard or requirement.” SB Dev. Code. §
82.13.090(c)(2)(B).

Further, the development code recognizes the hazards posed by fire prone areas, such as
those on steep slopes - above 30%- and within 30 feet of the National Forest, but permits
development anyway. SB Dev. Code. 82.13.060. Exemptions should not be allowed for these
areas that are prone to severe fire hazards. The standards should be uniformly applied upon all
developers.

Mitigation to address the significant environmental effects of fire is inadequate because
the Code standards do not meet the most current fire-safe building techniques and standards.
Mitigation HAZ-18 states: “The county shall review proposed development projects within high
fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as
found in the County’s Development Code, Chapter 82.13, shall be strictly enforced. New
development in this area shall be constructed to reflect the most current fire-safe building and
development techniques and standards for structures built in a high fire hazard area.” However,
the Code as written provides a host of exemptions and loopholes and ignores relevant research
that prevents the County from enforcing “the most current fire-safe building and development
techniques.” Loopholes that permit development within setback areas and allow developers to
submit plans contrary to the overall zoning guidelines should be removed to mitigate the effect
of significant fire hazards.

The General Plan, Community Plans, and Development Code should encourage people to
concentrate in existing urban communities and discourage developers from building in areas of
extreme fire hazard within, and adjacent to, the forest. Stronger setbacks and enforceable
restrictions on the density of developments in forested and fire prone areas will benefit the health
of the community and health of the forest.

VII. The DEIR’s Analysis of Water Supply and Availability is Inadequate

The analysis of water supply and availability is inadequate and requires further analysis
and recirculation. The DEIR improperly defers identification and analysis of many of the
project’s impacts, as well as formulation of mitigation measures, to a later time when
development of specific projects is considered. This deferral frustrates informed decision-making
and violates CEQA. “An EIR should be prepared with a sufficient degree of analysis to provide
decision-makers with information which enables them to make a decision which intelligently

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code
October 20, 2006
Page 30 of 41
takes account of environmental consequences.” CEQA Guidelines § 15151. See Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Association, 42 Cal. 3d 929 (1986) (“the EIR must contain facts and analysis, not just the agency’s bare conclusions or opinions.”); Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners, 91 Cal.App.4th 1344 (2001); Stanislaus Natural Heritage Project v. County of Stanislaus, 48 Cal. App. 4th 182 (1996).

CEQA guidelines require environmental analysis “as early as feasible in the planning process to enable environmental considerations to influence the project program and design.” CEQA Guidelines, § 15004, subd. (b). The Courts have consistently reiterated that concern: [e]nvironmental problems should be considered at a point in the process “where genuine flexibility remains.” A study conducted after approval of a project will inevitably have diminished influence on decision-making. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA. Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296,307 (citations omitted).

Where, as here, the water supply is uncertain and a shortfall in those supplies theoretically available is likely, the EIR must evaluate that issue, identify other potential sources, and identify and analyze the environmental consequences of tapping those resources. Santa Clarita Org. for Planning the Environment v. County of Los Angeles, 106 Cal. App. 4th 715 (2003); Napa Citizens for Honest Government v. Napa County Bd. Of Supervisors, 91 Cal. App. 4th 342, 371 (2001). Where there is remaining uncertainty that the water supply will be available, the EIR must provide mitigation measures that will prevent development until water supply is secured. See Napa Citizens, 91 Cal. App. 4th at 374. The Draft EIR fails on all counts.

The requirement that new developments pay “impact fees” that would pay to import water to recharge depleted aquifers is not “full mitigation,” as the DEIR says. Water Districts in the county are already recharging the aquifers they rely on, but are still overdrawing their supplies. (E.g., Hi-Desert Water District and the Bighorn Desert View Water Agency.) There are no large, untapped supplies of potable water available for new recharge facilities anywhere in southern California. The State Water Project has little more than enough water to meet its delivery obligations, and the Mojave Water Agency, the State Water Project water purveyor for much of San Bernardino County, will not extend existing contracts or enter into new ones for water deliveries. Under these circumstances, it is not rational to believe that “impact fees” to buy and import water will mitigate, fully or otherwise, the negative effects new developments will have on water supplies and water quality. There is not now enough water to support current development in the long-term, and there is not much more water available to supplement existing supplies.

As mitigation measures that are feasible and that will reduce the negative effects on water supplies and quantity, the County should adopt policies and regulations that do the following:
• Reduce residential densities in areas where water supplies are being overdrawn by current
development, or where water supplies are compromised by natural or man-made
contaminants.
• Discourage and restrict uses with heavy water demands from locating in those same
areas.
• Mandate water conservation:
  • Adopt landscape regulations that prohibit, or at least limit, plants with heavy water
demands. Encourage use of native, drought-tolerant vegetation.
  • Adopt standards for and encourage installation of gray-water systems.
  • Adopt and enforce regulations that restrict the grading of lots and removal of native
vegetation to the “envelope” for any new building, including and especially any single-
family dwelling.
• Require use of pervious surfaces where feasible for driveways and parking lots, to reduce
run-off and maintain some recharge capacity for the site.

VIII. The DEIR Fails To Adequately Analyze Impacts to Aesthetics

As the DEIR acknowledges, the clear night sky in the Mountain and High Desert Regions
of the County enhances the quality of life of people living in those areas, and is an important
economic asset as well. People come from around the country and around the world to view
stars, galaxies, meteors and other phenomena that simply cannot be seen elsewhere, because
lights from human development wash them out. So clear and visible a night sky is an
increasingly rare aesthetic and economic asset. The County can do much more to protect the
night sky than it proposes. We suggest at least the following as mitigation measures that can
reduce lighting and protect the night sky:

• Provide information about the night sky ordinance and its lighting restrictions with every
application packet for land use approval or a building permit.
• Review exterior lighting, and require changes as necessary, as part of the permit approval
process for new uses and buildings, as well as for modifications and remodels of existing
structures.
• Amend the night sky ordinance to allow for the imposition of citations and substantial
fines for chronic or defiant offenders.
• Respond to complaints alleging night sky ordinance violations by:
  • Mailing a letter to the alleged violator stating that a complaint was made, giving
information about the night sky ordinance, the restrictions it imposes and the
penalties it provides for, and advising that they examine and adjust their exterior
lighting to ensure compliance with the ordinance.
  • Escalate to a site-visit, and a citation and imposition of fines if necessary.
• Adopt a regulation that prohibits the commercial sale of non-compliant light fixtures in
areas where the night sky ordinance applies. People assume that a product they purchase
new from a hardware or department store is legal to use. It makes no sense to allow the
commercial sale of a product that cannot be used legally, and the County can use its
police power to prohibit such sales.
IX. The DEIR Fails to Adequately Analyze Impacts to Public Utilities

The Mountain and High Desert Regions are not served by sewage treatment plants. Virtually all development in these regions is served by on-site septic systems. Many of these systems have leached contaminants, mostly nitrates, into the municipal groundwater resources beneath them. The County should adopt new regulations that do the following:

- Require each new development, including any single-family dwelling, that will rely on a septic system to include a reservation of land on-site that is large enough and appropriately located to accommodate a complete replacement of the septic system. Review site plans to ensure compliance with this requirement. (The Colorado River Regional Water Quality Control Board requires such set-asides within its boundaries, which includes the High Desert Region.)

- Require evaluation of the on-site septic system for proper function and adequate capacity for each expansion or remodel of existing structures, including any single-family dwelling, that requires any land use or building permit approval. Require corrections or adjustments if the evaluation shows the existing system is not, or will not, function properly, or cannot accommodate the proposed type and level of use.

X. The County Should Revise and Re-Circulate the DEIR

Because the DEIR fails to provide detailed information required by CEQA regarding the General Plan Update, the County should withdraw the DEIR and prepare a revised, independent, sufficiently detailed EIR for the General Plan Update.

In the alternative, if the County chooses to keep the combined DEIR structure for the County General Plan Update, it must revise and re-circulate the entire DEIR for public review and comment. A lead agency must re-circulate an EIR for further public comment under any of four circumstances:

1. When the new information shows a new, substantial environmental impact resulting either from the project or from a mitigation measure;
2. When the new information shows a substantial increase in the severity of an environmental impact, except that recirculation would not be required if mitigation that reduces the impact to insignificance is adopted;
3. When the new information shows a feasible alternative or mitigation measure that clearly would lessen the environmental impacts of a project and the project proponent declines to adopt the mitigation measure; or
4. When the draft EIR was “so fundamentally and basically inadequate and conclusory in nature” that public comment on the draft EIR was essentially meaningless. CEQA Guidelines §15088.5.
Based on the comments above, it is clear that the EIR must be re-drafted and re-circulated. Conditions (1), (2), and (4) above will be met by meaningful and adequate discussion of the General Plan Update’s impacts, mitigation measures, and cumulative impacts. The combined effect of these omissions makes it clear that the fourth condition has also been met.

XI. CONCLUSION

In sum, the current DEIR has not adequately disclosed, analyzed, avoided, minimized, and mitigated the environmental impacts of the General Plan Update. Because of the document’s shortcomings, the public and decision makers cannot make informed decisions about the proposed Project’s costs in areas including biological resources, water resources, fire hazards, and air quality.

The Center looks forward to reviewing a revised EIR addressing the full range of impacts from the General Plan Update. Thank you very much for your consideration of these comments.

Sincerely,
/s/  
Jonathan Evans
Center for Biological Diversity

CC: (without exhibits)

Field Supervisor
USFWS- Ecological Services
Carlsbad Field Office
6010 Hidden Valley Road
Carlsbad, CA 92011
Attn: Nancy Ferguson

California Department of Fish and Game
Los Alamitos Administrative Office
4665 Lampson Avenue, Suite J
Los Alamitos, CA 90720
Attn: Curt Taucher, Regional Manager, Region 6

California Department of Fish and Game
Eastern Sierra – Inland Deserts Region
Bishop Field Office
407 West Line Street
Bishop, CA. 93514
Attn: Denyse Racine, Senior Wildlife Biologist

DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code
October 20, 2006
Page 34 of 41
Steve Loe, Forest Biologist
San Bernardino National Forest
Supervisors Office
1824 S. Commercenter Circle
San Bernardino, CA 92408
sloe@fs.fed.us

Devere Kopp
Mountaintop District Botanist, Forest Planning
San Bernardino National Forest
Big Bear Ranger Station
P.O. Box 290
Fawnskin, CA 92333
dkopp@fs.fed.us


Nowicki, B., 2002. The Community Protection Zone: Defending Houses and Communities from the Threat of Forest Fire, Center for Biological Diversity.


San Bernardino County, Land Use Services Department Planning Staff Report, General Plan Update Project, September 21, 2006.


LITERATURE CITED/EXHIBITS
(Not provided on accompanying CD)


DEIR Comments For San Bernardino GP Update, Associated Community Plans, and Dev. Code October 20, 2006
Page 40 of 41


LEAD AGENCY RESPONSE TO COMMENT LETTER O.5
CENTER FOR BIOLOGICAL DIVERSITY, OCTOBER 20, 2006

RESPONSE O.5-1
The County respectfully disagrees that the EIR “is inadequate to meet both the procedural and substantive mandates of CEQA.” Further, the County relies upon the guidance presented in Section 15151 of the CEQA Guidelines, in that: “disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.” Also, the EIR is a programmatic EIR and sufficiently describes the impacts of the general plan, similar to the approach taken by many other counties and cities in preparing EIRs on general plans. See Categorical Discussion #1.

RESPONSE O.5-2
The EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, its to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 (“[w]hile detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted”); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where “devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will satisfy specific performance standards articulated at the time of project approval” (internal quotations omitted).)

That is the approach taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of their general plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists), the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their General Plan Update. For further explanation, please see Categorical Discussion #1.

RESPONSE O.5-3
The County respectfully disagrees with the claim that the Draft EIR should be recirculated. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion #6.

Regarding the enforceability of mitigation measures and the timing of preparation and adoption of the Mitigation Monitoring Program, Section 21081.1(a) of the Public Resources Code clearly specifies that the Program be adopted “when making the findings required by …Section 21081” (in other words, prior to certification of the Final EIR). The Lead Agency can prepare the Mitigation Monitoring Program sooner than that timeframe, but it is not required to do so by the Public Resources Code. For further information, please see Categorical Discussion #5.
RESPONSE O.5-4
The County respectfully disagrees with the commenter’s opinion that the EIR failed to “obtain relevant information for an adequate analysis.” Further, the County relies upon the guidance presented in Section 15151 of the CEQA Guidelines, in that: “disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.”

RESPONSES O.5-5 AND O.5-7
The EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, its to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 (“[w]hile detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted”); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where “devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will satisfy specific performance standards articulated at the time of project approval” (internal quotations omitted)).

In the approach taken in assessment of impacts of the proposed plan, multiple topical maps have been prepared, creating layers of information used as part of the General Plan EIR’s evaluation of impacts and are included in the appendices to the EIR (General Plan Background Reports). This extensive body of information coupled with a commitment to devise policies and mitigation measures representing a genuine commitment to performance standards/policies that lessen or avoid effects, form the broad basis for the analysis in the EIR.

That is the approach taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of their general plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists, the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their General Plan Update. For further explanation, please see Categorical Discussion 1.

RESPONSE O.5-6
The County respectfully disagrees with the implication that the EIR preparation should be guided by the “Phase I – Scoping Analysis” prepared by Hogle-Ireland in 2002. Instead, preparation and distribution of the Draft EIR was accomplished in conformance with the California Environmental Quality Act, and the CEQA Guidelines. For a complete explanation of the relationship of the Phase I Scoping Analysis to the Draft EIR, the following narrative is provided.

The San Bernardino County Board of Supervisors authorized the General Plan Update in 2001 as a two-phase program. The first phase was a strategic analysis of the 1989 General Plan, as amended. The Phase I analysis was designed to provide recommendations for Board consideration. The Board’s endorsement of a final set of recommendations was intended to define the scope of work for the preparation of the new General Plan (Phase II). The consultants also performed an initial evaluation of all existing goals and policies in the 1989 Plan. The Board adopted those recommendations with minor adjustments. The
Board also endorsed important additional tasks that included reinstating community plans that were eliminated in 1989, completing a comprehensive revision to the County’s Development Code to modernize and streamline the document, and providing focused zoning-level analysis in the West Fontana and Mentone areas, two rapidly growing areas that have never undergone comprehensive review. The Phase I Evaluation also made process-oriented recommendations that called for a public involvement process that included extensive public meetings throughout the County and established a General Plan Advisory Committee (GPAC) made up of community members to represent a broad cross-section of County unincorporated areas. The Phase I Evaluation Report was used to define the scope of services for a contract to assist staff with the update program. However, preparation of a specific assessment for ground-level impacts on wildlife using a quantitative approach for an EIR covering such a large area is not practical; such a detailed level of analysis is conducted as part of CEQA reviews for particular projects in compliance with the CEQA Guidelines.

**Phase II General Plan Update Process**

Phase II of the San Bernardino County General Plan Update (GPU) was launched in the summer of 2003. The County’s planning consultant contract included a specific scope of work that responded to the recommendations of the Phase I Evaluation. The scope of work outlined a three-year planning process that provided for significant public involvement, and also identified the following specific work products that would result from the planning effort:

- A Vision Statement
- Background Reports for each General Plan Element
- 13 Community Plans
- Draft Goals and Policies Report
- Updated General Plan
- Updated Development Code
- Environmental Impact Report.

**General Plan EIR**

The final critical step in the County’s General Plan Update process was the preparation of the EIR. The Notice of Preparation (NOP) for the Draft EIR was released on October 5, 2005, in accordance with Section 15082 of the CEQA Guidelines. The NOP provided: a description of the General Plan Update process; information on the environmental issues which the County identified for analysis in the Draft EIR; and a request for input on the environmental analysis that would be conducted by the County. Three scoping meetings were held in late October 2005 for the purpose of soliciting input from the public regarding any specific issues that anyone felt the EIR should address. Since that time, the Draft EIR has been completed in accordance with Section 15084 of the CEQA Guidelines, and was released on September 8, 2006 for public review and comment, in accordance with Section 15087 of the Guidelines. The comment period ended on October 23, 2006, and responses to all comments have been prepared, in accordance with Section 15088 of the CEQA Guidelines, for inclusion in the Final Environmental Impact Report.

**RESPONSE 0.5-8**

The background explanation that was included in the Bear Valley Community Plan (BVCP) at the September 21, 2006 Planning Commission hearing, regarding the holding zone concept of the 1988 BVCP, is provided for historical context of current land use designations that have been carried forward as part of the General Plan Update. It does not interject a new policy into the community plan and it has no application outside of the BVCP. The inclusion of this information does not provide exceptions to the
policies contained in the 2006 BVCP, the discussion is included to provide a context bridge to the 1988 Plan. The 2006 Community Plan is intended to establish clearly defined community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. With regards to Policy BV/LU 1.1, the language does not mean that future Land Use Zoning District changes cannot be approved, on the contrary, the intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan. The carry over of the “holding zone” concept was a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing and then considered by the County Board of Supervisors.

The inclusion of the historical context of the 1988 BVCP causes no impacts, albeit direct, indirect or cumulative. The text is only an explanation of a strategy for the manner in which any future individual development proposal that includes a GPA to change the land use or increase density would be considered. The holding zone label is not a land use zoning designation. The land use designations that exist on large parcels that “hold” the existing designation until such time as an individual GPA application may be submitted remain the same.

**RESPONSES O.5-9, O.5-10, O.5-11 AND O.5-12**

These comments set forth a general challenge the enforceability, timing, and adequacy of the mitigation measures set forth in the EIR. The County disagrees with these comments, and based on its review of the EIR, concludes that the mitigation measures set forth for various impacts comply with CEQA’s requirements for adequate and enforceable mitigation. It is important to note that the County is establishing general mitigation requirements that will be required to be implemented through conditions of approval on specific projects, which must demonstrate their consistency with the adopted general plan. This is the approach upheld by the court in Rio Vista Farm Bureau Center v. County of Solano (5 Cal. App.4th 351 (1992)) where the court noted “The general statement of mitigation measures in the FEIR is consistent with the general nature of the Plan.” This same principle applies here, as the County is considering a general plan (a plan which is even broader and more general in scope than the solid waste facilities plan at issue in the Rio Vista case).

With respect to the enforcement of the mitigation measures, the mitigation measures recommended in the EIR have been included as policies and implementation measures in the proposed General Plan, as described in Chapter VIII of the Draft EIR. This makes those mitigation measures legally binding, and ensures their implementation, because specific land use projects that are proposed must be consistent with the governing general plan. This is also one of the means specifically allowed by CEQA for making mitigation measures enforceable see Public Resources Code section 21081.6(b).

Regarding the timing of preparation and adoption of the Mitigation Monitoring Program, Section 21081.1(a) of the Public Resources Code clearly specifies that the Mitigation Monitoring Program be adopted “when making the findings required by …Section 21081” (in other words, prior to certification of the Final EIR). The Lead Agency can prepare the Mitigation Monitoring Program sooner than that timeframe, but it is not required to do so by the Public Resources Code. For further information, please see Categorical Discussion #5.
RESPONSE O.5-13

The County disagrees with the statement that the DEIR does not attempt to provide meaningful information regarding the impacts of the project on threatened species. First, there is substantial and detailed information in the EIR and in the Conservation Report, which is an appendix to the EIR, as well as in supporting, documents on which the EIR analysis is based. For example, there are detailed maps of the habitat of sensitive species included in the conservation report. The placement of such detailed information in an appendix to an EIR is recommended by CEQA Guideline 15147. It is also appropriate because this EIR already substantially exceeds the recommended page limit as set in CEQA Guideline 15141 (150 pages).

Also, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole. The Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors in addition to protected wildlife/plant species.

Additionally, the current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to plant and wildlife species. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE O.5-14

The County disagrees with this comment, which asserts that the Conservation Report, Appendix H to the EIR, lacks sufficient detail and engages in incorrect assumptions. With respect to the level of detail, the information that is provided in the Conservation Report is sufficient for the purpose of developing general plan policies to address mitigation of impacts on sensitive species. This is not an EIR evaluating a specific development project, or a general plan amendment for a specific development project, and the level of detail in the Conservation Report is appropriate in light of the broad and general nature of the proposed County General Plan.

This comment also challenges the statement in the Conservation Report that most projects in San Bernardino County will be subject to biological resources evaluations that will include site-specific
studies. The comment suggests it is inappropriate to defer analysis on this basis, but the EIR is not deferring analysis. This statement in the Conservation Report is explaining why a general analysis is being provided at this time, and confirming that more specific analyses will be prepared in conjunction with particular projects proposed on particular sites. Under the CEQA provisions and case law governing EIRs on general plans, this is proper.

The comment also states that many projects will not be subject to environmental review because they will be exempt from CEQA pursuant to either a statutory or categorical exemption. In the context of land use projects governed by the provisions of this Plan, however, most projects of any size of scope will not qualify for exemptions from CEQA and will undergo some level of review. In addition, most of the exemptions that apply to land use projects (such as the exemption for minor modification of existing facilities, the exemption for minor construction, the exemption for minor alterations to land use limitations, and the like) are categorical exemptions, and categorical exemptions are subject to the exceptions set forth in CEQA Guideline 15300.2, which disallow the use of exemptions when there would be a significant effect due to unusual circumstances, or (for some exemptions) when an otherwise exempt project is located in a sensitive environment.

RESPONSE O.5-15

The EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, is to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 (“[w]hile detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted”); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where “devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will satisfy specific performance standards articulated at the time of project approval" (internal quotations omitted).)

That is the approach taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of their general plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a Table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists, the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their general plan updates; for further information; please see Categorical Discussion #1.

RESPONSE O.5-16

The County respectfully disagrees with the comment that an attempt has been made to avoid analysis by failing to collect necessary information. The 2007 General Plan relies upon the 1989 General Plan as only one source of background and baseline information. Background information on biological resources was also derived from the California Natural Diversity Database (CNDDB), the California Native Plant Society Electronic Inventory, consultations with resource agencies (e.g., California Department of Fish and Game, U.S. Fish and Wildlife Service) and local resource experts (e.g., Museum of Natural History), reviews of regional species and habitat conservation plans, and literature reviews.

This section of the EIR is the first tier of a multi-level environmental review and analysis process that programmatically analyzes the general biological elements contained in the General Plan, not a specific
development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole. EIRs for subsequent projects will require assessments of greater detail and specificity in order to develop measures that avoid, minimize, and compensate for adverse impacts to biological resources, e.g., protected wildlife/plant species and wildlife linkages and movement corridors.

**Response O.5-17**

The County’s current Biological Resource and Open Space Overlay Maps include discrete local, state, and federally protected species occurrence, serving as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys, as well as mitigation measures to avoid, minimize and compensate for adverse impacts to biological resources. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. See Categorical Discussion 7 for further information regarding Mitigation Measures BIO-7 and BIO-12.

As a final note, the County respectfully disagrees with the implication that the EIR preparation should be guided by the “Phase 1 – Scoping Analysis” prepared by Hogle-Ireland in 2002. Instead, preparation and distribution of the Draft EIR was accomplished in conformance with the California Environmental Quality Act, and the CEQA Guidelines. For a complete explanation of the relationship of the Phase 1 Scoping Analysis to the Draft EIR, please see previous Response to Comment O.5-6.

**Responses O.5-18 and O.5.19**

The County disagrees that the General Plan Updated and DEIR do not adequately address impacts to special status species in San Bernardino. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Furthermore, the Biology section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal (e.g., raptor protection measures, compensatory mitigation ratios to offset impacts, and so forth). To that end, the Biology Section focuses on the broad policy implications of implementing the General Plan as a whole. These goals and policies specifically relate to the preservation of biological resources, including special status species within remaining natural open space areas of the County. For example, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.” Additionally, the County has created Policy CO 1.2, which states that “the preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas…” and that the County will continue to “…review the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.”
The County has taken additional steps to improve protection of biological resources through the creation of Mitigations BIO-1 to BIO-12 presented in Categorical Discussion 7. Mitigations BIO-10 and BIO-12 improve upon the existing Biotic Resources Overlay to map and require reports of “biotic resources located on the site and those on adjacent parcels, which could be adversely affected” by future projects. These mitigation measures improve upon the County’s current Biological Resource Overlay Maps. The County’s current Biological Resource and Open Space Overlay Maps include discrete local, state, and federally protected species occurrence, serving as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys, as well as mitigation measures to avoid, minimize and compensate for adverse impacts to biological resources. The County agrees that a number of other resources and publications exist within the scientific literature and public domain that illuminate and characterize biotic resources within the County. Other references, such as the California Natural Diversity Data Base (CNDDDB), are routinely used in assessing the potential impacts of individual development projects as suggested by the commenter.

**Response O.5-20**

The General Plan and EIR focus on the broad policy framework that the County will use to implement goals and policies to balance the need for future growth and development within the County, while maintaining biological resources. The General Plan does not include any particular proposed development that will result in the conversion of oak woodlands. In response to comments on oak woodland impacts, Mitigation BIO-13 was added to the County Development Code, and this change ensures that the mitigation requirements of CEQA with respect to oak woodlands will be applied to subsequent specific development projects, and such projects (when they generate potentially significant impacts on oak woodlands) will be required to comply with those mitigation requirements. Public Resources Code section 21083.4(e)(1) specifies that a lead agency that adopts the specified mitigation measures shall be deemed to be in compliance with CEQA as it applies to effects on oaks and oak woodlands. By incorporating this mitigation as a legally binding provision in the County Development Code, the County has adopted those specified mitigation measures and they will be applied as necessary to any specific projects that are proposed.

**Response O.5-21**

As noted previously in Response O.6-20, the General Plan and EIR focus on the broad policy framework that the County will use to implement goals and policies to balance the need for future growth and development within the County, while maintaining biological resources. In accordance, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. The EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements contained in the General Plan. The County respectfully disagrees that the EIR fails to address impacts to the Santa Ana River and provide protections for the biological resources, including special-status species that inhabit the river and surrounding areas. Mitigation BIO-1, presented in Categorical Discussion 7, calls for the coordination with “local interest groups, state, and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County”. The County contends that this measure among others directly establishes protections for critical habitats and species that occur within and along the Santa Ana River. Furthermore, consultations with resource agencies, such as the Army Corps of Engineers and California Department of Fish and Game, will ensure that all development complies with Clean Water Act 404 and 401 and California Fish and Game Code 1600 (et seq.) jurisdictional regulations.
The County agrees that its duty to mitigate cannot be shifted onto other agencies; accordingly, the County has established Mitigations BIO-1 to BIO-12 included in Categorical Discussion 7 to provide measures that help avoid, minimize, and compensate for adverse impacts to biological resources within the County. In implementing these measures, the County will work with resource agencies, local interested parties, and surrounding counties, such as Riverside, to conserve the biological integrity of the region. The County asserts that participation in federal plans, such as the Western Mojave Plan, is an essential tool in maintaining the biotic resources of the County, regardless of the difficulties and timelines of enacting such a far-reaching conservation process.

The County agrees that riparian habitats within the Desert Region are rare and should be protected to the maximum extent practicable. The County further appreciates that riparian areas provide valuable habitat for wildlife species while also maintaining the hydrological characteristics of the Region. Therefore, the County has established Mitigation BIO-1, presented in Categorical Discussion 7, which calls for coordination with “local interest groups, state, and federal agencies prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County”. The County contends that this measure among others directly establishes protections for habitats and species that occur within and along riparian areas of the Desert Region. Furthermore, consultations with resource agencies, such as the Army Corps of Engineers and California Department of Fish and Game, will ensure that all development complies with Clean Water Act 404 and 401 and California Fish and Game Code 1600 (et seq.) jurisdictional regulations.

The County respectfully disagrees with this comment. The referenced section 88.01.030(j) of the Plant Protection and Management Chapter of the Development Code does not require a permit for removal of regulated trees on lots that are less than one-half acre in that are developed with a primary structure, such as a single family home on residentially zoned property. This only applies to existing developed lots, principally residential lots with an existing home located on the parcel. This is a provision that has been in the code for nearly 20 years. The County has not experienced problems with wanton removal of trees on developed individual residential property. The provision is intended to allow a homeowner to maintain their property without the need to obtain a permit for landscaping, tree thinning, etc. This County does not consider the continuation of this exemption as a potential significant impact, because it relates to whether a permit is required for maintenance on existing developed parcels, and does not authorize new development. Likewise, Section 88.01.030(k) is provided to allow the removal of hazard trees that could fail and cause property damage or trees that may pose a fire hazard due to the close proximity to a structure without a permit from the County. This section is intended to allow the removal from a lot that is not development and covered under provision 88.01.030(j) but may threatened a home or other structure on adjacent property due to structural or fire hazards. Similarly, this provision has not been a source of unreasonable tree removal problems.

The County respectfully disagrees with this comment. The County believes that it has provided an appropriate level of review and disclosure for the adoption of a general plan. The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts. To that end, this section of the EIR is
the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. The General Plan does not address specific development proposals nor does it specify existing, proposed, or historical habitat acreages. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation.

**RESPONSE O.5-26**

The County respectfully disagrees with the implication that the EIR preparation should be guided by the “Phase 1 – Scoping Analysis” prepared by Hogle-Ireland in 2002. Instead, preparation and distribution of the Draft EIR was accomplished in conformance with the California Environmental Quality Act, and the CEQA Guidelines. For a complete explanation of the relationship of the Phase 1 Scoping Analysis to the Draft EIR, see Response to Comment O.6-6.

**RESPONSE O.5-27**

The County recognizes the existence and importance of wildlife corridors for the health of biodiversity between habitat areas. The Valley, Mountain, and Desert Regions have been identified as areas with important landscape linkage in southern California. The County’s linkages support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a means of maintaining wildlife linkages and corridors, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may, in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to movement and dispersal corridors in addition to protected wildlife/plant species. In the urbanized areas of the County, the USFWS and CDFG are invited to comment on development proposals that are before the County. Their input on special status species and wildlife linkages are considered in the review process.

**RESPONSE O.5-28 & O.5-29**

The County agrees that the Valley, Mountain, and Desert Regions are important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1), and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). Additionally, the County also acknowledges that linkages and corridors may be impacted by urban expansion. To address this issue, the County has established Mitigation BIO-7, found in Categorical Discussion 7. This measure calls for the creation of a map that identifies wildlife movement corridors in coordination with local, state, and federal agencies. This map will be used in the preparation of biological assessments prior to permitting land use conversion within the county, and will be included in the Open Space and Biological Resource Overlays. In addition, wildlife corridors on the open space overlay maps are being supplemented with information from: the San Bernardino Valley MSHCP effort; the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; San Bernardino County Museum; South Coast Wildlands Corridor Project and so forth which have identified linkages from the San Bernardino Mountains to the north, south east and west. The County contends that the level of analysis presented in the EIR is sufficient for the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements contained in the General Plan rather than a specific development proposal. Moreover, the County asserts that updated conservation measures set forth in the General Plan and EIR are adequate to ensure the viability of existing wildlife linkages and corridors.
**Response O.5-30**
The County did conduct an extensive literature search for reasonably ascertainable commercial information from resource management plans and other documents containing pertinent information on the species as well as on general biological resources (e.g., wildlife corridors) in the project study area by region (Valley, Mountain, and Desert) and the Conservation Background Report illuminates this. To that end, the wildlife corridors on the open space overlay maps are being supplemented with information from: the San Bernardino Valley MSHCP effort; the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; San Bernardino County Museum; South Coast Wildlands Corridor Project; and so forth which have identified linkages from the San Bernardino Mountains to the north, south east and west.

**Response O.5-31**
The County thanks the Center for Biological Diversity for the list of reports on the design and biological needs for wildlife corridors within the Region. The County’s program to map existing wildlife corridors is an ongoing process that will benefit from the information presented in these reports. To that end, the County added a program to General Plan Policy CO 2.1 to improve the completeness, function, and utility of the Biological and Open Space Overlays for the updated General Plan and subsequent development project CEQA review. This commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to: compile and display data collected during the San Bernardino Valley MSHCP effort; the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; and integrate sensitive biological data from other traditional sources (e.g., USFWS, California Natural Diversity Data Base, San Bernardino County Museum, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and so forth). Development of this updated database will integrate data from a number of diverse sources. The County, however, disagrees with the commenter’s assessment that the EIR fails to take address issues critical for preservation and conservation of biological resources, including landscape linkages, in the region as discussed in previous Responses O.5-27 to O.5-29.

**Response O.5-32**
The County disagrees that the Draft EIR failed to evaluate indirect impacts. The plan-level analysis for biological impacts includes analysis of direct and indirect effects. See Impacts BIO-1, BIO-2, BIO-3 and other impact analyses.

**Response O.5-33**
The County agrees that the Draft EIR does not quantify toxic runoff from individual household in the County of San Bernardino. Household hazardous wastes, as defined by California Health and Safety Code, Section 25218.1(e), are “any hazardous waste generated incidental to owning or maintaining a place of residence.” These include medications, paint, motor oil, antifreeze, auto batteries, lawn care products, pest control products, drain cleaners, pool care products such as chlorine and acids, and household cleaners. Household hazardous waste programs are regulated by federal and state laws, and administered by local agencies. Any future development under the San Bernardino General Plan will be consistent with all laws and statutes regarding the storage, use, handling and disposal of hazardous materials or waste in the County of San Bernardino. There are no aspects of the General Plan update that would alter the existing setting or change mandated local, state or federal laws regarding hazardous materials or hazardous waste. Lastly, the County believes that the qualitative analysis in the EIR is sufficient.
RESPONSE O.5-34
The General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals which is consistent with other regional planning documents (e.g., Northern and Eastern Mojave Plans, City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Santa Ana Wash Habitat Conservation Plan, Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan).

Furthermore, the County’s Plant Protection and Management Ordinance (County Code Title 8, Division 9, Chapters 1-5) are consistent with the regional efforts that are in place to eradicate Arundo donax and other invasive exotics. The County’s Plant Protection and Management Ordinance provides guidelines for the interim and long term management of plant resources on private and County property within unincorporated areas of the County; promotes the conservation of plant life that increases aesthetic value; conserves native plant life heritage; regulates removal of native flora via uniform standards; protects local watersheds; preserves habitats for rare, endangered or threatened plants and animal species; establishes regulations, standards, and enforcement for the maintenance of forests within the Mountain Region and trees within the Valley Region; sets forth guidelines for the conservation of desert native plants and use of desert resources; and establishes guidelines for the preservation and management of riparian habitats and plants.

RESPONSE O.5-35
This section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. Specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, oblige specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors in addition to protected wildlife/plant species.

RESPONSE O.5-36
The General Plan does not address specific development proposals nor does it specify impacts of night lighting and noise on surrounding wildlife. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. Nonetheless, many studies have been conducted on the effects that light and noise have on the behavior of various wildlife species. It is still unclear and uncertain whether the net effect of potential noise and light-induced behaviors is significant pursuant to CEQA Guidelines. To that end, an additional unquantifiable acreage of suitable or occupied habitat would be affected by elevated levels of noise and light from development. However, the findings from studies combined with best professional judgment suggest that increased noise and light frequency and duration could adversely affect occupancy of wildlife habitats and productivity for many species, but at what significance level, is still speculative.
Increases in series of irregularly planned sources of ecological light pollution (e.g., direct glare, chronically increased localized illumination, and temporary, unexpected fluctuations in lighting) may cause wildlife to experience orientation, miss-orientation, or disorientation from additional illumination (Longcore and Rich, 2004). Wildlife can be attracted to, or repulsed from, the light altered environment, which in turn may affect foraging, reproduction, communication, and other behavioral factors (Longcore and Rich, 2004; Hill, 1990; and Schwartz and Henderson, 1991). Local individuals may also be somewhat susceptible to light disruptions because they depend on seasonal day-length cues to trigger critical behaviors. Rapid increases in light can temporarily reduce vision from which recovery time may be minutes to hours. Furthermore, after becoming adjusted to light some individuals may be attracted to it (Buchanan, 1993; and Longcore and Rich, 2004). Nonetheless, increased illumination may extend diurnal or crepuscular behaviors into the nighttime environment by improving an animal’s ability to orient itself (Longcore and Rich, 2004; Hill, 1990; and Schwartz and Henderson, 1991). However, not all effects of increased lighting have been found to be deleterious to wildlife. Numerous diurnal birds and reptiles have been documented foraging under artificial lights. The “night light niche” seems beneficial for those species that can exploit it, but not for their prey (Hill, 1990; and Schwartz and Henderson, 1991).

Additionally, increases in ambient noise levels could affect some breeding potential for individuals that may breed in close proximity to the development and other areas subjected to construction-related disturbances. However, following completion of construction, breeding individuals would be expected to reoccupy adjacent habitats. The natural recovery of suitable habitat and the local populations within the area would be expected. The long-term operational-related impacts may potentially reduce intra-species communication distances and distort sounds (TNCC, 1997). More specifically, an incremental increase in noise from the proposed Project may further reduce intra-species communication distances and distort sounds, thereby making it harder for individuals to locate mates or make prospective mates perceive the calls of suitors as weaker than those of suitors in less noisy areas (San Diego Association of Governments and RECON, 1990). The episodic increases in noise also may reduce the area an individual can effectively defend, making individuals less attractive as a resource provider (TNCC, 1997). Furthermore, the impact of noise on wildlife involves a number of parameters, but one of the most apparent is the potential for masking of communication. Birds depend on song for species identification, mate attraction, and territorial defense. Hearing in birds is not analogous to hearing in mammals. For example, birds show a high degree of frequency selectivity and vocalize in a much higher frequency level than most traffic noise produces. The Draft Comprehensive Species Management Plan for the LBVI (SANDAG 1988) evaluated the potential for masking of vireo song by traffic noise and recommended that continuous noise levels above 60 dBA Leq within habitat areas may affect the suitability of habitat use by LBVI. Since then, many regulatory agencies recommend the use of 60 dBA Leq hourly levels to be considered a significant impact for sensitive birds’ species at the edge of suitable habitat. Nonetheless, studies in The Netherlands have shown that the numbers of breeding birds in wooded areas declined significantly near roads and in proportion to the density of traffic on the road (Reijnen et al., 1995; Reijnen and Foppen, 1995). Conversely, a study of CAGN found no significant affect of background traffic noise on the rate of calling and that masking for a typical call would extend only about 15 m from the edge of the highway (Awbrey et al., 1995). The authors indicate that habitat quality was as important as noise.

A review of the 60 dBA criterion by the Traffic Noise Control Center (Sarigul-Klihn et al., 1997) concluded that other important factors need to be considered when using this criterion to determine impacts and affects, such as: 1) the spectral distribution of energy in the signal, bird calls, and background noise, and 2) long-term average of the source. For example, although hourly average noise levels of trains may exceed 60 dBA Leq, there will be periods in between trains where the ambient noise environment is well below 60 dBA Leq. Although it is unknown how LBVI adapts to higher transient noise events, it has been shown that most birds will move their head or location to improve the signal-to-noise ratio significantly (Dooling, 1982).
In total, the effect of these light or noise-induced behaviors on fitness to wildlife is still uncertain (Derrickson, 1988). Therefore, no definitive claim about the significance of the impacts light and noise have on wildlife can be asserted at this time. Nonetheless, subsequent projects will include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts of light and noise on wildlife/plant species.

**RESPONSE O.5-37**

The County did conduct an extensive literature search for reasonably ascertainable commercial information from resource management plans and other documents containing pertinent information on the species as well as on general biological resources (e.g., wildlife corridors) in the project study area by region (Valley, Mountain, and Desert) and the Conservation Background Report illuminates this. To that end, the wildlife corridors on the open space overlay maps are being supplemented with information from: the San Bernardino Valley MSHCP effort; the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains; San Bernardino County Museum; South Coast Wildlands Corridor Project; and so forth which have identified linkages from the San Bernardino Mountains to the north, south east and west. Furthermore, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that ensure that mitigating policies are legally binding, and thus will be enforced.

Additionally, the County’s current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated protected plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and so forth. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

The County’s commitment to update and enhance the Biological and Open Space Overlays as an implementing program of the General Plan will provide an opportunity to compile and display data collected during the San Bernardino Valley MSHCP effort, the recently completed Linkage Reports for the San Bernardino to Granite, San Gabriel, Little San Bernardino, and San Jacinto Mountains, as well as integrate sensitive biological data from other sources (e.g., SBNF, USFWS, San Bernardino County Museum, BLM, CNDDB, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and so forth). Development of this updated database will integrate data from a number of diverse sources. Furthermore, the County has committed to fund the San Bernardino County Museum to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.

See Categorical Discussion 7 for further information regarding Biological Resources.

The County disagrees with the comment that the mitigation recommended in the Draft EIR and included in the proposed general plan is not enforceable. It is precisely because the mitigating policies have been included in the plan that they are legally binding, and thus will be enforced.

**RESPONSE O.5-38**

The County appreciates the commenter’s suggested mitigation measures for impacts associated with fuel modification zones, unpermitted recreational activities, introduction of non-native plants, etc. However, the County asserts that the goals, policies, and mitigation measures set forth in the General Plan, EIR, and
other supporting documents provide an adequate framework for evaluating future development proposals. As a result of this framework, specific portions of subsequent projects will be required to include surveys and may, in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts, similar to those suggested in your comment. As noted in Categorical Discussion 7, this section of the EIR is the first tier of a multi-level environmental review and analysis process, which programatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. Consequently, the General Plan does not address specific development proposals nor does it specify mitigation measures for impacts associated with fuel modification zones, noise, light, and so forth. Rather, the General Plan establishes an overall policy framework that is consistent with existing regional and local conservation efforts, including management of non-native plants as an example.

**RESPONSES O.5-39 AND O.5-40**

The County acknowledges the commenter’s opinion regarding air quality in California. CEQA Guidelines, §15125 require that an EIR include a description of the environment within the vicinity of a proposed project as it exists at the time the NOP/IS is published, or if no NOP/IS is published, at the time the environmental analyses commences from both a local and regional perspective. The air quality analysis in the draft EIR was prepared at a programmatic level based on data that was the most accurate at the time the NOP/IS was published.

Multiple commenters raised questions about the same or similar issues. The County believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting as the responses themselves. In response to this comment, Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses.

Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the draft EIR.

**RESPONSE O.5-41**

The County believes that it has provided the good faith analysis, at a general and programmatic level of detail, in compliance with CEQA. The EIR discusses and refers to the South Coast Air Quality Management Plan and includes data on criteria pollutants, including state and federal standards and emissions inventories from the state and the South Coast and Mojave air districts acknowledges the opinion that a project-specific air quality analysis should be prepared for the County of San Bernardino General Plan update EIR. The project consists of a General Plan for the entire County, not a specific development proposal. Similarly, the Draft EIR addresses the impacts of the General Plan as a whole, rather than a project-specific EIR.

As a result, the Draft EIR for the County’s General Plan Update has been prepared at a programmatic level. Program EIRs focus on policy rather than project-related impacts. They contain a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that will follow and be implemented by the General Plan. CEQA requires that each of those subsequent development projects be evaluated for their particular site-specific impacts. These site-specific analyses may be encompassed in second-tier documents, such as Project EIRs, Focused EIRs, or Negative Declarations.
Since multiple commenters raised questions about the same or similar issues, the County, as Lead Agency, believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting as the responses themselves. In response to this comment, Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses. Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

**RESPONSE O.5-42**

The County acknowledges the commenter’s opinion regarding the need to include an analysis regarding hazardous air pollutants (HAPs) in the Draft EIR.

Title III of the 1990 Clean Air Act [CAA] Amendments significantly changed the pre-existing system for control of HAPs. The pre-1990 CAA approach required EPA to establish a list of HAPs and impose health-based emission standards for each pollutant. Title III provides for a second phase under which EPA is to assess residual risk after the implementation of the first phase of standards and impose new standards, when appropriate, to protect public health.

Section 112(r) of the CAA also contains requirements that address accidental releases of hazardous substances from stationary sources that potentially can have serious adverse effects to human health or the environment. Owners of such facilities must prepare a risk management plan (40 CFR 68) to detect and prevent or minimize accidental release of the substances and to provide a prompt emergency response to any such release.

The Draft EIR for the County’s General Plan Update has been prepared at a programmatic level. Program EIRs focus on policy rather than project-related impacts. They contain a more general discussion of impacts, alternatives, and mitigation measures. The County’s General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that will follow and be implemented by the General Plan. In the future, any development in the County, which would be considered a stationary source, may trigger an evaluation of HAPs as part of their CEQA analysis. Whether or not an evaluation of HAPs is necessary is based on the description of the project, and the project-specific analysis of the planned activity of the development for that particular site. An analysis of HAPs for a General Plan EIR is not appropriate in this case.

**RESPONSE O.5-43**

The County acknowledges the commenter’s opinion that an analysis of PM2.5 should be included in the County of San Bernardino General Plan Update EIR. Further, the County respectfully appreciates the information about PM2.5 and the information from the draft SCAQMD 2007 AQMP that has only been released to the public in October 2006. A qualitative analysis of PM10 emissions was prepared for the San Bernardino General Plan amendment. Mitigation measures applicable to PM10 would also be applicable to PM2.5.

As previously stated, the EIR for the County of San Bernardino General Plan is a "Program EIR" that evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many of individual development projects that may follow and be implemented by the General Plan. CEQA requires each of those subsequent development projects to be evaluated for their particular site-specific impacts, include project alternatives,
and to formulate appropriate mitigation measures. These site-specific analyses may encompass second-tier documents, such as Project EIRs, Focused EIRs, or Negative Declarations on individual development projects subject to the General Plan. These analyses typically evaluate the impacts of a single activity undertaken to implement the overall plan.

**RESPONSE O.5-44**

The County acknowledges the statement regarding the availability of information in the SCAQMD 2007 AQMP. At the time of the preparation of the Draft EIR for the County of San Bernardino the most recent available SCAQMD AQMP [2003] was reviewed. The SCAQMD 2007 AQMP is in draft form at this time and was recently released in October 2006 for public review. Future development initiated under the proposed General Plan will be consistent with the plans, policies and control measures of the 2007 AQMP and any future AQMP documents developed by the SCAQMD to regulate air quality in the South Coast Air Basin.

**RESPONSE O.5-45**

The County acknowledges the commentator’s opinion of the air quality analysis. In accordance with California Code of Regulations (CCR) Title 14, Section 15060, all future development in the County of San Bernardino will undergo an application review for completeness. At that time the County will also determine if the project is subject to CEQA (CCR, Title 14, Section 15061).

The Draft EIR for the General Plan update has been prepared at a programmatic level. Program EIRs focus on policy rather than project-related impacts. They contain a more general discussion of impacts, alternatives, and mitigation measures. The General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the County’s General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that will follow and be implemented by the General Plan. CEQA requires that each of those subsequent development projects be evaluated for their particular site-specific impacts. These site-specific analyses may be encompassed in second-tier documents, such as Project EIRs, Focused EIRs, or Negative Declarations.

A quantitative air quality analysis of all criteria pollutants was not performed for the General Plan update because the draft EIR was prepared at a programmatic level. Pursuant to CEQA Guidelines, Section 15168(c) subsequent activities [development] in the program [General Plan] must be examined in light of the program EIR to determine whether an additional environmental document must be prepared. At the time of any subsequent project-specific CEQA evaluation, the appropriate air quality analyses will be performed.

**RESPONSE O.5-46**

The County acknowledges the commenter’s opinion that the Draft EIR did not provide a meaningful evaluation of cumulative air quality impacts.

The Draft EIR provided a qualitative discussion of air quality impacts based on growth projections, which concluded that air quality impacts were significant. In addition, implementation of the San Bernardino General Plan would require individual projects to undergo further project-specific CEQA evaluations. These project-specific analyses would evaluate direct cumulative impacts and develop feasible mitigation measures. The Draft EIR for the County of San Bernardino General Plan provides a qualitative discussion of cumulative air quality impacts as a result of implementation of the Plan. The determination of significant cumulative air quality impacts is adequate and feasible mitigation measures have been included to reduce air quality impacts to the extent practicable.
Program EIRs focus on policy rather than project-related impacts. They contain a more general discussion of impacts, alternatives, and mitigation measures. The County’s General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that will follow and be implemented by the General Plan. CEQA requires that each of those subsequent development projects be evaluated for their particular site-specific impacts.

**RESPONSE O.5-47**

The County agrees that the Draft EIR did not include a localized significance threshold (LST) analysis. “LSTs are applicable at the project-specific level and not applicable to regional projects such as General Plans. [Further] The use of LSTs is voluntary.” [Emphasis added] (Source: Final SCAQMD LST Methodology, June 2003, page 1-1, http://www.aqmd.gov/ceqa/handbook/LST/LST.html)

**RESPONSE O.5-48**

The County acknowledges the commenter’s opinion that emissions were not quantified. Emissions by air basin are an adequate level of review based on a programmatic evaluation. As previously stated, the EIR for the County of San Bernardino General Plan is a “Program EIR” that evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many of individual development projects that may follow and be implemented by the General Plan. CEQA requires each of those subsequent development projects to be evaluated for their particular site-specific impacts, include project alternatives, and to formulate appropriate mitigation measures. These site-specific analyses may encompass second-tier documents, such as Project EIRs, Focused EIRs, or Negative Declarations on individual development projects subject to the General Plan. These analyses typically evaluate the impacts of a single activity undertaken to implement the overall plan.

**RESPONSE O.5-49**

The County respectfully disagrees with the commenter’s statement that the prescribed modeling outlined in his comment be used in the draft EIR. As previously stated, the EIR for the County of San Bernardino General Plan is a "Program EIR" that evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many of individual development projects that may follow and be implemented by the General Plan. Individual projects to be implemented within the County of San Bernardino under the proposed General Plan have not been identified. Modeling input parameters would have to be known to run the models identified by the commentator.

**RESPONSE O.5-50**

The County respectfully disagrees with the commenter’s statement that the draft EIR inadequately incorporates mitigation into the project. As previously stated, the EIR for the County of San Bernardino General Plan is a "Program EIR" that evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. A General Plan EIR evaluates the large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many of individual development projects that may follow and be implemented by the General Plan. The draft EIR
includes the feasible mitigation measures identified to reduce air quality impacts to the extent practicable. Further, all future projects to be implemented under the Plan will undergo a project-specific CEQA analysis which would include the implementation of additional mitigation measures to reduce project-specific impacts.

**RESPONSE O.5-51**

The County agrees with the commenter’s reference to CCR Title 14, Section 15126.4(a)(2) that all mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. For that reason, in accordance with CCR Title 14, Section 15060, all future development in the County of San Bernardino will undergo an application review for completeness. At that time the County will also determine if the project is subject to CEQA (CCR, Title 14, Section 15061). If the future development is subject to CEQA, and specifically the level of an EIR, the analysis will include a project-specific evaluation of impacts, the development of project alternatives and the implementation of feasible mitigation measures.

Any and all construction activities will be performed in accordance with SCAQMD and MDAQMD rules regarding fugitive dust (i.e., SCAQMD Rule 403) and wind hazards. These regulations specifically outline how construction activities will be conducted and when work will cease during high wind conditions.

**RESPONSE O.5-52**

The County acknowledges the commenter’s opinion. The County has no enforcement authority over businesses or private citizens regarding rideshare or trip reduction. Creating staggered and flexible work schedules does reduce peak traffic congestion and increase traffic circulation. Working with the Southern California Association of Governments (SCAG) to develop incentives and creative ways to promote trip reductions can mitigate air quality impacts, but not to a level below significance.

**RESPONSE O.5-53**

The County is supportive of public transit, including mass transit. The County has limited authority in implementing public transit, yet it is very supportive of regional transit activities and the SANBAG programs to encourage better County mobility and coordination of public transit systems. The General Plan illustrates the County’s support in Goals CI 3 and 4 and in the corresponding policies of CI 3.2, 3.3, 3.4 and 4.2. It is also exemplified in Valley Regional Policy V/CI 1.3 Mountain Regional Policy M/CI1.10.

As a final note, the County respectfully disagrees with the implication that the EIR preparation should be guided by the “Phase 1 – Scoping Analysis” prepared by Hogle-Ireland in 2002. Instead, preparation and distribution of the Draft EIR was accomplished in conformance with the California Environmental Quality Act, and the CEQA Guidelines. For a complete explanation of the relationship of the Phase 1 Scoping Analysis to the Draft EIR, see Response to Comment O.6-6.

**RESPONSE O.5-54**

The County acknowledges the commenter’s opinion regarding the need for additional mitigation to reduce NOx, ROG and CO emissions in the Draft EIR. As previously stated, the Draft EIR for the County of San Bernardino General Plan is a “Program EIR” that evaluates the broad-scale impacts of the proposed General Plan and contains a more general discussion of impacts, alternatives, and mitigation measures. The Draft EIR evaluates large-scale impacts on the environment that can be expected to result from the adoption of the General Plan, but does not necessarily address the site-specific impacts of each of the many individual development projects that may follow and be implemented by the General Plan. The site-specific project analyses will be more focused toward the actual impacts for that development
project and the identification of feasible mitigation measures that will reduce those particular impacts. A General Plan “programmatic” EIR is not intended to speculate on all future development and identify any and all mitigation that may or may not be related, or be feasible to reduce impacts from these future development projects.

Since multiple commentators raised questions about the same or similar issues, the County, as Lead Agency, believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting as the responses themselves. In response to this comment, Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses. Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

**RESPONSES O.5-55, O.5-56, O.5-57, O.5-58, O.5-59 AND O.5-60**

Assembly Bill 32 will create a new regulatory program intended to reduce statewide greenhouse gas emissions to their 1990 level. It is not yet clear how, or if, these future regulations would affect local governments or how they might influence local land use planning decisions. From the background discussion above, it is clear that the issue of greenhouse gas reductions extends well beyond the scope of local government actions incorporated in General Plans. Nevertheless, the County of San Bernardino recognizes the importance of this issue. Goals and policies already incorporated into the General Plan will serve to reduce vehicle trip generation when compared to existing conditions. For further information, please see Categorical Discussion #3.

**RESPONSE O.5-61**

The County does not dispute the scientific basis for global warming; however, as the commenter is well aware, the implications of global warming on common as well as special status-species are difficult to discern at best. Therefore, the General Plan cannot analyze the potential effects of climate change and global warming on rare, threatened, and endangered species as the best minds in science readily acknowledge that the impacts of global warming vary among taxa, benefiting some, while adversely affecting others. Just as some species will experience reductions in range and foraging times, others will expand their ranges and benefit from longer growing periods and durations for foraging. Although the commenter provides a seemingly reasonable example of how global warming may adversely affect the checkerspot butterfly due to changes in the growth patterns of prey, similar analyses for the numerous other plant and wildlife species that occur in the County is far beyond the scope of the General Plan. Additionally, as noted previously in Categorical Response 7, the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements contained in the General Plan. The General Plan does not address specific development proposals nor does it specify or speculate on the impacts or effects of global warming on local, state, or federally protected species. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation. Lastly, the County contends that the impacts and/or effects of global warming on local, state, or federally protected species can not be reasonably ascertained and are currently speculative.

**RESPONSES O.5-62, O.5-63, O.5-64, O.5-65, O.5-66 AND O.5-67**

Assembly Bill 32 will create a new regulatory program intended to reduce statewide greenhouse gas emissions to their 1990 level. It is not yet clear how, or if, these future regulations would affect local governments or how they might influence local land use planning decisions. From the background discussion above, it is clear that the issue of greenhouse gas reductions extends well beyond the scope of local government actions incorporated in General Plans. Nevertheless, the County of San Bernardino recognizes the importance of this issue. Goals and policies already incorporated into the General Plan
will serve to reduce vehicle trip generation when compared to existing conditions. For further information, please see Categorical Discussion #3.

**RESPONSES O.5-68, O.5-69, O.5-70, O.5-71**

The County respectfully disagrees with this comment and believes that the General Goals and policies, the Development Code provision of the Fire Safety Overlay provide prudent and comprehensive guidance to ensure fire safe development in the County. The Fire Safety Overlay requirements of the Development Code received a comprehensive overhaul in 2004 following the disastrous Old Fire and Grand Prix Fire of 2003. A Task Force consisting of fire officials, planners, building officials, builders, and community representatives was formed to review the current standards in existence at that time in light of observations and lessons learned for the 2003 fires. Several provisions were revised and new requirements added to the County Development Code in the Fire Safety Overlay District adopted by the Board of Supervisors. Those standards have been carried forward into the new Fire Safety Overlay section of the draft 2006 Development Code Update. The current standards included in the draft Development Code represent an effective set of performance standards that must be met by individual building construction as well as development projects such as residential tracts. These standards were accepted as adequate mitigation by professional firefighters, building officials, and planners as adequate mitigation for wildland fire hazards in mountain and foothill communities. The 2004 revisions to the Fire Safety Overlay included establishing a new zone for the foothill areas as FS3. This zone includes a substantial number of added provisions based on what had been learned from the firestorm that engulfed the Del Rosa area in the City of San Bernardino. Building standards such as Class A rated roofing materials, 1hr rated soffits, galvanized screening required on attic vents, separation requirements for flammable fencing away from structures, 1hr rated fencing that adjoining wildland fuels, 1 hr rated decking material, and so on. The revision also included a mandatory fuel modification plan for all new development that must be submitted concurrent with any development application so that fire hazard issues and project design can be evaluated jointly. These measures meet all current fire-building requirements. There are no “loopholes” in the FS Overlay. While Section 82.13.090 provides for consideration of alternative measure, they are subject to the review of the County Fire Department and can only be approved upon making certain findings. Furthermore, the alternative measures are limited to building separation, perimeter access and length of cul-de-sac. This provision only applies to development projects and not individual lot development.

**RESPONSES O.5-72**

The County respectfully disagrees with this comment and believes that the EIR analysis of water supply issues is appropriate for a broad general plan EIR that does not proposed any particular development projects. The EIR for a plan-level, first tier program EIR focuses on the broad policy implications of implementing the plan as a whole. It is neither feasible nor necessary for an EIR of this sort to specify with precision exactly how a particular policy or mitigation measure will be applied to a particular development project. What is necessary, however, its to devise policies and mitigation measures representing a genuine commitment to a performance standard, such that the impact of the plan will be avoided or lessened, to the extent it is feasible to do so. (See Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal.App.3d 433, 442 (“while detailed mitigation measures may not be possible before a specific development plan is proposed, general mitigation measures may be adopted”); Rio Vista Farm Bureau Center v. County of Solano, supra, 5 Cal.App.4th at p. 377 (where "devising more specific mitigation measures early in the planning process is impractical, the agency can commit itself to eventually devising measures that will satisfy specific performance standards articulated at the time of project approval" (internal quotations omitted).)

That is the approach taken by San Bernardino County in this case. Many other cities and counties (over 150) have employed a similar approach in order to comply with CEQA in connection with the update of
their General Plans. The California Planners’ 2003 Book of Lists, published by the Governor’s Office of Planning and Research, presented the results of the 2002 Local Government Survey sent to all cities and counties in California. In a Table (“Type of EIR Used for Last General Plan Update”) presented on pages 71-74 of the 2003 Book of Lists, the Survey reported that forty-five (45) jurisdictions used a Master EIR and one hundred eleven (111) used a Program EIR for their General Plan Update. For further information, please see Categorical Discussion #1.

**RESPONSE O.5-73**

The County understands that CEQA requires environmental analysis as early as feasible in the planning process, and believes that this early analysis has been provided in this EIR, at a general level of detail consistent with the plan-level nature of this review. The County’s evaluation of water supply issues began with the preparation of the Circulation and Infrastructure Background Report prepared for the County’s General Plan Update, and the County prepared the analysis in this Background Report and in this EIR prior to considering the proposed County General Plan. Likewise, the policies included in the General Plan require CEQA documents for specific projects to evaluate water supply impacts before any such specific projects are considered. The County’s General Plan does not, however, propose any specific projects and, in fact, substantially reduces growth in comparison to the prior County General Plan.

**RESPONSE O.5-74**

The County, as Lead Agency, with this proposed General Plan has prepared the policy foundation for the evaluation development proposals. As part of that review, the County will comply with the provisions of SB 610 and other laws and requirements. On a programmatic level, the EIR summarizes the reported availability of water from many of the multiple water purveyors that reported availability or had urban water management plans for review. Based on the information available information, water is generally available and specific assessment of the availability of water for a particular project must necessarily be assessed during the review process after that particular project has been proposed. At that time, as required by State law and by the policies of this general plan, water supply availability will be assessed as a factor in evaluating project approvals.

**RESPONSE O.5-75**

The County, as Lead Agency, is concerned about the availability of water to serve developments within areas of County jurisdiction. The County’s discretionary development review process includes notice to the local water purveyor that serves projects subject to discretionary review such as tract and parcel maps. Input from these purveyors is considered in the review and consideration of projects. With regard to the water wholesalers that serve San Bernardino County, speculative assessments of “obligations” vs. actual delivery requirements is provisional determination of true availability of water. Therefore, the County must rely on the information related to the County by actual providers as to their availability to provide water on the broad programmatic level and then, when there are specific proposals for development, using their indications of available water as a factor in the consideration of projects. Further, as available water does become more scarce, and the County anticipates that existing water purveyors and or suppliers will work on ways to fund and implement ground water replenishment and other water supply techniques to maintain minimum levels of service. The County believes strategic use of fair share funding coupled with other project specific mitigation may provide additional levels of impact reduction and the use and implementation of such mitigation must be evaluated on a case-by-case basis as projects are reviewed. Without the policy in place however, the County loses the policy foundation to utilize that tool effectively where necessary. Impact fees are properly part of a full mitigation package resulting from the development review process and the mitigation conclusion is based on other mitigating policies as well, such as UT-10 and UT-11.
The County, as Lead Agency, appreciates the suggestions for additional mitigation measures related to the protection of existing and future ground water resources:

- The proposed General Plan program substantially reduces densities and non-residential intensities already and therefore meets the first suggestion.

- The County’s development code already limits uses by land use category. In the Resource Conservation and Rural Residential land use category for instance, the County already limits uses, excluding high water type uses or have made those uses subject to a discretionary review process requiring public notice and review. The County is already implementing this policy suggestion.

- Uses with high “fixture” counts are already subject to heightened evaluation under State uniform building code requirements. The County will continue to implement and enforce the California Building Code (CBC) as adopted.

- The County through policies already proposed encourages water conservation. See policies CO 1.1, CO 1.2, CO 5.2, CO 5.3, and CO 5.4.

- The County agrees that the use drought tolerant, xeriphitic, or native plant landscaping is an effective program and, as such, already includes development standards for landscaping. See Chapter 83.10 of the proposed San Bernardino Development Code.

- The County agrees that gray water programs can be an effective program to solve multiple issues related to the distribution and elimination of treated water as well as a water conservation effort. At this time, there is not an effective network of trunk lines for localized implementation. The County however does enforce the CBC requirements for the inclusion of gray water lines with specified developments and will continue to do so. Further, the County, through its discretionary review authority does encourage the use of gray water facilities. See policy M/CO3.9

- The County agrees that the destruction of existing native landscaping as rural property is developed may be an effective approach to soil and water conservation. The County does encourage the protection of natural landscapes in developments. See Policies CO 5.3, D/CO 1.1, D/CO 1.2, D/CO 1.3, D/CO 1.4, D/CO 1.5, D/CO 1.7.

- The County is the primary permittee under the current NPDES program being implemented by the County for the County and all of the municipal co-permittees signatory to the permit. The permit activities include policies to maximize ground water percolation, minimize low flow runoff, and slow storm surges. Specific implementation requirements of the program are being conducted already in conjunction with the expanding implementation of the NPDES rules. The County encourages impervious paving techniques and other development techniques in the context of its role as the primary permittee under the NPDES permit.

**Response O.5-77**

The County agrees that night sky protection is important in the mountain and desert regions. To help reduce outdoor lighting and protect the night sky from additional light sources as the existing night sky ordinance (Chapter 86.09, 86.09.030) that has been implemented in the County has been an effective tool to reduce night light impacts. The County respectfully disagrees that additional regulation would be
beneficial or feasible. Further, enforcement responsibility of County ordinances is specified in Chapter 86.09040, Violations.

**RESPONSE O.5-78**

The County relies on the expertise and regulation by the regional water quality control boards to protect ground and surface water impacts from septic systems. Each water board serving San Bernardino County has specific regulations for septic systems appropriate for the regions that they serve. The adoption of additional regulation would create the potential for conflicting regulation in the future as water board regulations evolve and become more stringent as they have in the past. The County disagrees that adopting potentially conflicting policies or development standards is inappropriate and believes the regional boards’ regulation achieves the objectives of the comment.

**RESPONSE O.5-79**

The County respectfully disagrees with this comment, which asserts that the Draft EIR should be recirculated for a second round of public review. Section 15088.5 of the CEQA Guidelines, which is cited in these comments, articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 6.
San Manuel Band of Mission Indians
Environmental Department

October 22, 2006

County of San Bernardino
Land Use Services Department,
Advance Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

RE: Notice of Availability of the Draft Environmental Impact Report (EIR) For the San Bernardino County General Plan Update Program

Mr. James Squire,

The San Manuel Band of Mission Indians ("Tribe") is in receipt of your letter of September 12, 2006, regarding to participate in the public comment review on the Draft Programmatic Environmental Impact Report and the San Bernardino County Draft 2006 General Plan Program, and Appendices. The Tribe appreciates being contacted as part of the SB consultation planning process, pursuant to Government Code §65352.3.

Upon review of these drafts, these comments to consider:

- Draft Program Environmental Impact Report, San Bernardino County, 2006 General Plan Program, SCH# 2005101038, Chapter IV. Project Analysis - E. CULTURAL AND PALEONTOLOGICAL RESOURCES, 4. Mitigation measures. Under Mitigation CR-18 - this item was discussed as a possible Mitigation measure at our consultation meeting on July 27, 2005; 82.14.050 - Native American Monitor
  - If Native American cultural resources are discovered during grading or excavation of a development site or the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

- Draft Program Environmental Impact Report, San Bernardino County, 2006 General Plan Program, SCH# 2005101038, APPENDICES - Appendix H: Conservation Background Report, 6.3 EXISTING CONDITIONS, 6.3.2 Cultural Resources, 6.3.2.2 Regulatory Environment.
  Under State Significance Criteria – page. 6-60, it currently reads:
  Section 13064.5 of CEQA . . . remains are discovered. These procedures are detailed under California Public Resources Code (PRC) Section 5097.98 and .

  Under CRITICAL ISSUES TO BE ADDRESSED, 6.4.2 CULTURAL RESOURCES, page 6-165, it currently reads:
If human remains are discovered... Section 5097.98 of the PRC... will be followed.

The Public Resource Code Section 5097.98 has recently been amended as Assembly Bill No. 2641, Chapter 863 (Approved by the Governor September 30, 2006). Recommend to include the amended AB 2641 in these sections.

- San Bernardino County Development Code, Chapter 82.12, Cultural Resources Preservation (CP) Overlay District, discussed at our July 27, 2005 consultation meeting:
  82.14.050 – Native American Monitor
  If Native American cultural resources are discovered during grading or excavation of a development site or the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

- County of San Bernardino 2006 General Plan, V. CONSERVATION ELEMENT, page V-7, first paragraph should read:
  on file at the San Bernardino County Museum, 40 percent are historic sites.

The Tribe recognizes the importance in maintaining dialogue between the County of San Bernardino and San Manuel Band of Mission Indians. The Tribe would appreciate notification on the status of the final EIR and General Plan, as well as the Planning Commission and the Board of Supervisor hearings. Should you have any questions, please don’t hesitate to contact me.

Respectfully,

[Signature]

Ann Brierty
Environmental Department
San Manuel Band of Mission Indians
BUS: (909) 864.8933
FAX: (909) 862.5152
Email: abrierty@sanmanl-nsn.gov

Cc: James Ramos, Cultural Awareness Committee
   Erin Copeland, General Counsel
RESPONSE N.1-1
The County recognizes the San Manuel Band of Mission Indians as a Native American Sovereign Nation and thanks the Band for their comments on the Draft EIR, General Plan, and Development Code.

RESPONSE N.1-2
The County agrees with this addition, assuming that the Band is referring to Chapter 82.12 – Cultural Resources Preservation (CP) Overlay District and not Chapter 82.14 – Flood Plain Safety (FP) Overlay District. The following section will be added to Mitigation Measure CR-18:

82.12.050 – Native American Monitor

If Native American cultural resources are discovered during grading or excavation of a development site of the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

RESPONSE N.1-3
The County acknowledges the clarification concerning the applicability of AB2641 to discovery of human remains. All Background Reports, including the Conservation Background Report, were prepared to assist the development of the Draft General Plan policies. As such, these Reports present the best information available to the County at the time of their preparation (2004) and are not proposed to be updated.

RESPONSE N.1-4
The County agrees with this addition, assuming that the Band is referring to Chapter 82.12 – Cultural Resources Preservation (CP) Overlay District and not Chapter 82.14 – Flood Plain Safety (FP) Overlay District. The following section will be added to Page 2-84 of the Development Code immediately following section 82.12.040 – Development Standards:

82.12.050 – Native American Monitor

If Native American cultural resources are discovered during grading or excavation of a development site of the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

RESPONSE N.1-5
The County agrees with these corrections. The first paragraph on page V-7 of the General Plan has been revised as follows:

Currently, County staff reports that there are at least 11,600 archaeological sites with trinomials, or unique alphanumeric codes, on file at the San Bernardino County Museum, 40 percent historic sites. There are at least 2,000 structures on the various historic properties lists, with only a portion actually on the state or national registers. There are 122 properties within the County on
the California Point of Historic Interest list, 39 on the California Historical Landmarks list, 413 properties that are eligible for the National Register of Historic Places (NRHP), and 49 properties that are listed on the NRHP. Because properties eligible for the NRHP are also eligible for the California Register of Historic Resources (CRHR) that puts 481 properties (excluding the California Point of Historic Interest) as eligible for, or on the California Register.

RESPONSE N.1-6
The County thanks the San Manuel Band of Mission Indians for engaging in a dialogue with the County. The Band will be notified on the status of the Final EIR and General Plan.
September 30, 2006

San Bernardino County
Land Use Services Departments
385 N. Arrowhead Avenue – 1st Floor
San Bernardino, CA 92415-0182

Re: Comments on General Plan, Draft Environmental Impact Report and Appendices

From:
Melinda Hedley
P.O. Box 1571
Joshua Tree, CA 92252

Chapter 1
Impact Bio-7/18 Mitigation Measures
The Program EIR includes mitigation measures to require the County to: create buffer areas and mitigation banks for sensitive species within the Mountain Region............

This should also apply to the desert regions.

Chapter 1
Impact Bio-11/Mitigation Measures
It is anticipated that development within the County will not conflict with local policies or ordinances protecting biological resources. The General Plan implementation encourages and supports the development of Habitat Conservation Plans and mitigation habitat sites created by others to mitigate adverse effect of development.

Developers in the desert regions should be given the option of leaving these habitat sites in their original pristine state (native vegetation undisturbed).

Chapter 1
Impact BIO-17/Mitigation Measures
It is anticipated that development within the County will not conflict with local policies or ordinances protecting biological resources. The General Plan implementation encourages and supports the development of Habitat Conservation Plans and mitigation habitat sites created by others to mitigate adverse effect of development.

Developers in the desert regions should be given the option of leaving these habitat sites in their original pristine state (native vegetation undisturbed). Also "others" cannot recreate the "cryptobiotic crust" that protects the desert's endangered species.
LAND USE

1.3.5.1 Residential
A total of 25,027 residential dwelling units (including single-family and multi-family) were permitted in unincorporated San Bernardino County from 1988 to 1998.

These figures should not be used. They’re too old. More recent figures are available on line at the county web-site. The recent building boom in the desert regions should be taken under consideration and reflected in this report.

1.3.6.1 City Planning Regions and spheres of influence

Each city recognizes the sphere boundaries set by LAFCO and includes a discussion of the planning region and the sphere in their General Plan. Some cities have not adopted General Plan land use designations for their spheres of influence, and other cities’ general plans cover only a portion of the sphere of influence. The cities of Chino Hills, Grand Terrace, Highland, Ontario, and Yucca Valley do not have unincorporated territory within their spheres of influence. ……

This is not correct. Yucca Valley is bordered on the east by unincorporated Joshua Tree (CSA20) and on the west by unincorporated Morongo Valley.

Project Analysis Chapter IV

Mitigation AES-5

…Therefore, the County designates the following routes as scenic highways, and applies all applicable policies to development on these routes:

This needs to be added:
SR-62 from the Riverside County Line to the state line.
LEAD AGENCY RESPONSE TO COMMENT LETTER I.1
MELINDA HEDLEY, SEPTEMBER 30, 2006

RESPONSE I.1-1
The Valley, Mountain, and Desert Regions have been identified as important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. To that end, within the Valley, Mountain, and Desert Regions Policy CO 1.2 asserts that “the preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas.” Furthermore, Policy CO 1.2 includes “…review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas [see Existing Policy OR-27].”

RESPONSES I.1-2 AND I.2-3
The intended use of this section of the EIR is to disclose and evaluate the environmental baseline conditions for the San Bernardino County General Plan. This section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. The General Plan does not address specific development proposals; it establishes an overall policy framework that the County will use as a means of evaluation. To that end, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). Furthermore, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals (see County of San Bernardino 2007 General Plan; Section V–11 Conservation Element) which is consistent with other regional planning documents (e.g., Northern and Eastern Mojave Plans, City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan). Additionally, the County has supported and/or participated in the following adopted comprehensive planning documents: City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly; Upper Santa Ana Wash Land Management and Conservation Plan; Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan.

RESPONSE I.1-4
This figure, which was taken from the Land Use Background Report, shows past history with regards to actual number of permits for the given time period. In developing the updated General Plan and community plans, the County has considered growth in the County beyond 1998 cited in the Land Use Background Report.
**RESPONSE 1.1-5**

You are correct that unincorporated community of Joshua Tree is located to the east of the Town of Yucca Valley. However, Joshua Tree is not within the Yucca Valley sphere of influence. In fact, the Town of Yucca Valley does not have any unincorporated County area within its sphere of influence.

**RESPONSE 1.1-6**

The General Plan (at Policy OS 5.3, Desert Region) and the Joshua Tree Community Plan identifies Highway 62 as a scenic route.
October 23, 2006

County of San Bernardino
Land Use Services Department
Advance Planning Div.
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

Attn: James Squire

VIA Fax: 909-387-3223 and email: jsquire@lusd sbcounty.gov

RE: Draft Environmental Impact Report for the County of San Bernardino General Plan Update and Associated Community Plans

Dear Mr. Squire;

On behalf of the Winch family (Bradley & Cathy), we would like to thank the County of San Bernardino Planning Department for the opportunity to comment on this Draft Environmental Impact Report for the County of San Bernardino General Plan Update and Associated Community Plans.

My wife and I have lived in Fawnskin, CA since 2002 and dearly love our current life here.
The challenge is that we feel our life here would be adversely affected by the negative impacts that are proposed in this General Plan update.

We specifically suggest that the following areas are not appropriately addressed and/or lack proper analysis in the current DEIR:

- Aesthetics
- Water availability
- Air quality
- Fire safety, and
- Biological resources.

In our opinion, specific inadequacies of this DEIR include, but are not limited to, the following areas:

- Fire hazards and fire safety within the mountain communities. Experiences from recent fires make us believe that the county should be vigorously addressing ways to reduce and mitigate fire hazards in these communities. The limited analysis presented in the DEIR fails to present this as even a serious consideration to the county’s proposed changes in the General Plan update.

For example—

Proper and complete analysis of potential emergency evacuations with existing and projected population changes resulting from the project has not been presented to establish whether additional density or
additional housing can be supported in the General Plan policies and codes.

The 30-foot set backs from the National Forest are, we believe, inadequate. Further, no proper analysis is presented in the DEIR for what set back criteria would actually be an improvement.

There are many exemptions and loopholes possible from setback requirements in the code that make the criteria completely ineffectual.

In our opinion, set backs from the National Forest for development projects involving multiple houses should not be included as a portion of the individual parcels. Rather, they should be established as a set aside to assure that those setbacks cannot be built upon in the future.

The General Plan stresses the importance of the surrounding forest and natural habitats to the quality of life and general well-being of the mountain communities. Yet, no mountain wide analysis has been completed in the DEIR evaluating the carrying capacity of the National Forest as a whole—how many more homes, businesses, roads, tourists, etc., can be added without negatively impacting the surrounding forest and habitats? How much water is actually available to be utilized without negatively impacting the surrounding environs?
The maps referenced throughout the General Plan are difficult to read and nearly impossible to evaluate. Overall, they seem to be completely inadequate for determining the impacts of the General Plan updates.

The Biotic Resources Overlay map addresses only a miniscule percentage of the actual number of special status species. All these species must be addressed and the impacts analyzed.

The impacts on air quality of the updates being proposed are insufficient and not in line with state and federal regulations. Impacts to air quality in the mountain communities have been, we believe, ignored or downplayed in the past on a regular basis. This downplaying or ignoring is continued in the analysis within this DEIR. Proper analysis, impact evaluation and enforceable mitigations must be presented.

There are changes being made to the General Plan that have been completely left out of the DEIR since these changes have been done since the DEIR was released. One such change, with huge potential impacts, that has not been analyzed is the concept of 'holding zones'. Before this wording can be added to the General Plan update and/or specifically to the Bear Valley Community Plan, the impacts in all categories must be analyzed in detail and mitigations and enforcements for such mitigations presented.
Some specific issues regarding ‘holding zones’ that must be addressed in the DEIR analysis include but are not limited to:

The concept of ‘holding zones’ pre-dates our awareness of the severe fire dangers within our mountain communities. We have, in recent years, become more acutely aware of the dangers that communities surrounded by national forest face. Additionally, the fact that the denser the development is along the forest boundary, the more the fire danger is increased. Because of this, the ‘holding zone’ concept is no longer valid and should be totally replaced.

Natural resources and open space are not only ecological considerations of planning within the Big Bear Valley, but are essential elements to the entire character and the quality of life of this mountain community. As such, we must have every priority placed on maintaining these areas in rural living zones. This is confirmed in the current (1989) general plan which states that the reason for adopting the changes at that time was to “recognize existing land use commitments as much as possible.”

Section BV1.3.1 of the new plan defines part of the unique characteristics of Bear Valley as “...scenic resources and sense of remoteness from urban life.” Since the rural zoning designations certainly must assist with maintaining this “sense of remoteness,” the language about low density zoning designations
being a mere “holding zone” goes completely contrary to statements both in the current General Plan and the new one discussing the importance of the natural surroundings and desires of the community to maintain the current unique character of the Valley.

The evaluation for changing existing zoning of a parcel to increase its density needs to be based on much more than simply infrastructure. It must also include topography, geology, natural resources, wildlife habitats, and proximity to the national forest.

The overall carrying capacity of the national forest must be considered. In other words, we must consider how much development, traffic, full-time residents, etc., the surrounding forest can handle without degradation. These considerations must be included in any evaluation of increasing density. Already the plan discusses concerns about the potential lack of availability of water for potable and fire flow purposes. Saying that low-density designations are simply a “holding pattern” does not take any of these issues into consideration.

The majority of the RL-rural living-designations are alongside national forest land and serve as a valid buffer between the forest and mountain community development. Based on what we now know about such things as forest fires and the forest’s actual carrying capacity, we would suggest that property adjacent to national forest should be required in this
new plan to remain designated as very low-density rural living.

Continued increases in the existing density will almost certainly have a severe negative impact on local tourism economy by making the mountain communities so similar to communities “down the hill” that it no longer feels like an escape from the city and is no longer worth the drive to come here. The “holding zone” concept would be disastrous for the local economy.

The current residents of the Valley who bought property near any of these ‘rural living’ designations have the right to expect that these areas will remain as rural living. The county did not issue a formal disclosure when the surrounding properties were sold saying that this zoning was simply a “holding pattern.” Adding this new wording takes away the property rights of existing property owners like us and opens the door to potential legal issues regarding full disclosure.

There is no analysis of the climate change that is being addressed throughout the world, including with new state measures. The DEIR fails completely to mention this or present analysis for additional impacts from the General Plan updates.

Mitigation measures throughout the DEIR are completely inadequate. Often, mitigation measures are completely lacking. Mitigation measures that are
presented are not clearly defined and are not measurable. Additionally, no plan has been presented for how mitigations will be enforced. Considering that the county’s past record for enforcing mitigations in the mountain communities is abysmal, these measures must be strengthened, clearly defined and enforceable and methods for enforcement must be spelled out.

In summary, the DEIR needs to be redone so that it includes complete analysis of all potential impacts on all criteria categories of the changes being introduced by the General Plan update and associated Community Plan. We request that this revised DEIR be re-circulated to the public for comment when it is released.

Thank you for the opportunity to comment on this DEIR and for taking our comments into consideration.

Sincerely,

Bradley & Cathy Winch
Fawnskin Residents
The County’s Fire Safety Overlay is a provision in the County Development Code. An Update to the Development Code is a component of the General Plan Update (GPU). As explained in the Draft EIR, the Development Code is the primary tool for implementing the policies of the General Plan. The Updated Development Code is a part of the program being evaluated in the GPU EIR. The Development Code Update includes a recent revision to the Fire Safety Overlay that was adopted by the County Board of Supervisors in 2004. In response to the catastrophic fire damage of the Grand Prix and Old Fires, the County Board of Supervisors formed a Post-Disaster Reconstruction Task Force in 2003 to outline reconstruction procedures for fire victims in an effort to assist affected residents in rebuilding as expeditiously as possible. A separate sub-committee of the Task Force was established to focus specifically on changes to the County’s fire safety building and development requirements to enhance fire safe communities in the future. This sub-committee, consisted of staff from the County Fire Department, the Building and Safety Division, and the Advance Planning Division, California Division of Forestry, U.S. Forest Service, Crest Forest Fire District, Running Springs Fire Department and Big Bear City Fire District and various interested individuals, groups, and agencies to examine the County’s current fire safety related building and development design standards in order to incorporate “lessons learned” from the recent fires. The sub-committee met several times with Fire Chiefs and/or Fire Prevention Officers from the affected fire districts, affected residents, and representatives of mountain Fire Safe Councils, the building industry and mountain building associations. The feedback provided at the meetings resulted in an ordinance that had broad support.

Based on the recommended changes, the Board of Supervisors adopted a Development Code Amendment that revised the existing Fire Safety Overlay provisions, and a General Plan Amendment to reflect changes to the hazard overlay maps delineating the revised Fire Safety Areas. The Development Code Amendment included new standards that required the use of noncombustible and/or fire-resistant materials and other building requirements so as to mitigate the potential for future conflagrations. The City of San Bernardino (City) was also severely impacted by the Old Fire, and, as a result, adopted an ordinance to establish enhanced building standards for the areas of the City affected by the fire. The County’s changes to its Fire Safety Overlay incorporated standards similar to those adopted by the City and applied them to the Del Rosa area and other unincorporated areas along the valley foothills.

A summary of the revisions is as follows:

1. **Fire Safety Designations and Organizational Changes:** In order to emphasize the new standards implemented with the proposed changes, the designation for the Fire Safety Overlay District has been changed from Fire Safety Review Areas (FR) to Fire Safety Areas (FS). The building standards and project design requirements have been completely restructured to make them easier to understand and locate in the Code.

2. **Redefining Fire Safety Areas:**

   A. **Fire Safety Area 1 (FS1):** Fire Safety Area 1 includes those areas within the mountains and valley foothills. It includes all the land generally within the National Forest boundary and is characterized by areas with moderate and steep terrain and moderate to heavy fuel loading contributing to high fire hazard conditions.
B. Fire Safety Area 2 (FS2). Fire Safety Area 2 includes those lands just to the north and east of the mountain FS1 area in the mountain-desert interface. These areas have gentle to moderate sloping terrain and contain light to moderate fuel loading. These areas are periodically subject to high wind conditions which have the potential of dramatically spreading wildland fires.

C. Fire Safety Area 3 (FS3). Fire Safety Area 3 includes lands just to the south of the mountain FS1 area. These lands are primarily within the wildland-urban interface of the Valley Region and consist of varying terrain from relatively flat to steeply sloping hillside areas. Present and future development within FS3 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to FS1. These areas are subject to Santa Ana wind conditions which have the potential of dramatically spreading wildland fires during extreme fire behavior conditions.

3. Roof Covering: All three areas within the Fire Safety Overlay District require that roof coverings shall be either noncombustible or shall be fire retardant material not composed of organic fiber with a minimum Class A rating, as defined in the California Building Code. This means that wood shake or shingle roofs are now prohibited within all three areas.

4. Exterior Walls: Exterior wall separation standards are designed to reduce the exposure and risk from adjacent structural fires and to reduce the potential spread of fire from structure to structure.

A. For FS1 and FS2: All residential structures shall have interior side yard setbacks of 20% of the lot width. Interior side yards shall not be less than five feet and need not exceed 15 feet. Wherever possible, exterior wall separations shall not be less than ten feet for all buildings, including those on adjoining parcels.

When exterior walls of residential and accessory buildings or portions thereof are within 15 feet of interior side or rear lot lines, or the exterior wall separation is less than 30 feet, the outside of all such exterior walls or portions thereof shall be constructed with the modified one-hour construction. Where building separations are less than ten feet, additional mitigation measures may be required by the responsible fire authority.

B. For FS3: Exterior walls shall be constructed of noncombustible materials or shall provide the equivalent one-hour fire-resistance-rated construction on the exterior side. Interior side yards shall not be less than five feet. Within the Mountain Planning Area, building separation and side yard setbacks shall be as described in FS1/FS2 areas.

5. Eaves: In FS1 and FS2, eaves shall be solidly filled with tight-fitting wood blocks at least one and one-half inches thick. In FR3, eaves shall be enclosed with a minimum 7/8-inch stucco or equivalent protection.

6. Exterior Glazing: Exterior windows, window walls and glazed doors, and windows within exterior doors, shall be multi-layered glass panels (dual- or triple-paned), tempered glass, or other assemblies approved by the Building Official. Vinyl window frame assemblies shall be prohibited, except when they comply with specific construction characteristics.

7. Exterior Doors: All exterior doors made of wood or wood portions shall be solid core wood.

8. Insulation: Paper-faced insulation shall be allowed in attics or ventilated spaces only if the paper is not exposed to the attic open space. Cellulose insulation is required to be fire retardant.
9. **Additional Requirements**: Dependent upon specific conditions of the site, such as fire flow, building separation, road conditions, slope, vegetation, etc., or combination thereof, the responsible fire authority may require all structures to meet more stringent construction standards as additional mitigation to the fire threat. Such standards include, but are not limited to, full perimeter exterior walls to be constructed to the modified or full one-hour construction standards, sprinklers, soffitted eaves, etc.

10. **Fences**: Where wood or vinyl fencing is used, there shall be a minimum of five-foot separation between the wood or vinyl fencing and the wall of the nearest structure except on those properties where previous construction occurred pursuant to a previous code. Fencing within the five foot separation area shall be of noncombustible material or modified one-hour fire-resistance-rated construction. All fences or walls required adjacent to fuel modification areas or wildland areas as conditions of approval for a development project shall be constructed of noncombustible materials as defined in the California Building Code.

11. **Residential Density in Sloped Terrain**: Reinstates standards from community plans designed to reduce fire hazards and prevent erosion. The density of development in sloping hillside areas shall be in accordance with the following criteria: One to four dwelling units per gross acre on slopes of 0-<15%, two dwelling units per gross acre on slopes of 15-<30%, one dwelling unit per three gross acres on slopes of greater than 30% gradient. In the West Valley Foothills Planning Area, residential development on slopes of greater than 30% gradient is prohibited.

12. **Fuel Modification Areas/Plans**: A permanent fuel modification area shall be required around development projects that are adjacent or exposed to hazardous fire areas for the purpose of fire protection. The recommended width of the fuel modification area shall be determined based on the Fuel Modification Plan, but in no case shall it be less than 100 feet. All final plans shall be reviewed and approved by the responsible fire authority in conjunction with the County Fire Marshall. A preliminary or final plan shall be submitted concurrently with the development application to the Land Use Services Department for review in conjunction with the project design review. Fuel Modification Plans shall address the following factors, including, but not limited to:

   A. The natural ungraded slope of the land within and adjacent to the project;
   B. Fuel loading;
   C. Access to the project and to the fuel modified area;
   D. The on-site availability of water that can be used for fire fighting purposes;
   E. The continual maintenance of such areas;
   F. The soil erosion and sediment control measures to alleviate permanent loss of top soil and accelerated erosion; and
   G. A list of recommended landscape plant materials that are fire resistant.

The issue of evacuation routes is addressed in the Draft EIR. The Draft EIR considers the evacuation routes that have been identified in General Plan Regional Goals V/S 1, M/S 1, and D/S 1 and Policies V/S 1.1, M/S 1.1, and D/S 1.1. The topic of wildland fire as a public safety hazard is addressed in Chapter IV, Topic G., Hazards and Hazardous Materials beginning at page IV-71 of the Draft EIR. Impact HAZ-6 specifically evaluates safety hazards to the public residing in and visiting the mountain region of the
Mitigation Measure HAZ-18 calls for the use of the Fire Safety Overlay requirements contained in the County Development Code as the primary method of reducing impacts of wildland fires on future development within the mountain region. The significance conclusion for impacts related to safety hazards at page IV-83 provide disclosure to decision-makers and the public that, in spite of extensive fire safety development requirements, there still remains a significant unavoidable safety impact due to the inherent risks associated with residing in high fire hazard areas. Evacuation routes were evaluated more directly as a traffic circulation issue in the Transportation/Traffic impact discussion in Chapter 4, Topic O beginning on page IV-141. The specific issue of evacuation routes is addressed in Impact TR-6 at page IV-177. Transportation Mitigation Measure TR-18 specifically addresses programmatic mitigation to reduce potential safety impacts related to adequate evacuation routes. Mitigation Measures TR-1, TR-12, TR-13, TR-14, and TR-16 all contribute collectively to creating and maintaining a safe and efficient circulation network that, in turn, provides for safe and effective evacuation routes.

The issue of evacuation routes is not an isolated issue that can be considered independent of the entire fire safety approach taken by the County. Evacuation routes are part of the physical infrastructure that, in turn, supports the institutional infrastructure of fire safety and evacuation planning. The pre-planned evacuation strategy prepared by the Mountain Area Safety Task Force (MAST) in early 2003, prior to the occurrence of the Grand Prix and Old Fires, was instrumental in the successful evacuation program for these two catastrophic wildland fires. Various evacuation scenarios were considered in the strategy and incorporated pre-planned routes that facilitated the successful evacuation of the affected mountain areas.

MAST was formed in late 2002 to promote fire safety in the mountain communities. MAST is comprised of seven local, state, and federal agencies consisting of San Bernardino County Fire Department, California Division of Forestry and Fire Protection, U.S. Forest Service, State & Local Office of Emergency Services, San Bernardino County Sheriff’s Department, California Highway Patrol and MAST was utilized for critical, strategic, and tactical decisions throughout the pre-planning and post-fire evaluation process. The MAST effort proved critical to a successful evacuation effort when winds shifted and blew the fire into the mountain communities. 70,000 citizens from the communities of Arrowhead Springs, San Bernardino, Devore, Crestline, Crest Forest, Rim Forest, Running Springs, Highland, Skyforest, Cedarpines Park, Valley of Enchantment, Twin Peaks, Summit Valley, Lake Arrowhead, Los Flores Ranch, Holcomb Valley, Oak Springs Ranch, Blue Jay, Cedar Glen, Hook Creek, Green Valley Lake, Arrowbear, Lucerne Valley, Apple Valley, Squint’s Ranch, Silverwood Lake, Baldy Mesa, Oak Hills, and South Hesperia were evacuated. At the height of the fire over 4,000 firefighters were assigned to the fire and were successful in protecting over $7.5 billion in residential and commercial infrastructure. The Old Fire was contained by November 4, 2003.

MAST has since evolved and is addressing not only the emergency caused by the drought and the bark beetle epidemic, but several other issues both tactical and strategic that are critical to public safety and forest health. It is important to note that MAST was created in large part in response to the initiative of community-based Fire Safe Councils. As the emergency grew in magnitude and there was no central coordinating agency for all of the issues associated with the emergency. Each individual agency had its own mission, obligations, and authority and with that, it’s administrative restrictions and geographic limitations. Without a single agency to address these issues, the grass roots Fire Safe Councils became the focal point for community involvement and citizen input. The Fire Safe Councils then became the rally points for the various agencies and the leadership of those agencies determined that a central administrative structure, designed around collaboration must be created. MAST was the result. There are several functional groups within the MAST structure that are addressing short term and long term issues that directly relate to public safety and forest health. One component is addressing immediate fuels reduction, there is another component that is addressing future long term forest health. There is also a public education component that will work to educate residents and change human behavior so that the messages of fire safety and forest health will continue. The Board of Supervisors recently authorized the
issuance of a Request for Proposals for consultant services to prepare the public education program. In addition, MAST has continued to support the efforts of local Fire Safe Councils. Three Fire Safe Councils have produced Community Wildfire Protection Plans (CWPP) for their respective communities. The complete plans are for Arrowhead Communities, Mill Creek Canyon and Wrightwood. These plans were accepted by the Board of Supervisors earlier this year. These plans provide additional guidance and specific fire strategies for their specific communities.

RESPONSE I.2-2
The original 30 feet setback requirement from National Forest lands was added to County development requirements in the early 1980s when the mountain communities’ plans were prepared. The 30 feet setback was based on the State fuel clearance requirements around structures. The State recently passed an amendment to the Public Resources Code (PRC 4291) that now requires 100 feet of fire clearance. The County is amending its Development Code (Section 82.13.060) to require the 100 feet setback from National Forest land for all future land divisions and housing developments. These areas shall be designated as non-buildable areas to prevent structural intrusion.

RESPONSE I.2-3
The General Plan Draft EIR does not contain a “carrying capacity” analysis. The term “carrying capacity” is fundamentally a biological concept that is used typically for ecological discussions in an attempt to describe conditions for a specified habitat to support an optimum population level of a certain organism or organisms that may be found within a given habitat. While the term has been applied to the human species, it is normally done so on a somewhat global scale that is theoretical and conceptual. For the purposes of the General Plan and the Program EIR prepared to comply with the California Environmental Quality Act, “carrying capacity” would be speculative. The General Plan and the community plans have been prepared using a defined planning term of “build-out” capacity. The build-out capacity is the development of land to its full potential or theoretical capacity as permitted under the proposed general plan designations. The maximum build-out capacity of the community plans are presented in the introduction to the Land Use Element of each community plan. Relevant information regarding the theoretical maximum build-out based on existing land use designations are presented in Table 2 of the community plans. Table 3 of the community plans presents population, household and employment projections that were prepared as part of the General Plan Update. Table 3 of the community plans present a ratio of the theoretical build-out capacity for growth expected to occur during the 20 year analysis period of the new General Plan. For example, in the Bear Valley Community Plan the expected build-out of the area during the planning horizon for this General Plan is 0.46 for population and 0.49 for households. The ratios can be interpreted to mean that 46% of the ultimate population build-out and 49% of the ultimate household build-out are forecast to occur during the next 20 years.

The County has analyzed the projected growth within the Mountain Region of the County General Plan as well as the five community plan areas that are located within the San Bernardino National Forest. A context for projected growth within the Mountain Region is based on population projections presented in Appendix C, “2030 Population Projections-Background Information”, of the General Plan Draft EIR. Development potential for the Mountain Region is presented in the Land Use Background Report, Appendix C to the Draft EIR. Table 1-6 (page 1-21), indicates that only 15% of all land within the National Forest boundary is under County jurisdiction. Approximately 84% of the Mountain Region, defined as that area within the contiguous boundary of the San Bernardino National Forest, is public land and approximately 1% is land under the jurisdiction of the incorporated City of Big Bear Lake. The General Plan Draft EIR analyzed growth that may occur on private land within the County’s jurisdiction, which constitutes approximately 15% of the area within the National Forest boundary. This analysis was performed at a level of detail consist with state requirements for a Program EIR. The five community plans provide growth and development information that covers the majority of the private lands within the
National Forest where development is concentrated. As part of the current General Plan Update, the County chose to re-instate community plans so that focused growth policies within each distinct community area could be addressed on an individualized basis. The five community plan areas combined make up approximately 52 square miles or 49% of all private land within the National Forest boundary. Even though the community plans only make up 49% of the private land area within the National Forest, the community plan areas make up 87% of the population (70,385 population forecast for 2030 within the community plan areas compared to 81,035 people within the entire Mountain Region), and 86% of the households within the National Forest (27,277 households forecast for 2030 compared to 31,893 households within the Mountain Region) (data from Tables 2 and 5 in Appendix C of the Draft EIR). Furthermore, each community plan contains an estimate of the maximum theoretical build-out of each plan area based on a detailed analysis of the land area designated within each General Plan land use zoning designation based on the housing density permitted within each residential designation. The ratio (or percentage when multiplied by 100) of build-out during the planning period of 2000-2030 compared to theoretical build-out is presented in Table 3 of each plan. The Draft EIR considered these growth projections in the analysis of environmental consequences of implementing the GPU EIR. For example, traffic volumes were evaluated based on population growth that was forecast for the 20 year planning horizon of the GPU. Water supply analysis was evaluated based on data provided the major water purveyors within the Mountain Region, which take into account projected growth. The water supply analysis in the General Plan Draft EIR relied on the Urban Water Management Plans, or comparable supply/demand assessments, provided by the water purveyors.

Thus, a type of capacity analysis was performed for the General Plan and Draft Program EIR – it was not, however, what a biologist would consider as a “carrying capacity”.

RESPONSE 1.2-4
See response I.2-2 and 3 above for detail on water supply in relation to natural environs. In the semi-arid Southern California climate, the mountain planning region has a highly variable natural water supply with multiple factors influencing supply including rain versus snow pack, temperatures, and domestic use among others. Therefore it is difficult to truly estimate the water actually available without negatively impacting the surrounding environs. As a programmatic assessment, the mitigation measures proposed requires assessment of available water in the development review process.

RESPONSE 1.2-5
The scale and level of detail on the maps in the General Plan Program and background reports are consistent with the programmatic nature of the General Plan and EIR. The purpose of the maps is not to provide precise detailed information on the County but rather to highlight the potential for an issue to alert the reader to do additional research for more information of the particular topic. Further, given the size of the County, mapping at a very detailed level for a programmatic document is problematic. Available however are detailed land use maps for the entire County in conjunction with the General Plan Program.

RESPONSE 1.2-6
The current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to plant and wildlife species. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County
investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

Nonetheless, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. As a result, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. The General Plan establishes an overall policy framework that the County will use as a means of evaluation. To that end, this EIR section focuses on the broad policy implications of implementing the General Plan as a whole.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE I.2-7
The County acknowledges the concerns regarding the air quality in the mountain communities of San Bernardino. The air quality analysis for the update of the General Plan for the County of San Bernardino was sufficiently prepared pursuant to the requirements outlined in the CEQA statutes beginning at Section 21000 of the California Public Resources Code, and also pursuant to the CEQA Guidelines at the California Code of Regulations, Title 14, beginning at Section 15000. Therefore, the proper analysis, evaluation of impacts, and identification of feasible mitigation measures has been accomplished in accordance with the appropriate state regulations. For this particular project, there are no federal regulations which govern the preparation of an air quality analysis for the update of the County’s General Plan. The air quality analysis in the Draft EIR does not downplay the importance of the air quality problems in the County of San Bernardino. The findings in the Draft EIR have determined that air quality is significant, with or without the proposed project, and that no feasible mitigation measures have been identified to reduce the impact to a level below significance.

Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

RESPONSE I.2-8
The County respectfully disagrees with the comment. The recognition of severe fire dangers within the mountain communities has existed for several decades, and certainly well before the preparation of the 1988 Bear Valley Community Plan (BVCP). Following the 1980 Panorama Fire, comprehensive changes, that included considerable additional requirements to improve fire safe development, were added to fire safety provisions of the County Development Code. The background explanation that was included in the BVCP at the September 21, 2006 Planning Commission hearing regarding the holding zone concept of the 1988 BVCP was added for historical context of current land use designations that have been carried forward as part of the General Plan Update. It does not interject a new policy into the community plan and it has no application outside of the BVCP. The inclusion of this information does not provide exceptions to the policies contained in the 2006 BVCP, the discussion is included to provide a context bridge to the 1988 Plan. Extensive fire safety policies are included in the BVCP and the General Plan. Please refer to Response I.2-1 and I.2-2 above for an explanation of additional fire safe
development requirements that have been added to the County Development Code during the preparation of the new General Plan.

With regards to the “holding zone” concept, the 2006 Community Plan is intended to establish clearly defined community objectives for future development of the area and provide guidance to project review to ensure conformance with Community Plan policy. With regards to Policy BV/LU 1.1, the language does not mean that future Land Use Zoning District changes cannot be approved, on the contrary, the intent is that projects will be approved subject to demonstrating consistency with the Community Plan and General Plan. The carry over of the “holding zone” concept was a label that represented a deliberate strategy in the original 1988 Community Plan for future consideration of land use district changes. The strategy entailed assigning appropriate designations to suitable undeveloped large parcels that existed in the unincorporated portion of Big Bear Valley in 1988. For residentially designated large parcels, a very low density was assigned that would prompt the requirement for a future General Plan Amendment and specific project design that would consider the infrastructure availability, fire safety and other specific project design issues on a case-by-case basis. The current 2006 BVCP incorporates that same approach as expressed through various land use policies and circulation/infrastructure policies, as well as, fire safety considerations. To be clear, any future change to a General Plan Land Use Zoning District would require a general plan amendment (GPA). GPAs are considered as a legislative action under state planning and zoning law, and, as such, are reviewed by the Planning Commission during a public hearing and then considered by the County Board of Supervisors.

RESPONSE I.2-9
The Valley, Mountain, and Desert Regions include large blocks of natural open space and include local, state, or federal administered lands that possess wildlife movement and dispersal corridors; and rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance. Tables 7 through 9 in Attachment 1 are attached and they identify in a tabular format the local, state, and federally administered lands (reserves, wildlife management areas, natural areas, and so forth) and regional planning documents that complement the General Plan and dictate how ecological processes and biological diversity will be maintained within the County. To that end, the County also agrees that an emphasis needs to be placed on protection of biological diversity and preservation of natural areas. As a result, General Plan Goal CO 1 states that “the County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County,” and Goal CO 2 states “the County will maintain and enhance biological diversity and healthy ecosystems throughout the County.”

RESPONSE I.2-10
The County respectfully disagrees with the comment. The Community Plans are intended to guide future growth and development by defining the community character and establishing goals and policies to ensure the maintenance of that character into the future. The County believes that the proposed Bear Valley Community Plan (BVCP) will fulfill that intent. The 1988 BVCP contemplated ultimate development of vacant and under-developed land within Big Bear Valley. The 2007 BVCP also anticipates similar future conditions. The purpose of assigning low density land use zoning designations in 1988 was to ensure that any changes to an assigned designation would be done through a General Plan Land Use Amendment (GPA). The GPA process necessitates a comprehensive review by Planning staff, the County Planning Commission and the Board of Supervisors. An important part of the review is to ensure that adequate infrastructure can be provided and that the project design is consistent with maintenance of community character.

RESPONSE I.2-11
The County agrees with the comment. As described above, any project that proposes to change the land use zoning designation must be done through a General Plan Amendment (GPA) application. The review
process for a GPA will also consider potential environmental impacts to the factors that are mentioned in the comment, such as topography, geology, natural resources including wildlife habitat, and so on. The new General Plan also discourages requests for GPAs that are not accompanied by a specific project design (see LU 9.3 and accompanying program). By reviewing a specific project design in conjunction with a request to increase density, a complete evaluation of the merits of the proposed development can be made. This evaluation includes an assessment of the environmental effects of such a project in compliance with the California Environmental Quality Act.

RESPONSE I.2-12
Thank you for your suggestion, however, the County, as Lead Agency, does not agree with the suggested approach that property adjacent to the National Forest should be forever retained in a very low density land use designation that may be represented by a current designation that the commenter considers as a “holding zone”. See responses 2-11 and 2-12 above for an explanation of the project design review procedures and policy review for consistency with the respective Community Plans in the Mountain Region. The County believes that individual development proposals should be considered on as case-by-case basis based on the merits of the project and conformance with the development requirements of the County. Consideration of wildland fire hazards for new development is thoroughly discussed in response 2-1 and setback requirements from National Forest land is addressed in response 2-2. Public and agency notification procedures for development application review also provide an opportunity for the Forest Service to provide input on development that may affect Nation Forest land.

RESPONSE I.2-13
The demographic forecasts presented in Appendix C of the Draft Program EIR, show moderate growth projections for the mountain communities. Table 5, Appendix C, indicates the following average annual growth rates for the five community plans within the National Forest based on population increases: Bear Valley, 1.8%; Crest Forest, 1.3%; Hilltop, 1.6%; Lake Arrowhead, 2.1%; and Lytle Creek, 1.9%. These are modest growth rates compared to many locations in southern California. The projected growth is not anticipated to significantly detract from the mountain character as described in the respective community plans. The community plans contain several policies in the Land Use and Circulation/Infrastructure Elements that provide direction to ensure that future development does not substantially detract from the values held by community residents. Ensuring that there is adequate infrastructure is an important policy that will be used to evaluate projects that are within a land use zoning designation of low density that may be proposed in the future to increase the density based on a specific development proposal. Density for the sites within the Bear Valley Community Plan that have a holding zone type designation, must have a general plan amendment approved by the Board of Supervisors in order to increase density. Specific findings that the project densities are consistent with the community plan must be met on a project-by-project basis in order for the Board to approve an increase. This process ensures a thorough review of increased density increases that must be reviewed by the County Planning Commission and considered by the Board of Supervisors with full public hearings.

RESPONSE I.2-14
The County respectfully disagrees with this comment. There is no implication, with any particular, existing land use zoning designation, that there will never be any change to the designation in the future. State law provides for the General Plan Amendment (GPA) process, which is a legislative process that requires Board of Supervisors approval, in order to implement the zoning change.

RESPONSE I.2-15
The County acknowledges the commenter’s concerns regarding climate changes. Since multiple commenters raised questions about the same or similar issues, the County believed it was appropriate to develop expanded discussions of these issues, thereby supplementing the individual responses, or acting
as the responses themselves. In response to this comment, Categorical Discussion 3 is the most appropriate response to address the issues raised regarding Greenhouse Gases, Global Warming, and Implementation of Assembly Bill 32, and Categorical Discussions 1 and 2 are the most appropriate responses regarding the programmatic nature of the EIR and air quality analyses. Further, Attachment 2 includes supplemental air quality information related to the existing air quality conditions and regulatory standards specific to the County of San Bernardino. This data, however, is provided for information only and does not alter the conclusions reached in the Draft EIR.

RESPONSE I.2-16

This EIR is a "Program EIR," which evaluates the broad-scale impacts of the proposed General Plan. Although the legally required contents of a Program EIR, including mitigation measures, are the same as those of a Project EIR, in practice there are considerable differences in level of detail of both the EIR and the mitigation measures. Program EIRs are typically more conceptual and abstract. They contain a more general discussion of impacts, alternatives, and mitigation measures. The mitigation measures proposed are feasible and are roughly proportional to the impacts of implementing the General Plan. Subsequent development, through the County review processes, must comply with the mitigation measures proposed and the General Plan policies upon which these mitigation measures are crafted. Therefore, the enforcement of the mitigation measures comes through the development review process and enforcement of development code provisions.

RESPONSE I.2-17

The County, as Lead Agency, respectfully disagrees with the need to re-circulate the Draft EIR. Section 15088.5 of the CEQA Guidelines articulates the requirements for recirculation. Although the Board of Supervisors will make the final determination, none of the comments in this letter appear, from the staff’s perspective to have triggered the requirements for recirculation of the Draft EIR. For further explanation, please see Categorical Discussion 5.
JOSHUA TREE COMMUNITY ADVOCATES
and IONA M. CHELETTE
61996 Sunburst Circle
Joshua Tree, CA 92252
(760) 366-9895

23 October 2006

San Bernardino County Land Use Services
Advanced Planning, Attn: Jim Squire
FAXED (909) 387-3223

COMMENTS ON DRAFT EIR AND APPENDICES OF SEPTEMBER 2006

Ladies and Gentlemen:

Thank you for the opportunity to serve on the Joshua Tree Community Plan Advisory Committee and to participate in the General Plan Advisory processes.

As you know, I consistently have supported reestablishment of a Joshua Tree Community Plan, adopted in 1980 but never funded or implemented, and continue to do so. My criticisms of the proposed plan are meant to inspire improvement of the inevitably imperfect document we have created.

Comments on the proposed General Plan and Development Code also follow.

I. JOSHUA TREE COMMUNITY PLAN

Please incorporate by this reference "Constructive Criticism of Joshua Tree Community Plan Preliminary Draft of 6 June 2005," dated 15 July 2005; and "Suggestions for Additions to Joshua Tree Community Plan from Other Community Plans and 1980 JT Community Plan," dated 20 July 2005. These comments were previously circulated throughout the county and community and provided to Planning staff.

A. Description of Study Area

The fatal flaw in the JTCP is that it was never completed. At page 12, "Description of the Study Area" there is a reference to sensitive species in the planning area which refers the reader to an Appendix which does not exist. Nor are sensitive species addressed in the Desert Region portion of the Conservation Element of the GP. We have been explaining to non-resident planning personnel for two years that the mule deer is not the most common species in our planning area, and that any description of our fauna that contains no mention of our world-class variety of reptiles is inaccurate. Description of our fauna should definitely not begin with a grazing mammal that few have seen here in the last 50 years! Part of the problem was that we changed planners midstream due to the departure of long term planning personnel that were familiar with our area. The JTCP committee attempted to remEDIATE this by researching Stebbins and Page One of Five Pages
consulting with field biologists, then submitting a comprehensive list of area species, with references to locating their sensitive status as it may change over time, with its December 2004 JTCP draft. I've since re-submitted the document to assist our planner to complete that critical portion of an accurate description of our area and am re-submitting it with these comments for your ready reference. The JTCP is not complete without that information and should not be acted upon by the county until the description of our planning area is accurate and complete. Please put it in the body of the description, not in an Appendix.

As for the General Plan's Conservation Element, the Desert Region of this county has one of the highest concentrations of sensitive species in the county and we deserve the same specificity as the Mountain Region's description of species. It is critical that animals be afforded the same basis for protection as plants in our new General Plan and Development Code.

The county did a very good job on plants in the code revision. It remains to expand the Native Plant Ordinance at a later date to include more sensitive species.

B. Habitat Conservation

The Habitat Conservation Plan for Joshua Tree is the West Mojave Plan and we were one of the communities well-served by its planners when the Joshua Tree Planning Area was designated as a survey area in that plan. The movers and shakers in surrounding towns and government agencies who continue to work to create a Morongo Basin Regional Habitat Conservation Plan to serve the needs of developers for Yucca Valley and Copper Mountain College are the same people who failed to support designation of Yucca Valley as a survey area in the West Mojave Plan (presumably to support the Town's development potential) with the result of documented destruction of tortoises on construction sites. There are references in the proposed JTCP to regional habitat conservation plans which were never brought before the Joshua Tree Community Plan Advisory Committee or any other groups of Joshua Tree residents. Apart from the undesirable political implications of lack of transparency in government, there is no Category 1 land suitable for creation of a habitat conservation area for tortoises in Joshua Tree - a regional HCP would be based on bad science. Still others of us hold the opinion that tortoises should not be relocated at all because they don't survive when they are relocated.

The Joshua Tree Community Plan needs a clear statement that it is subject to the survey requirement of the West Mojave Management Plan to protect its sensitive species from developers.

C. Land Use

Table 1, page 19, Percent of Total Land Area adds up to 106 per cent (oops).
D. Circulation and Infrastructure

1. Circulation. Goal JT/CI3 at page 35. It would be appropriate to move JT/CI3.2 up to JT/CI3.1 in view of the numerous traffic fatalities which have occurred as a result of government agencies' failure to track down and spend the $75,000 which was allegedly funded by CalTrans in 1998 to correct the problem of lack of a continuous turning lane in SR 62. It would be appreciated if our county representative to SANDAG would get off his or her duff and lobby to gain higher priority for this tiny little project over, say, installation of decorative medians in a surrounding town. This is the most flagrant instance of government neglect that I have personally witnessed during the 10 years I have been corresponding annually with CalTrans regarding their inaction on this life-saving improvement.

2. Circulation. References to bicycle paths, pedestrian safety and even equestrian trails abound in the proposed JTCP, and that is just good planning. It would be appropriate, however, to clearly prioritize funding for road repairs that have been promised but not delivered, for decades, over recreational lane improvements in the language of the JTCP. Safety and flood control should come first and more taxpayers are tired of ruining their vehicles on potholes and dirt roads than would realistically use bike lanes, pedestrian lanes or equestrian trails in Joshua Tree.

3. Infrastructure. Fifty-six percent of the Joshua Basin Water District's old 2, 4 and 6" distribution pipes do not provide adequate fire flow (Patrick So and Associates engineering report, 2003). The continual repairs to these pipes is costing Joshua Tree residents more than their replacement on a regular schedule and arguably posing a public health problem. Water infrastructure improvements are overdue due to political wrangling and should be prioritized. Also, Joshua Basin Water District's emphasis on its plans to import water -- which inevitably results in more residents -- creates philosophical inconsistencies in this predominantly protectionist document. The majority of Joshua Tree citizens have consistently espoused no-growth or low-growth sentiments throughout this public review process.

4. Infrastructure. Joshua Tree houses regional institutions which serve the entire Morongo Basin: The Morongo Basin Transit Authority needs support for expanding its services; the building housing the courts and jails needs more bathrooms; and Joshua Tree is long overdue for a new library facility.

II. GENERAL PLAN

A. Housing Element. Bonus densities for affordable housing promote residential growth that is not supported by plans for adequate infrastructure improvements or improved levels of service.

The amount of affordable housing allocated to the Desert Region of the county will result in sensitive species destruction; degraded
levels of service in already economically disadvantaged residential communities with poor or nonexistent employment opportunities; and challenge already deteriorated infrastructures and services, such as schools, in these communities. In short, the existing allocation, with bonuses for developers, of affordable housing stock to the wide open spaces of the desert region of the county constitutes dumping the least advantaged county residents on an already overburdened system without concurrent funding for the maintenance and rehabilitation that these residents and their children deserve.

B. Open Space. The implementation of the Open Space land use designation first called for in the 1989 General Plan is one of the most important accomplishments of this General Plan revision and we applaud county planners and consultants on this achievement, whose time had come.

III. DEVELOPMENT CODE

A. The discussions regarding Desert Regional Standards in the late 1990s generally produced an informal consensus among First District desert residents that it would be most helpful for Building and Safety employees to have LESS rather than more discretion in carrying out their permitting functions.

The revised Development Code simplifies the procedures but the procedures themselves, except for some provisions of the Overlays, are basically business as usual with the building inspectors' prerogatives remaining intact. This isn't useful to the average citizen home builder in an increasingly regulated world and it doesn't reflect some changing protectionist realities.

For example, Biotic Resources Overlay 82.11.030 potentially conflicts with the West Mojave Management Plan requirement to survey prior to construction throughout the Joshua Tree Planning Area.

B. Fire Safety Overlay at 82.13.040 seems to remove the density bonus for 5 or more units except in Planned Developments, conflicting with the Housing Element (although, as stated above, we would just as soon see all density bonuses removed).

C. Hillside Grading. 83.08.010. Hillside development must be limited to avoid environmental degradation by requiring site review for ALL hillside grading, whatever the slope, throughout the county.

For instance, one parcel could not be allowed to drain across any other parcel in the desert region because of our porous soil (sand) and sensitive species living in it. (Look at the east side of Quail Springs Road just above Alta Loma where enormous, hazardous gullies were created simply from blading the land on the west side of the road for large new homes during the 1980s. Those gullies were not there when I was a child in Joshua Tree).

Page Four of Five Pages

Hillside development should be subjected to strict interpretations
of scenic overlay regulations as well.

D. Landscaping. 83.10.030. Landscape regulation and preservation of native plants is another good idea whose time has come, but we do not agree that regulations promulgated by local water purveyors should take precedence over county regulations or enforcement by the county of such regulations. For one thing, the amateurs sitting on local water boards (and we say this respectfully, for local directors are not required to be more than amateur) lack the expertise to promulgate such regulations as well as the resources (funding and personnel) to enforce them, even on a complaint basis. At best, this becomes a political football at the local level.

We do not think that this is a good opportunity for local control or even that the county should become reduced to the regional agency of last resort in the absence of local landscaping and water conservation regulations. We need the county to take a leadership role here just as it did with Night Sky Protection and Open Space.

We needed to address solid waste and wastewater more extensively during this General Plan and Development Code Review and need county leadership in these matters as well. We failed to float the premise of a "Bad Boy" ordinance prohibiting the county from doing business with known offenders. Wastewater and sewerage is increasingly discussed throughout our communities and best addressed regionally by joint power authorities to cut costs and increase proficiency. It looks like Consolidated Fire is going to work and that could be the successful model for our future.

We reserve the right to provide additional comments as the review process continues.

Respectfully submitted,

[Signature]

Iona M. Chelette, Treasurer
Joshua Tree Community Advocates
and Member,
Joshua Tree Community Plan Advisory Committee

23 October 2006 at Joshua Tree, California
INTRODUCTION

1.1 PURPOSE OF THE COMMUNITY PLAN (COUNTY WILL PROVIDE)

1.2 COMMUNITY BACKGROUND

1.2.1 Location

Most known as the namesake of the Joshua Tree National Park, the community of Joshua Tree is nestled in the foothills of Southeastern California's Mojave desert approximately 76 miles east of the county seat in San Bernardino and approximately 32 miles northeast of Palm Springs. Joshua Tree is on State Route 62 which is accessed from Interstate 10 on the west, State Route 247 on the north, U.S. Highway 95 on the east at the Arizona State border and from Joshua Tree National Park roads on the south.

1.2.2 History

The first known inhabitants in the Joshua Tree area were the hunting and gathering Serrano tribes. Although the Spanish and the Mormons both explored the area in later years, neither group settled permanently.

Not until the 1850s was this area settled by ranchers and miners. The homestead years brought about scattered rural settlement as the area continued to be a primary cattle drive route to Arizona. The post-depression era brought the development of a main oiled road which grew to highway status in 1963.

Among the earliest modern settlers in this area was William Keys. In 1918, Keys brought his bride, Frances M. Lavton to the Desert Queen Ranch (now known as the historic Keys Ranch) within the Joshua Tree National Park. By 1928-1929 the Hi-Desert Airport was in use.

The Joshua Tree National Monument was established in 1936. It became a Class A wilderness area /shed station in 1977 and a World Biosphere Reserve in 1984. In 1994 it became the Joshua Tree National Park and an additional 234,000 acres and 163,000 wilderness acres were added to the park's holdings.

Real estate developers arrived in about 1937 and the 1940's saw the establishment of the U.S. Post Office branch, county library branch, fire protection district and the Joshua Tree Chamber of Commerce. Social institutions such as the Joshua Tree Woman's Club, The Sportsman's Club, community drama productions and various Joshua Tree Turtle Celebrations also date from the 1940s. Joshua Tree has been a "community of interest" for seven decades.

In 1963, numerous small water companies and wells were combined to form the Joshua Basin County Water District. During the 1970s Joshua Tree saw a spate of growth with construction of the Joshua Tree Community Center and Senior Nutrition Site and the Hi-Desert Playhouse. The Joshua Tree Campus of College of the Desert (now...
and night lizards; Desert horned lizards (Phrynosoma platyrhinos); whiptails and skinks; blind snakes and boas; colubrid, racer, patch-nosed, leaf-nosed and gopher snakes; and poisonous rattlesnakes. There are 25–36 species of reptiles native to the area and 13 species of amphibians. The area also is a California Fish and Game-designated hotspot for rare invertebrates.

Mammals, reptiles, birds, invertebrates and native plants which are endangered, threatened or species of concern occur in Joshua Tree and may place considerable constraints on the development potential of certain areas of the community. These constantly updated lists are available from the State of California Fish and Game website and site-specific information is available from the County of San Bernardino’s permitting agencies regulating builders and developers.

Days in Joshua Tree are typically clear with less than 25 per cent humidity. Temperatures are most comfortable in spring and fall, with an average high of 85°F and average low of 50°F. The highest temperature in the hottest three summer months is in excess of 100°F with cooling below 75°F only in the early morning hours. The coolest temperature in the three coolest winter months is 50°F with frequent 32°F nights and occasional snow. Rainfall traditionally occurs most frequently in January-February and during the July-August monsoon season although there is dramatic divergence from that pattern with damaging flooding. Tornadoes are rare but earthquakes are ubiquitous.

1.3 COMMUNITY CHARACTER

Joshua Tree has approximately 8,000 residents. The total community population increased by ____ per cent between 1980 and 2000, with an annual population increase in the four-year period between 2000 and 2004 of _____. Based upon current U.S. Census Bureau statistical data, the 2004 computed population is approximately ____. Based on the calculated projected trend, a ____ per cent total population increase is projected for 2024.

Since the last community planning in 1980, Joshua Tree has become a community of full-time residents, including retirees, supplemented by those who own a second home here. The calculated median age is ____. The average family size is ____. The vacancy rate estimated by the 2000 Census is ____.

(The proceeding two paragraphs are based on the 1980 Community Plan. WE NEED THE COUNTY'S PROFESSIONAL PLANNERS TO FIGURE THIS SO THAT WE CAN ALL AGREE ON A REASONABLE BUILD-OUT SCENARIO MENTIONED LATER IN THE COMMUNITY PLAN. Thank you.)

The bulk of Joshua Tree’s economic-base is derived from tourism, retirement incomes and commuters to the Coachella Valley. Retail development is desirable.

1.3.1. Unique Characteristics

Joshua Tree’s siting as the namesake of the Joshua Tree National

Joshua Tree Community Plan Introduction 12/21/2004 Draft P. 3 of 4
and night lizards; Desert horned lizards (Phrynosoma platyrhinos); whiptails and skinks; blind snakes and boas; colubrid, racer, patch-nosed, leaf-nosed and gopher snakes; and poisonous rattlesnakes. There are 26-36 species of reptiles native to the area and 13 species of amphibians. The area also is a California Fish and Game-designated hotspot for rare invertebrates.

Mammals, reptiles, birds, invertebrates and native plants which are endangered, threatened or species of concern occur in Joshua Tree and may place considerable constraints on the development potential of certain areas of the community. These constantly updated lists are available from the State of California Fish and Game website and site-specific information is available from the County of San Bernardino's permitting agencies regulating builders and developers.

Days in Joshua Tree are typically clear with less than 25 per cent humidity. Temperatures are most comfortable in spring and fall, with an average high of 85°F and average low of 50°F. The highest temperature in the hottest three summer months is in excess of 100°F with cooling below 75°F only in the early morning hours. The coolest temperature in the three coolest winter months is 50°F with frequent 32°F nights and occasional snow. Rainfall traditionally occurs most frequently in January-February and during the July-August monsoon season although there is dramatic divergence from that pattern with damaging flooding. Tornadoes are rare but earthquakes are ubiquitous.

1.3 COMMUNITY CHARACTER

Joshua Tree has approximately 8,000 residents. The total community population increased by ____ per cent between 1980 and 2000, with an annual population increase in the four-year period between 2000 and 2004 of ____. Based upon current U.S. Census Bureau statistical data, the 2004 computed population is approximately ____. Based on the calculated projected trend, a ____ per cent total population increase is projected for 2024.

Since the last community planning in 1980, Joshua Tree has become a community of full-time residents, including retirees, supplemented by those who own a second home here. The calculated median age is ____. The average family size is ____. The vacancy rate estimated by the 2000 Census is ____.

(The proceeding two paragraphs are based on the 1980 Community Plan. WE NEED THE COUNTY'S PROFESSIONAL PLANNERS TO FIGURE THIS SO THAT WE CAN ALL AGREE ON A REASONABLE BUILD-OUT SCENARIO MENTIONED LATER IN THE COMMUNITY PLAN. Thank you.)

The bulk of Joshua Tree's economic base is derived from tourism, retirement incomes and commuters to the Coachella Valley. Retail development is desirable.

1.3.1. Unique Characteristics

Joshua Tree's siting as the namesake of the Joshua Tree National

Joshua Tree Community Plan Introduction 12/21/2004 Draft P. 3 of 4
Impacts REC-1, REC-2 and REC-3
Development allowed under the General Plan may result in the need to add more park space and recreational trails to serve the project population called for by the General Plan.

This impact can be fully mitigated through the adoption of certain mitigation measures summarized in the adjacent column and presented in detail in Chapter IV of the Program Environmental Impact Report.

A number of mitigation measures have been included in the Program EIR to require the County to support: the establishment of urban open space areas within urban areas; the dedication of lands when specific projects are reviewed that exhibit natural features worthy of regional park land status; the extension of the County trail system so that it connects with local, state and federal trail systems. In addition, the County will provide a regional trail system and rest areas that provide continuous interconnecting trails that serve major populated areas of the County, including bicycle and pedestrian staging areas consistent with the master plan of Regional Trails.

The County will encourage the dedication or offers of dedication of trail easements when appropriate for establishing a planned trail system alignment or where an established trail is jeopardized by impending development or subdivision activity; use active and abandoned road, utility, and railroad rights-of-way for non vehicular circulation in all new development when found feasible. The County will require proposed development adjacent to trail systems to dedicated land for trailhead access points; develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas; utilize public funding mechanisms wherever possible to protect and acquire regional park lands; and utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas.

Regional Parks offers the following comments:

The County will require the dedication or dedication of trail easements when development or subdivision is proposed adjacent to a planned or existing trail alignment. Existing or proposed utility easements, railroad right of way and abandoned roadways shall be considered for trail corridors in new development when their use meets the design goals of the County.

The preservation of open space and dedication of trail easements shall be required mitigation for proposed developments astride or adjacent to an approved trail alignment.

DEIR, Chapter IV, N. Recreation, 1. Setting

There are also nine regional parks in the County. Regional parks generally encompass 100 or more acres and are designed to serve a population of 100,000 residents. These regional parks offer a variety of recreational and entertainment opportunities.

Regional Parks offers the following revision:

The Regional Parks Department operates and manages nine Regional Parks varying in size from 150 Acres to over 2,200 acres. These parks offer a variety of recreational and entertainment opportunities including camping, fishing, group and individual picnic areas, swimming areas with waterslides, skate parks, equestrian stables with rentals, a world class amphitheater, the State Historical Silver Mining Town, boat launch facilities and marinas. The Regional Parks are: Prado Regional Park in Chino, Cucamonga Guasti Regional Park in Ontario, Glen Helen Regional Park in Devore, Yucaipa Regional Park in Yucaipa, Lake Gregory Regional Park in Crestline, Mojave River Forks Regional Park in the Summit Valley, Mojave Narrows Regional Park In Victorville, Calico Ghost Town Regional Park in Yermo, Moab Regional Park on the Colorado River south of Needles. A new Regional Park is in the
Planning and acquisition phase in Colton. Big Morongo Wildlife Preserve is a park operated under a cooperative agreement with the Bureau of Land Management, the Nature Conservancy and Regional Parks.

DEIR, Chapter IV, 3. Impact Analysis, a) Valley Region

Regional Parks notes the following:

Delete paragraph number four(4), which states Mountian Regione.

b) Mountain Region

Delete Desert Region paragraph and insert Mountain Region data.

c) Desert Region

Delete County paragraph and insert Desert Region data.

DEIR, Chapter IV, 4. Mitigation Measures

Mitigation REC – 9
The County shall classify local parks in three(four (4)) categories: Local, Neighborhood and Community Parks, Regional Parks and establish size and location standards as follows:

- Local Park: A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.

- Neighborhood Park: A walk-in park, up to 10 acres, with a service radius of a halfmile. Serves a neighborhood and provides a passive recreation location for all age groups.

- Community Park: A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius.

Regional Parks notes that the larger County Regional Park is not identified as a category yet is mentioned repetedly in this Recreation section of the EIR. Regional Parks offers the following:

- Regional Park: A walk in, drive to park larger than 100 acres, which could include active recreation such as swim areas, soccer fields day use and campgrounds or passive recreation such as nature areas and wildlife preserves. Regional Parks serve the local community as well as the larger Southern California community.

DEIR, Chapter IV, 4. Mitigation Measures

Mitigation REC – 12
The County shall provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails and the trail route and use descriptions shown in Figures 2-11A through 2-11C of the Circulation Background Report.

Regional Parks notes that the listed figures 2-11A, B and C are Truck Routes in the Valley, Mountain and Desert Regions. The correct figures are: Figures 2-13A, 2-13B and 2-13C.
23 October 2006

Land Use Services Department
Advance Planning Division
Attn: Mr. James Squire
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA  92415-0182

RE: San Bernardino County Draft 2006 General Plan Program, Draft
Programmatic Environment Impact Report and Appendices – Comments by
the San Bernardino County Museum (SBCM) – Geology

Chapter IV, page IV-66 (Geology and Soils)

♦ The paragraph noting the extensive history of large damaging earthquakes occurring
with in the County, the 1857 earthquake is not mentioned but the 1812, a smaller
quake is noted. The 1857 Ft. Tejon quake is the most recent earthquake to rupture
through Wrightwood. The 1857 quake was at least a 7.7 on the moment magnitude
scale (8.3 on the Richter scale).
23 October 2006

Land Use Services Department
Advance Planning Division
Attn: Mr. James Squire
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

RE: San Bernardino County Draft 2006 General Plan Program, Draft
Programmatic Environment Impact Report and Appendices—Comments by
the San Bernardino County Museum (SBCM) – Paleontologic Resources

San Bernardino County Development Code – Chapter 82.19 (Paleontologic
Resources (PR) Overlay District)

 specializing in the same as the 1989(rev 2002) version! The updated version was very
well done with respect to our comments (monitoring and curation as well as
qualifications of paleontologists was especially in need of updating). Why was the
version with the requested changes not included in the General Plan DEIR? The
critical updates are missing and need to be reinstated in the General Plan DEIR.
Everything hinges on these updates in terms of doing paleontology properly in San
Bernardino County. The paleontologic resources overlay, the mitigation conditions,
etc. all need to be tied to the Development Code update. The version that included
the comments by the SBCM is attached.

Chapter IV – Paleontological Resources:

Page IV-63 (82.21.020 – PR Overlay District) --- This chapter needs to include the
exact same language that is in the version of the Development Code for the
Paleontologic Resources Overlay District that was circulated on 2/9/06 (attached).

Page IV-59: Another federal agency that administers land that contains paleontologic
resources in San Bernardino County is the Department of Defense.

Chapter 6 – Conservation

Page 6-2, 6.1.2.3: Paleontological Resources - The Division of Geological Sciences
at the San Bernardino County Museum should be called out as well as the Regional
Paleontologic Localities Inventory as the source of all paleontologic data. What types
of data were provided by other individuals that the SBCM would not possess? What
other paleontologists were consulted that provided information?

Page 6-77, 6.3.3.3: Existing Conditions – include the Department of Defense

Page 6-166 and 6-177: All references to Earth Sciences should be changed to
Geological Sciences throughout the documents. Curator of Earth Sciences should be
rewritten to be either “Senior Curator of Geological Sciences” or “Curators of the Division of Geological Sciences”.

♦ Page 6-165: Please see qualifications criteria on attached document.

♦ Page 6-185: Persons consulted at the San Bernardino County Museum. Does not list the personnel in the Geological Sciences Division, specifically Kathleen Springer, Senior Curator, Eric Scott, Curator of Paleontology, J. Chris Sagebiel, Curator of Geology.

♦ Page 6-185: Persons consulted at the San Bernardino County Museum. Dave Prusch does not work at the San Bernardino County Museum

♦ Page 6-188 San Bernardino County Museum acronym is SBCM not SBMC

Chapter IX

♦ List of preparers, acronyms: The San Bernardino County Museum is not listed under person and agencies consulted on the DEIR. Also, the San Bernardino County Museum is SBCM not San Bernardino Natural History Museum (SBNHM).

Paleontologic Resources Map

- Figure 6-4A and 6-4B (Paleontological Resource Areas, Valley and Mountain regions) seem to be somewhat incongruent with the paleosensitivity map. For instance, Chino should be green. Did not check all of them, but that leapt out at me. Needs to be looked at very carefully in consultation with the SBCM. Was not able to find the Desert Region Map on my CD of the DEIR.

- Where in the document does it state that the paleosensitivity map needs to be updated? It should be under “Critical Issues to be Addressed” in the Conservation Background Report.

♦ Earlier comments: The paleontologic resources overlay needs to be checked for accuracy, which is a time-consuming task and will have to be part of the General Plan Implementation. Our recommendations regarding the map are follows: review and update the Regional Paleontologic Locality Inventory data that was used to create the original map (map was produced in 1989), review the existing geologic maps which delineate the sedimentary formations that encompass the high and undetermined sensitivity zones; create a new map, with better written definitions of the criteria regarding mitigation of parcels within the “red” and “orange” zones. These definitions will correspond to the revised mitigation conditions we have suggested.

Thank you for the opportunity to review, comment and be a part of the General Plan update. We look forward to meeting and discussing our comments soon as well as implementing the changes suggested.

Sincerely,

[Signature]

Kathleen Springer, Senior Curator, Division of Geological Sciences, SBCM
Eric Scott, Curator of Paleontology
J. Chris Sagebiel, Curator of Geology
CHAPTER 82.21 - PALEONTOLOGIC RESOURCES (PR) OVERLAY DISTRICT

Sections:
82.21.010 - Purpose
82.21.020 - Location Requirements
82.21.030 - Development Standards
82.21.040 - Paleontologist Qualifications

82.21.010 - Purpose

The Paleontologic Resources (PR) overlay district established by Sections 82.01.020 (Official Land Use Plan and Districts) and 82.01.030 (Overlay Districts) is created in recognition of the following:

A. The identification and preservation of significant paleontologic (fossil) resources is necessary as many such resources are unique and non-renewable.

B. Preservation of such paleontologic resources provides a greater knowledge of County natural history, thus promoting County identity and conserving scientific amenities for the benefit of future generations.

82.21.020 - Location Requirements

The Paleontologic Resources (PR) Overlay District may be applied to those areas where paleontologic resources are known to occur or are likely to be present. Specific identification of known fossil occurrences or potential paleontologic sensitivity is indicated by listing in the locality files of one or more of the following institutions:

A. San Bernardino County Museum;
B. University of California; and
C. Los Angeles County Museum.

82.21.030 - Criteria for Site Evaluation for Paleontologic Resources Development Standards

When a land use is proposed within a PR overlay district, the following criteria shall be used to evaluate the project's compliance with the intent of the overlay.

A. Field survey prior to grading. In areas of potential but unknown sensitivity, field surveys prior to grading shall be required to establish the need for paleontologic monitoring.

B. Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence within the overlay district, or that has been demonstrated to have fossils present in a field survey, shall have all mass grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors should be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.

C. Disposition of Recovered specimens. All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of an institution with appropriate staff and facilities for their scientific
information potential to be preserved. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.

D. Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented.

DE. Report of findings. A Qualified paleontologic personnel shall prepare a report of findings with an appended itemized accession-inventory of specimens. A report shall be submitted and approved prior to granting of building permits, and a final report shall be submitted and approved prior to granting of occupancy permits. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

E. Mitigation financial limits. In no event shall the County require the applicant to pay more for mitigation as required by Subsections B., C., and D., above within the site of the project than the following amounts:

1. One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;

2. Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and

3. If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:
   a. $200 dollars-per unit for any of the next 99 units;
   b. $150 dollars-per unit for any of the next 400 units; and
   c. $100 dollars-per unit for units in excess of 500.

82.21.040 – Paleontologist Qualifications

Qualified professional paleontologists that are employed to conduct field surveys or monitor grading shall meet the following criteria to qualify to perform work within the County jurisdiction:

A. Education: An advanced degree (Masters or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology).

B. Professional experience: At least five years professional experience with paleontologic (not including cultural) resources, including the collection, identification and curation of the resources.
10 March 2005

Land Use Services Department
Advance Planning Division
Matthew W. Slowik, Senior Associate Planner
385 North Arrowhead Avenue
San Bernardino, CA 92415-0182

RE: Comments on Draft Conservation and Open Space Background Reports for
the General Plan Update—Paleontologic Resources

♦ All references to "Earth Sciences" should be changed to "Geological Sciences"
throughout the documents.

♦ "Curator of Earth Sciences" might be rewritten to be either "Senior Curator of
Geological Sciences" or "Curators of the Division of Geological Sciences".

♦ Page 6-124:

The first sub-paragraph states, midway through, "This report shall be submitted to the
San Bernardino County Museum. This report shall be submitted to, and approved by, the
San Bernardino County Museum …" The first sentence appears to be unnecessary. The
2nd should probably be amended to read "Division of Geological Sciences, San
Bernardino County Museum".

"All recovered specimens must be prepared to a point of identification and permanent
preservation and fully curated into the retrievable permanent collections of the
Division of Geological Sciences, San Bernardino County Museum." This is an
important point, it does not currently state that fossils found in this County have to be
curated at the San Bernardino County Museum, and it has become problematic.

♦ Qualifications of paleontologists

We believe that the County of San Bernardino should construct a list of qualified
paleontologists such as those maintained by Riverside and Orange Counties. One must
apply and submit their resume and application materials in order to appear on the list.

We need to make sure that people who work in this County are qualified to do this kind
of science. What is recommended is that we define a “qualified” professional. Here are
the criteria from which we wish to proceed: an advanced degree (Masters or higher) in
gеology, пасеntology, biology, or related disciplines (exclusive of archaeology); and 5+
years professional experience with paleontologic (as opposed to cultural!) resources,
including the collection, identification and curation of the resources.
Below are the recommendations and criteria that the San Bernardino County Museum employs when we perform literature reviews and assessments of parcels and would like them to be standardized in the General Plan. These criteria have been established by the SBCM and are employed by the State and Federal gov’ts.

1. Monitoring of excavation is required in rock units having high potential to contain significant nonrenewable paleontologic resources. Paleontologic monitors should be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially-fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).

3. Identification and curation of specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented.

4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, would signify completion of the program to mitigate impacts to paleontologic resources.

Paleontologic Resources Map - The staff of the Geological Sciences Division has briefly reviewed the digitized version of the paleontologic resources map. For current use it a better tool than the previous iteration (marker and Mylar). The map does need to be checked for accuracy, which is a time-consuming task and will have to be part of the General Plan Implementation. Our recommendations regarding the map are follows: review and update the Regional Paleontologic Locality Inventory data that was used to create the original map (map was produced in 1989), review the existing geologic maps which delineate the sedimentary
formations that encompass the high and undetermined sensitivity zones; create a new map, with better written definitions of the criteria regarding mitigation of parcels within the “red” and “orange” zones. These definitions will correspond to the revised mitigation conditions we have suggested above.

Thank you for the opportunity to review, comment and be a part of the General Plan update. We look forward to discussing our comments and implementing the changes suggested.

Sincerely,

Kathleen Springer, Senior Curator, Division of Geological Sciences, SBCM
Eric Scott, Curator of Paleontology
J. Chris Sagebiel, Curator of Geology
LEAD AGENCY RESPONSE TO COMMENT LETTER I.3
IONA CHELETTE, JOSHUA TREE COMMUNITY ADVOCATES

RESPONSE I.3-1
County Planning staff have reviewed the referenced material and have made appropriate changes to the Joshua Tree Community Plan.

RESPONSE I.3-2
The current Biological Resource and Open Space Overlay Maps only include discrete local, state, and federally protected species occurrence; these data serve as indicators for a variety of associated plant and wildlife species and their habitats. Furthermore, other graphic references (e.g., designated Critical Habitat, soil mapping for the Delhi Sands flower-loving fly, and so forth) are used by the County in determining the need for subsequent projects to include focused surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to plant and wildlife species. Other references, such as the California Natural Diversity Data Base (CNDDB) are also routinely used in assessing the potential impacts of individual development projects. Recent County investments in GIS software and the requisite hardware, combined with the completion of a countywide parcel-base map overlay now allow the County to develop a more comprehensive method of compiling and displaying important biological and open space data. As a result, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas. Furthermore, the County has revised the biological resource mitigation measures to include an additional implementing program in the General Plan Goals and Policies to improve its current system for identifying important resources and natural open space areas.

Additionally, the Valley, Mountain, and Desert Regions have been identified as important landscape linkages in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors, and protected wildlife/plant species. Nonetheless, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation.

See Categorical Discussion 7 for further information regarding Biological Resources.

RESPONSE I.3-3
The Valley, Mountain, and Desert Regions have been identified as important landscape linkages in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). As a result the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) that define a framework that the County will use as a means of evaluating future development proposals. As a result, specific
portions of the Valley, Mountain, and Desert Regions will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors, and protected wildlife/plant species. Nonetheless, this section of the EIR is the first tier of a multi-level environmental review and analysis process which programmatically analyzes the general biological elements contained in the General Plan; not a specific development proposal. Rather, the General Plan establishes an overall policy framework that the County will use as a means of evaluation.

RESPONSE I.3-4

The County’s Plant Protection and Management Ordinance (County Code Title 8, Division 9, Chapters 1-5) provides guidelines for the management of plant resources on private and County property within unincorporated areas of the County within the Valley, Mountain and Desert Regions; promotes the conservation of plant life that increases aesthetic value; conserves native plant life heritage; regulates removal of native flora via uniform standards; protects local watersheds; preserves habitats for rare, endangered or threatened plants and animal species; establishes regulations, standards, and enforcement for the maintenance of forests within the Mountain Region and trees within the Valley Region; sets forth guidelines for the conservation of desert native plants and use of desert resources; and establishes guidelines for the preservation and management of riparian habitats and plants.

RESPONSE I.3-5

The intended use of this section of the EIR is to disclose and evaluate the environmental baseline conditions for the San Bernardino County General Plan. This section of the EIR is the first tier of a multi-level environmental review and analysis process, which programmatically analyzes the general biological elements, contained in the General Plan not a specific development proposal. The General Plan does not address specific development proposals; it establishes an overall policy framework that the County will use as a means of evaluation. To that end, the Valley, Mountain, and Desert Regions have been identified as an important landscape linkage in southern California as they support and facilitate the movement and dispersal of substantial numbers of local, state, and federal protected wildlife and plant species (see Tables 1 through 6 in Attachment 1); and connect large blocks of natural open space essential for the long-term plant/wildlife viability regionally (see Tables 7 through 9 in Attachment 1). Furthermore, the General Plan establishes Goals (e.g., CO 1 and CO 2) and Policies (e.g., CO 1.1, CO 1.2, CO 2.1, CO 2.2, CO 2.3, and CO 2.4) which define a framework that the County will use as a means of evaluating future development proposals (see County of San Bernardino 2007 General Plan; Section V–11 Conservation Element) which will require subsequent projects to include surveys and may in certain circumstances, obligate specific mitigation programs to avoid, minimize, and compensate for adverse impacts to the aforementioned movement and dispersal corridors, and protected wildlife/plant species. Nonetheless, the General Plan’s Goals and Policies are consistent with other regional planning documents (e.g., Northern and Eastern Mojave Plans, City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly, Upper Santa Ana Wash Land Management and Conservation Plan, Glen Helen Specific Plan Natural Resource Management Plan, Carbonate Habitat Management Strategy (CHMS), West Mojave Plan, and the California Desert Conservation Area Plan). Additionally, the County has supported and/or participated in the following adopted comprehensive planning documents: City of Rialto Habitat Conservation Plan for the Delhi sands flower loving fly; Upper Santa Ana Wash Land Management and Conservation Plan; Glen Helen Specific Plan Natural Resource Management Plan; Carbonate Habitat Management Strategy (CHMS); West Mojave Plan; and the California Desert Conservation Area Plan.

RESPONSE I.3-6

As of the date this response is being written, the West Mojave Plan (Plan) has not yet been adopted. Should the Plan be adopted in the future, the Plan itself will state the geographic area to which it applies.
Many of the land use zoning districts' geographic area is less than 1% of the total land area. As such, the
percentages you reference do not add up to 100% exactly, due to rounding. This table is meant to show
approximate area of each zoning district. Thank you for your comment.

The order in which the goals are listed does not indicate a priority or relative importance.

The County acknowledges the findings of the Patrick So and Associates report on the state of the Joshua
Tree water infrastructure. Water supply infrastructure is outside the purview of this General Plan update
and EIR. The local water distribution purveyor will need to address the adequacy of the water system
pipes. Further growth that may tap into the existing system is subject of review of the County through the
development review process. The goals and policies of the General Plan and the mitigation measures of
the EIR will be implemented during that review and assessment of the adequacy of the water purveyor to
serve the project is part of the review process.

The General Plan has identified the need of infrastructure to keep pace with growth. Specific details of
the infrastructure needs of the Joshua Tree area with regards to courthouse restroom adequacy, transit
service adequacy, and library service are details to be addressed by the County in its capital improvement
programming.

Housing Density Bonuses are a highly regulated portion of State planning law where developers, under
specified conditions may apply for density bonuses for their developments. The State of California has an
existing law which mandates that the County implement a density bonus law. San Bernardino has must
comply with State law. It is not the County’s policy or intent to have Joshua Tree or any one area of the
County receive a disproportionate share of the density bonus units, or other affordable housing program
units. The County agrees that a high concentration of affordable housing stock rather than a well-
balanced housing stock may put an inappropriate impact on an area.

The County appreciates the recognition of the proposed Open Space land use designation.

The proposed Development Code is intended to provide the County with a more straightforward and
easily enforceable set of development standards that require few interpretations. The purpose of the biotic
resources overlay and other overlay plans is to ensure there is appropriate review of particular resources
or issues prior to entitlement or permits. These County documents though, are intended to be read in
concert with other planning documents in the area rather than in conflict with them. Several changes in
the Development Code have made to implement the Desert Rural Development Standards that were
developed in the mid-1990’s. Changes to application review, procedures, development requirements in
the Desert Region and the implementation of the Agritourism uses in the Rural Living, Agriculture and
Resource Conservation Land Use Zoning Districts are examples of incorporation of the Desert Rural
Standards recommendations. These changes are implemented and administered in a variety of ways that
include development application processing by Planning staff, construction oversight by Building and
Safety staff and enforcement by Code Enforcement staff. Once the West Mojave Plan is adopted and
implemented by the County, appropriate revisions will be made to the Development Code and operating
procedures to help streamline the development process and contribute to accomplishing the regional conservation goals of the West Mojave Plan.

**RESPONSE 1.3-15**
The fire safety overlay specifies the areas of the County that due to the special conditions that occur in the County that create extreme fire and safety issues, special restriction need to occur.

**RESPONSE 1.3-16**
The County's Hillside Grading ordinance is a very proactive tool to manage hill a mountain sides in a County with severe landslide and erosion issues. It was never intended to be a desert wide, or countywide regulation on the clearing of land in conjunction with development activities. The County does recognize the potential for increased impacts to communities when the clearing of lots occurs and is willing to discuss possible solutions to the multiple issues facing homeowners in the desert planning region including erosion, fire safety, dust control, and weed abatement.

**RESPONSE 1.3-17**
The County has extensive landscape development standards in the proposed Development Code. These set out the minimum levels of landscaping required of development. The County agrees native and xeriphitic landscape material may be the most appropriate in many portions of the County, including Joshua Tree. The County agrees to work with local water purveyors on implementation of appropriate guidelines for the specifics of a given area an regularly reassess the adequacy of the County’s landscaping guidelines.

**RESPONSE 1.3-18**
The mitigation measures proposed and the goals and policies suggested in the General Plan are enforceable in the development review process. In that process, developers must show adequate and appropriate solutions to issues such as wastewater and solid waste management. Those unable to obtain “will serve” letters must present alternative approaches to providing these services. The County agrees that a regional approach to much of the large scale infrastructure is needed and will work with these entities as appropriate to facilitate infrastructure.
ATTACHMENT 1 - BIOLOGICAL ANALYSIS SUPPLEMENTAL INFORMATION

The supplemental biological attachment is provided for information only. Subsequent to the preparation of the General Plan, Draft EIR, and Conservation Background Report, resource agencies have updated databases and lists of special status species; local, state, and federally administered lands; and regional planning documents. This information has been included as follows; however, it should be noted that the following information does not alter the findings or conclusions reached in the Draft EIR.

Updated lists of special status plant and wildlife species for the Valley, Mountain, and Desert Regions, including habitat descriptions, listing statuses, and potentials for occurrence, are presented in Tables 1 through 6. Special status species include those species that have been afforded special recognition by federal, state, or local resources conservation agencies (e.g., U.S. Fish and Wildlife Service and California Department of Fish and Game) and/or resource conservation organizations (e.g., California Native Plant Society), excluding avian species solely identified under Section 10 of the Migratory Bird Treaty Act for federal protection.

Lists of local, state, and federally administered lands and regional planning documents for the Valley, Mountain, and Desert Regions are enumerated in Tables 7, 8 and 9, respectively. Administered lands include preserves, parks, state and national forests, areas of critical environmental concern, military lands, and so forth. Regional planning documents include resource management plans and habitat conservation plans among others. In addition, important wildlife movement and dispersal corridors are provided in Tables 7 through 9 for the three regions.

Table 1.
Special Status Plant Species Potentially Occurring within the Valley Region

<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abronia villosa var. aurita chaparral sand-verbena</td>
<td>Annual herb. Occurs in coastal scrub and chaparral on sandy soils. From 260 to 5,250 feet in elevation.</td>
<td>January – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Antennaria marginata white-margined everlasting</td>
<td>Perennial stoloniferous herb. Occurs in upper and lower montane coniferous forests. Occurs at approximately 7,055 feet in elevation.</td>
<td>May – August</td>
<td>Fed: none&lt;br&gt;CA: none&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis parishii Parish’s rock cress</td>
<td>Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodland, and upper montane coniferous forests. Typically found on rocky, quartzite clays or sometimes carbonate soils. From 5,800 to 9,515 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arenaria lanuginosa ssp. saxosa rock sandwort</td>
<td>Perennial herb. Occurs in subalpine and upper montane coniferous forests on mesic, sandy soils. Found from 5,900 to 8,500 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arenaria paludicola marsh sandwort</td>
<td>Perennial herb. Occurs in marshes and swamps. Currently known from one site in San Luis Obispo growing up through dense mats of cattail, rush, and sedge in freshwater marsh. From 10 to 560 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END&lt;br&gt;CA: END&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arenaria ursina Big Bear Valley sandwort</td>
<td>Perennial herb. Occurs on pebble plains pavement and in pinyon and juniper woodland on mesic and rocky soils. From 5,905 to 9,515 feet in elevation.</td>
<td>May – August</td>
<td>Fed: THR&lt;br&gt;CA: none&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
</tbody>
</table>
| *Aster greatae*  
Great’s aster | Rhizomatous perennial herb. Occurs in chaparral, broad-leafed upland forest, cismontane woodland, lower montane coniferous forest, and riparian woodland on mesic soils. From 985 to 6,595 feet in elevation. | June – October | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-3 | Moderate |
| *Astragalus lentiginosus*  
var. *sierrae*  
Big Bear Valley milk-vetch | Perennial herb. Occurs in Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, and upper montane coniferous forests typically on gravelly or rocky soils. From 5,905 to 8,530 feet in elevation. | April – August | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
| *Astragalus leucolobus*  
Big Bear Valley woollypod | Perennial herb occurring in upper and lower montane coniferous forest, pebble plain, pinyon and juniper woodland. Also in dry pine woods, gravelly knolls within sagebrush, or stony lake shores in the pine belt from 5,480 to 8,745 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
| *Atriplex coulteri*  
Coulter’s saltbush | Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland on alkaline or clay soils. From 30 to 1,510 feet in elevation. | March – October | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-2 | Moderate |
| *Berberis nevinii*  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| *Botrychium crenulatum*  
scalloped moonwort | Perennial rhizomatous herb. Occurs in bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes and swamps, from 5,000 to 10,765 feet in elevation. | June – July | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-2-1 | Moderate |
| *Brodiaea filifolia*  
thread-leaved brodiaea | Bulbiferous perennial herb. Occurs in chaparral, cismontane woodlands, coastal scrub, playas, vernal pools, and valley and foothill grasslands, usually in clay soils. From 115 to 4,003 feet in elevation. | March – June | Fed: THR  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| *Calochortus clavatus*  
var. *gracilis*  
slender mariposa lily | Bulbiferous perennial herb. Occurs in chaparral and coastal scrub. Often in shaded foothill canyons and on grassy slopes with other habitat. From 1,180 to 3,280 feet in elevation. | March – May | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-2-3 | Moderate |
| *Calochortus palmeri*  
var. *palmeri*  
Palmer’s mariposa lily | Perennial bulbiferous herb. Occurs in chaparral, lower montane coniferous forest, meadows, and seeps in mesic soils. From 3,280 to 7,220 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
| *Calochortus plummerae*  
Plummer’s mariposa lily | Bulbiferous perennial herb. Occurs in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland on alluvial or granitic, rocky or sandy soils. From 295 to 5,580 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | High |
| *Calochortus weedii*  
var. *intermedius*  
intermediate mariposa lily | Perennial bulbiferous herb occurring in chaparral, coastal scrub, and valley and foothill grassland. Often in dry, rocky soils. From 395 to 2,805 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carex comosa bristly sedge</td>
<td>Perennial rhizomatous herb. Occurs in coastal prairies, marshes and swamps, lake margins, and valley and foothill grassland, up to 1,395 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-3-1 Moderate</td>
</tr>
<tr>
<td>Castilleja cinerea ash-gray Indian paintbrush</td>
<td>Perennial hemiparasitic herb. Occurs in Mojavean desert scrub, meadows and seeps, on pebble plain pavement, within pinyon and juniper woodland and upper montane coniferous forest. Usually found in clay openings. From 4,265 to 7,841 feet in elevation.</td>
<td>June – August</td>
<td>Fed: THR</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3 Moderate</td>
</tr>
<tr>
<td>Castilleja lasiorhyncha San Bernardino Mountains owl’s clover</td>
<td>Hemiparasitic annual herb. Occurs in chaparral, meadows and seeps, on pebble plain pavement, within pinyon and juniper woodland and upper montane coniferous forest. Usually found in clay openings. From 4,265 to 7,841 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3 Moderate</td>
</tr>
<tr>
<td>Centromadia pungens ssp. laevis smooth tarplant</td>
<td>Annual herb occurring in chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland. Often in alkaline soils. Sea level to 1,575 feet in elevation.</td>
<td>April – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3 Moderate</td>
</tr>
<tr>
<td>Chorizanthe parryi var. parryi Parry’s spineflower</td>
<td>Annual herb. Occurs in chaparral, coastal scrub. In openings, slopes, and flats on dry, sandy or rocky soil. From 130 to 5,995 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 3 R-E-D: 7-2-3 High</td>
</tr>
<tr>
<td>Chorizanthe xanti var. leucotheca white-bracted spineflower</td>
<td>Annual herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland. From 985 to 3,950 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3 Moderate</td>
</tr>
<tr>
<td>Cladium californicum California sawgrass</td>
<td>Perennial rhizomatous herb. Occurs in meadows and seeps, and in freshwater and alkaline marshes and swamps. From 200 to 1,970 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: * Moderate</td>
</tr>
<tr>
<td>Claytonia lanceolata var. peirsonii Peirson’s spring beauty</td>
<td>Perennial herb. Occurs in subalpine coniferous forest, upper montane coniferous forest on scree. From 7,005 to 9,005 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-3-3 Moderate</td>
</tr>
<tr>
<td>Cordylanthus maritimus ssp. mantinus salt marsh bird’s-beak</td>
<td>Hemiparasitic annual herb. Occurs in coastal dunes and coastal salt marshes and swamps. Up to 100 feet in elevation.</td>
<td>May – October</td>
<td>Fed: END</td>
<td>CA: END CNPS: List 1B R-E-D: 2-2-2 Moderate</td>
</tr>
<tr>
<td>Dodecahema leptocerus slender-horned spineflower</td>
<td>Annual herb. Occurs in chaparral, and coastal scrub (alluvial fan sage scrub) along flood-deposited terraces and washes from 600 to 2280 feet; associated with Encelia, Dalea, and Lepidospartum</td>
<td>April – June</td>
<td>Fed: END</td>
<td>CA: END CNPS: List 1B R-E-D: 3-3-3 Moderate</td>
</tr>
<tr>
<td>Dudleya abramsii ssp. affinis San Bernardino Mountains dudleya</td>
<td>Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodlands, and upper montane coniferous forests typically on granitic, quartzite, or carbonate soils. Elevation ranges from 5,200 to 8,530 feet.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3 Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Dudleya multiflora many-stemmed dudleya</td>
<td>Perennial herb. Occurs in coastal scrub, chaparral, and valley and foothill grassland, usually on clay soils or grassy slopes. Up to 2,590 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 1-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar</td>
<td>Perennial herb. Occurs in coastal scrub and chaparral on sandy soils. Usually on river floodplains or terraced fluvial deposits. From 490 to 2,000 feet in elevation.</td>
<td>June – September</td>
<td>Fed: END CA: END CNPS: List 1B R-E-D: 3-3-3</td>
<td>High</td>
</tr>
<tr>
<td>Eriogonum foliosum leafy buckwheat</td>
<td>Annual herb. Occurs in chaparral, lower montane coniferous forest, and pinyon and juniper woodland typically on sandy soils. From 3,935 to 7,215 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriogonum kennedyi var. austromontanum southern mountain buckwheat</td>
<td>Perennial herb. Occurs in lower montane coniferous forest typically on gravelly soils and on pebble plain pavement at elevations from 5,807 to 7,792 feet.</td>
<td>July – September</td>
<td>Fed: THR CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriogonum microthecum var. johnstonii Johnston’s buckwheat</td>
<td>Deciduous shrub. Subalpine coniferous forest, upper montane coniferous forest on rocky soils. From 7,300 to 9,515 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriogonum ovalifolium var. vineum Cushenbury buckwheat</td>
<td>Perennial herb. Occurs in Joshua tree “woodland,” Mojavean desert scrub, and pinyon and juniper woodland. From 4,595 to 8,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Fimbristylis thermalis hot springs fimbristylis</td>
<td>Perennial rhizomatous herb. Occurs in meadows and in alkaline seeps near hot springs, from 395 to 4,400 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Galium californicum ssp. primum California bedstraw</td>
<td>Perennial herb. Occurs in chaparral and lower montane coniferous forest on granitic, sandy soils from 4,430 to 5,580 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gentiana fremontii moss gentian</td>
<td>Annual herb. Occurs in meadows and seeps on mesic soils and in upper montane coniferous forest. From 7,870 to 8,860 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gilia leptantha ssp. leptantha San Bernardino gilia</td>
<td>Annual herb. Occurs in lower montane coniferous forest on sandy or gravelly soils. From 4,920 to 7,965 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hecastocleis shockleyi prickly leaf</td>
<td>Shrub occurring in Mojavean desert scrub, creosote brush, and chenopod scrub on dry rocky slopes and washes. Often on carbonate soils or slate. From 30 to 7,220 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 3 R-E-D: ??-?</td>
<td>Moderate</td>
</tr>
<tr>
<td>Helianthus nuttallii ssp. parishii Los Angeles sunflower</td>
<td>Rhizomatous perennial herb. Occurs in coastal salt and freshwater marshes and swamps. From 15 to 1,640 feet in elevation.</td>
<td>August – October</td>
<td>Fed: None CA: None CNPS: List 1A R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td>Heuchera parishii Parish’s alumroot</td>
<td>Perennial rhizomatous herb. Occurs in alpine boulder and rock fields, and lower, upper, and Subalpine coniferous forest, usually in rocky soils. From 4,920 to 12,470 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Horkelia cuneata ssp. puberula mesa horkelia</td>
<td>Perennial herb. Occurs in coastal scrub, chaparral and cismontane woodland on sandy or gravelly soils. From 230 to 2,660 feet in elevation.</td>
<td>February – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Horkelia wilderae Barton Flats horkelia</td>
<td>Perennial herb. Occurs in upper and lower montane coniferous forest and edges of chaparral. From 6,000 to 9,840 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hulsea vestita ssp. pygmaea pygmy hulsea</td>
<td>Perennial herb. Occurs in alpine boulder and rock fields and Subalpine coniferous forest, usually in granitic soils. From 9,300 to 12,800 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ivesia argyrocoma silver-haired ivesia</td>
<td>Perennial herb. Occurs in alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 4,900 to 8,000 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lepidium virginicum var. robinsonii Robinson's pepper-grass</td>
<td>Annual herb. Occurs in coastal scrub and chaparral on dry soils. Up to 3,100 feet in elevation.</td>
<td>January – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lesquerella kingii ssp. bernardina San Bernardino Mountains bladerod</td>
<td>Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland usually on carbonate soils. Found at elevations of 6,070 to 8,860 feet.</td>
<td>May – June</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lilium parryi lemon lily</td>
<td>Bulbiferous perennial herb. Upper and lower montane coniferous forest, meadows and seeps, riparian forest. Wet terrain, forested, mountainous, or boggy areas. On mesic soil. From 4,000 to 9,150 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>High</td>
</tr>
<tr>
<td>Linanthus concinnus San Gabriel linanthus</td>
<td>Annual herb. Occurs in lower and upper montane coniferous forest in rocky soils and on dry slopes. From 5,170 to 9,190 feet in elevation.</td>
<td>April - July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Linanthus killipii Baldwin Lake linanthus</td>
<td>Annual herb. Occurs in alkaline meadows and seeps, pebble pavement, pinyon and juniper woodland, and upper montane coniferous woodland. From 5,580 to 7,880 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lycium parishii Parish’s desert-thorn</td>
<td>Shrub. Occurs in coastal scrub and Sonoran desert scrub. From 1,000 to 3,280 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Malacothamnus parishii Parish’s bush mallow</td>
<td>Deciduous shrub occurring in chaparral and coastal scrub. From 1,000 to 1,490 feet in elevation. Presumed extinct in California.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 1A R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td>Malaxix monophyllos ssp. brachypoda adder’s mouth</td>
<td>Perennial bulbiferous herb. Occurs in bogs and fens, meadows and seeps, and upper montane coniferous forest on mesic soils. From 7,220 to 8,860 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-3-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Mimulus exiguus San Bernardino Mountains monkeyflower</td>
<td>Annual herb. Occurs in meadows and seeps, pebble pavement plain, and upper montane coniferous forest on mesic and clay soils. From 5,900 to 7,600 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Mimulus purpureus</em> purple monkeyflower</td>
<td>Annual herb occurring in meadows, pebble plain, and upper montane coniferous forest. From 6,235 to 7,545 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Monardella macrantha</em> ssp. <em>hallii</em></td>
<td>Halí’s monardella</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Monardella pringlei</em> Pringle’s monardella</td>
<td>Annual herb. Occurs in sandy coastal scrub, from 655 to 2,825 feet in elevation. Known only from occurrences in the vicinity of Colton.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 1 A R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Navarretia prostrata</em> prostrate narvarretia</td>
<td>Annual herb. Occurs in coastal scrub, vernal pools, and valley and foothill grasslands in mesic soils. From 50 to 2,300 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Nolina cismontana</em> chaparral nolina</td>
<td>Evergreen shrub. Occurs in coastal scrub and chaparral on sandstone or gabbro soils. From 460 to 4,180 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Oreonana vestita</em> woolly mountain-parsley</td>
<td>Perennial herb. Lower montane, subalpine, and montane forests. On gravelly soils. Occurs at elevations of 7,495 to 11,480 feet.</td>
<td>May – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Orobanche valida</em> ssp. valida rock creek broomrape</td>
<td>Perennial parasitic herb. Chaparral, pinyon and juniper woodland on granitic soil. Occurs at elevations of 4,100 - 6,560 feet.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Oxytheca parishii</em> var. <em>cienegensis</em> Cienega Seca oxytheca</td>
<td>Annual herb. Occurs in upper montane coniferous forest in sandy, granitic soils. From 6,900 to 8,040 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Phlox dolichantha</em> Big Bear Valley phlox</td>
<td>Perennial herb. Occurs in pebble pavement plain and openings in upper montane coniferous forest. From 6,000 to 9,745 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Poa atropurpurea</em> San Bernardino blue grass</td>
<td>Annual herb. Occurs in meadows and seeps. From 4,460 to 8,055 feet in elevation.</td>
<td>April – August</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Populus angustifolia</em> narrow-leaved cottonwood</td>
<td>Deciduous tree occurring in riparian forests. From 3,940 to 5,905 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Ribes divaricatum var. parishii</td>
<td>Parish’s gooseberry. Occurs in riparian woodland. From 200 to 1,000 feet in elevation.</td>
<td>February – April</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rorippa gambelii</td>
<td>Gambel’s water cress. Rhizomatous perennial herb. Occurs in freshwater or brackish marshes and swamps. From 15 to 1,085 feet in elevation.</td>
<td>April – September</td>
<td>Fed: END</td>
<td>Moderate</td>
</tr>
<tr>
<td>Schoenus nigricans</td>
<td>black sedge. Occurs in marshes and swamps often associated with alkaline soils. From 500 to 6,565 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Senecio aphanactis</td>
<td>rayless ragwort. Annual herb. Occurs in cismontane woodland, coastal scrub, and chaparral on drying alkaline flats. From 50 to 2,625 feet in elevation.</td>
<td>January – April</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Senecio bernardinus</td>
<td>San Bernardino ragwort. Perennial herb. Occurs in mesic or alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 5,900 to 7,550 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sidalcea hickmanii ssp. parishii</td>
<td>Parish’s checkerbloom. Perennial herb occurring in chaparral, cismontane woodland, and lower montane coniferous forest. From 3,280 to 8,200 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sidalcea neomexicana</td>
<td>salt spring checkerbloom. Perennial herb. Occurs in coastal scrub, chaparral, lower montane coniferous forest, brackish marshes, Mohavean desert scrub, and playas on alkaline, mesic soils. Up to 5,020 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sidalcea pedata</td>
<td>bird-foot checkerbloom. Perennial herb. Occurs in meadows and seeps on mesic soils and on pebble plain pavement. From 5,250 to 8,200 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sphenopholis obtusata</td>
<td>prairie wedge grass. Perennial herb. Occurs in cismontane woodland and meadows and seeps in mesic soils. From 985 to 6,560 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Streptanthus campestris</td>
<td>southern jewel-flower. Annual herb. Occurs in chaparral, lower montane coniferous forest, and pinyon-juniper woodland in open, rocky areas. From 1,970 to 9,150 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Symphyotrichum defoliatum</td>
<td>San Bernardino aster. Rhizomatous perennial. Occurs in meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and valley and foothill grasslands, often in disturbed places. Up to 6,690 feet in elevation.</td>
<td>July – November</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td>Taraxacum californicum</td>
<td>California dandelion. Perennial herb. Occurs in meadows and seeps on mesic soils. From 5,315 to 9,165 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END</td>
<td>High</td>
</tr>
<tr>
<td>Thelypodium stenopetalum</td>
<td>slender-petaled thelypodium. Perennial herb. Occurs in meadows and seeps on mesic, alkaline soils. From 5,250 to 8,205 feet in elevation.</td>
<td>May – September</td>
<td>Fed: END</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Thelypteris puberula</em> var. <em>sonorensis</em> Sonoran maiden fern</td>
<td>Perennial rhizomatous herb. Occurs in meadows, seeps and streams. From 165 to 2,000 feet in elevation.</td>
<td>January – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

General references: Hickman (ed.) 1993; Munz 1974; CNPSEI 2006; CNDDB 2006

**Federal designations**: (federal Endangered Species Act, USFWS):
END: Federal-listed, endangered.
THR: Federal-listed, threatened.
CAN: Proposed federal listed, endangered.

**State designations**: (California Endangered Species Act, CDFG)
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare

**California Native Plant Society (CNPS) designations**:
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

**CNPS R-E-D Code**:
Rarity:
1 Rare, found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2 Occurrence confined to several populations or one extended population.
3 Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment:
1 Not endangered.
2 Endangered in a portion of its range.
3 Endangered throughout its range.

Distribution:
1 More or less widespread outside California.
2 Rare outside California.
3 Endemic to California (i.e., does not occur outside California)

**Definitions of Occurrence Probability**:
Absent
Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.

Low
Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.

Moderate
Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

High
Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

Present
Species observed on the site during surveys described here, or recorded onsite by other qualified biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accipiter cooperi</td>
<td>Cooper’s hawk</td>
<td>None CSC</td>
<td>Inhabits deciduous, coniferous, and mixed riparian or wetland forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Agelaius tricolor</td>
<td>tricolored blackbird</td>
<td>None CSC</td>
<td>(Nesting Colony) Highly colonial species, most numerous in central valley &amp; vicinity. Largely endemic to California. Requires open water, protected nesting substrate, &amp; foraging area with insect prey within a few km of the colony.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aimophila ruficeps canescens</td>
<td>Southern California rufus-crowned sparrow</td>
<td>None CSC</td>
<td>Inhabits grassy rocky slopes with sparse low bushes, open pine-oak woodlands.</td>
<td>High</td>
</tr>
<tr>
<td>Amphispiza belli belli</td>
<td>Bell’s sage sparrow</td>
<td>None CSC</td>
<td>(Nesting) Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aquila chrysaetos</td>
<td>Golden eagle</td>
<td>None CSC</td>
<td>Found along rolling foothills or coast-range terrain with large trees (scattered oaks, sycamores, digger pines) in open areas. Cliff-walled canyons provide nesting habitat.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Asio otus</td>
<td>long-eared owl</td>
<td>None CSC</td>
<td>(Nesting) Riparian bottomlands grown to tall willows &amp; cottonwoods, also belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Athene cunicularia</td>
<td>Burrowing owl</td>
<td>None CSC</td>
<td>Prefers open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent on small mammal burrows (particularly ground squirrels) for its subterranean nesting.</td>
<td>High</td>
</tr>
<tr>
<td>Coccyzus americanus occidentalis</td>
<td>Western yellow-billed cuckoo</td>
<td>FSOC SE</td>
<td>Inhabits dense cottonwood/willow stands, although mesquite and salt cedar may be utilized.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Empidonax trailli extimus</td>
<td>southwestern willow flycatcher</td>
<td>FE SE</td>
<td>(Nesting) Riparian woodlands in southern California. State listing includes all subspecies.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eremophila alpestris actia</td>
<td>California horned lark</td>
<td>None CSC</td>
<td>This species is associated with desert brushlands, grasslands, and similar open habitats, as well as alpine meadows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lanius ludovicianus</td>
<td>loggerhead shrike</td>
<td>None CSC</td>
<td>(Nesting) Broken woodlands, savannah, pinyon-juniper, Joshua tree, &amp; riparian woodlands, desert oases, scrub &amp; washes. Prefers open country for hunting, with perches for scanning, &amp; fairly dense shrubs and brush for nesting.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Polioptila californica californica</td>
<td>Coastal California gnatcatcher</td>
<td>FT CSC</td>
<td>Occurs in coastal sage scrub vegetation on mesas, arid hillsides, and in washes and ne sts almost exclusively in California sagebrush.</td>
<td>High</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Vireo bellii pusillus</td>
<td>Least Bell’s vireo</td>
<td>FE, SE</td>
<td>The least Bell’s vireo is a Spring and Summer breeding resident, migrating south for Fall and Winter. It primarily inhabits riparian woodlands, willow scrub, and thickets for breeding.</td>
<td>High</td>
</tr>
<tr>
<td>Chaetodipus fallax fallax</td>
<td>Northwestern San Diego pocket mouse</td>
<td>None, CSC</td>
<td>The northwestern San Diego pocket mouse inhabits coastal sage scrub, sage scrub/grassland and chaparral communities.</td>
<td>High</td>
</tr>
<tr>
<td>Chaetodipus fallax pallidus</td>
<td>pallid San Diego pocket mouse</td>
<td>None, CSC</td>
<td>Desert border areas in eastern San Diego Co. in desert Wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy herbaceous areas, usually in association with rocks or coarse gravel.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Dipodomys merriami parvus</td>
<td>San Bernardino kangaroo rat</td>
<td>FE, None</td>
<td>Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans &amp; flood plains. Needs early to intermediate seral stages.</td>
<td>High</td>
</tr>
<tr>
<td>Dipodomys stephensi</td>
<td>Stephens’ kangaroo rat</td>
<td>FE, ST</td>
<td>These rats need sparsely vegetated habitats (like sagebrush and grass patches) on sandy or gravelly soils.</td>
<td>High</td>
</tr>
<tr>
<td>Eumops perotis californicus</td>
<td>Western mastiff bat</td>
<td>None, CSC</td>
<td>Found in all but sub-alpine and alpine habitats. Limited roosting sites in caves and buildings.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Glaucolmys sabrinus californicus</td>
<td>San Bernardino flying squirrel</td>
<td>None, CSC</td>
<td>Black oak or white fir dominated woodlands between 5200-8500 ft in the San Bernardino &amp; San Jacinto Ranges.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lepus californicus bennettii</td>
<td>San Diego black-tailed jackrabbit</td>
<td>None, CSC</td>
<td>Occurs in intermediate canopy stages of shrub habitats and open shrub, along herbaceous and tree edges within coastal sage scrub habitats in southern California.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Neotoma lepida intermedia</td>
<td>San Diego desert woodrat</td>
<td>None, CSC</td>
<td>Found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Nyctinomops macrotis</td>
<td>big free-tailed bat</td>
<td>None, CSC</td>
<td>Low-lying arid areas in southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Onychomys torridus ramona</td>
<td>Southern grasshopper mouse</td>
<td>None, CSC</td>
<td>Prefers grassland and desert scrub communities.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Perognathus longimembris brevinasus</td>
<td>Los Angeles pocket mouse</td>
<td>None, CSC</td>
<td>Occurs in lower elevation grasslands and coastal sage communities in the Los Angeles basin. Requires open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and leaves instead.</td>
<td>High</td>
</tr>
<tr>
<td>Taxidea taxus</td>
<td>American badger</td>
<td>None, CSC</td>
<td>Most abundant in drier open stages of most shrub, forest, &amp; herbaceous habitats, with friable soils. Need sufficient food, friable soils &amp; open, uncultivated ground. Prey on currowing rodents. Dig burrows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anniella pulchra</td>
<td>silvery legless lizard</td>
<td>None CSC</td>
<td>Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with high moisture content.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aspidoscelis hypertyra</td>
<td>Orange throated whiptail</td>
<td>None CSC</td>
<td>Inhabits sandy washes, rocky hillsides, and coastal sage scrub that support adequate prey species.</td>
<td>High</td>
</tr>
<tr>
<td>Charina umbratica</td>
<td>southern rubber boa</td>
<td>None ST</td>
<td>Restricted to the San Bernardino &amp; San Jacinto Mtns. Found in a variety of montane forest habitats. Found in vicinity of streams or wet meadows. Requires loose, moist soil for burrowing. Seeks cover in rotting logs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Crotalus ruber</td>
<td>Northern red-diamond rattlesnake</td>
<td>None CSC</td>
<td>Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Emys (Clemmys) mar morata pallida</td>
<td>Southwestern pond turtle</td>
<td>None CSC</td>
<td>Inhabits permanent or nearly permanent bodies of water in many habitat types including ponds, marshes, rivers, and streams with suitable basking sites.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lampropeltis zonata (parvirubra)</td>
<td>California mountain kingsnake (San Bernardino population)</td>
<td>None CSC</td>
<td>Bigcone spruce &amp; chaparral at lower elev. Black oak, incense cedar, jeffrey pine &amp; ponderosa pine at higher elevations. Well lit canyons with rocky outcrops or rocky talus.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Phrynosoma coronatun blainvillei</td>
<td>San Diego horned lizard</td>
<td>None CSC</td>
<td>Occurs in coastal sage scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana aurora draytonii</td>
<td>California red-legged frog</td>
<td>FT CSC</td>
<td>Requires emergent riparian vegetation near deep, still or slow-moving ponds or intermittent streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana muscosa</td>
<td>mountain yellow-legged frog</td>
<td>FT CSC</td>
<td>Federal listing refers to populations in the san gabriel, san jacinto &amp; san bernardino mountains only. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Thamnophis hammondii</td>
<td>Two-striped garter snake</td>
<td>None CSC</td>
<td>Highly aquatic. Found in or near permanent fresh water, often along streams with rocky beds and riparian growth.</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taricha torosa torosa</td>
<td>Coast range newt</td>
<td>None CSC</td>
<td>Found in wet forests, oak forests, chaparral, and rolling grasslands.</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catostomus santanae</td>
<td>Santa Ana sucker</td>
<td>FT CSC</td>
<td>Endemic to Los Angeles basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, &amp; algae.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Gila orcutti</em></td>
<td>Arroyo chub</td>
<td>None CSC</td>
<td>Occurs in slow water stream sections with mud or sand bottoms. Often found in intermittent streams.</td>
<td>Low</td>
</tr>
<tr>
<td><em>Rhinichthys osculus</em> ssp. 3</td>
<td>Santa Ana speckled dace</td>
<td>None CSC</td>
<td>Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles river system. Requires permanent flowing streams with summer water temps of 17-20°C. Usually inhabit shallow cobble and gravel riffles.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Rhaphiomidas terminatus abdominalis</em></td>
<td>Delhi Sands flower-loving fly</td>
<td>FE None</td>
<td>Found only in areas of the Delhi sands formation in southwestern San Bernardino &amp; northwestern riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**Status Codes**

Federal

- **FE** = Federally listed; Endangered
- **FT** = Federally listed; Threatened
- **FSOC** = Federal Species of Concern

State

- **ST** = State listed; Threatened
- **SE** = State listed; Endangered
- **CSC** = California Species of Special Concern

Source:

CNDDB, November 2006 for all valley region quadrangles.

**Potential for Occurrence (PFO) definitions:**

- **Absent:** Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.
- **Low:** Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.
- **Moderate:** Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **High:** Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **Present:** Species observed within the study area during surveys, or recorded onsite by other biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abronia nana ssp. covillei Coville’s dwarf abronia</td>
<td>Perennial herb. Occurs in Great Basin scrub, Joshua tree woodland, pinyon and juniper woodland, upper montane coniferous forest, and subalpine coniferous forest, on sandy, carbonate soils. From 5,520 to 10,170 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None CA: None CNPS: List 4 R-E-D: 1-2-1</td>
<td>Low</td>
</tr>
<tr>
<td>Abronia villosa var. aurita chaparral sand-verbena</td>
<td>Annual herb. Occurs in coastal scrub and chaparral on sandy soils. From 260 to 5,250 feet in elevation.</td>
<td>January – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Allium marvinii Yucaipa onion</td>
<td>Perennial bulbiferous herb occurring in chaparral on clay soils. From 2,495 to 3,495 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 4 R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Antennaria marginata white-margined everlasting</td>
<td>Perennial stoloniferous herb. Occurs in upper and lower montane coniferous forests. Occurs at approximately 7,055 feet in elevation.</td>
<td>May – August</td>
<td>Fed: none CA: none CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis breweri var. pecuniaria San Bernardino rock cress</td>
<td>Perennial herb. Occurs in subalpine coniferous forest on rock soils. From 8,860 to 10,500 feet in elevation.</td>
<td>March - August</td>
<td>Fed: none CA: none CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis johnstonnii Johnston’s rock cress</td>
<td>Perennial herb. Occurs in chaparral and lower montane coniferous forest, usually on eroded clay soils. From 4,430 to 7,705 feet in elevation.</td>
<td>February – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Low</td>
</tr>
<tr>
<td>Arabis parishii Parish’s rock cress</td>
<td>Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodland, and upper montane coniferous forests. Typically found on rocky, quartzite clays or sometimes carbonate soils. From 5,800 to 9,515 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Arabis shockleyi Shockley’s rock cress</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on carbonate or quartzite, rocky or gravelly soils.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>High</td>
</tr>
<tr>
<td>Arctostaphylos peninsularis peninsular manzanita</td>
<td>Perennial evergreen shrub. Occurs in chaparral. From 4,070 to 4,990 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Low</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>---------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Arenaria lanuginosa</em> ssp. <em>saxosa</em> rock sandwort</td>
<td>Perennial herb. Occurs in subalpine and upper montane coniferous forests on mesic, sandy soils. Found from 5,900 to 8,530 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Arenaria paludicola</em> marsh sandwort</td>
<td>Perennial herb. Occurs in marshes and swamps. Currently known from one site in San Luis Obispo growing up through dense mats of cattail, rush, and sedge in freshwater marsh. From 10 to 560 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END CA: END CNPS: List 1B R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Arenaria ursina</em> Big Bear Valley sandwort</td>
<td>Perennial herb. Occurs on pebble plains pavement and in pinyon and juniper woodland on mesic and rocky soils. From 5,905 to 9,515 feet in elevation.</td>
<td>May – August</td>
<td>Fed: THR CA: none CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Aster greatae</em> Greta’a aster</td>
<td>Rhizomatous perennial herb. Occurs in chaparral, broadleaved upland forest, cismontane woodland, lower montane coniferous forest, and riparian woodland on mesic soils. From 3,595 to 6,565 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Astragalus bicristatus</em> crested milk-vetch</td>
<td>Perennial herb. Occurs in lower montane coniferous forest, and upper montane coniferous forest on sandy or rock soils. From 5,580 to 9,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None CA: None CNPS: List 4 R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Astragalus brauntonii</em> Braunt’s milk-vetch</td>
<td>Perennial herb. Occurs in chaparral, coastal scrub, closed-cone coniferous forest, and valley and foothill grassland. Usually on granite, limestone, or gravelly clay soils in disturbed areas. From 13 to 2,100 feet in elevation.</td>
<td>February – July</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Astragalus lentiginosus</em> var. <em>antonius</em> San Antonio milk-vetch</td>
<td>Perennial herb. Occurs in lower montane coniferous forest, upper montane coniferous forest. From 4,920 to 8,530 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Astragalus lentiginosus</em> var. <em>sierrae</em> Big Bear Valley milk-vetch</td>
<td>Perennial herb. Occurs in Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, and upper montane coniferous forests typically on gravelly or rocky soils. From 5,905 to 8,530 feet in elevation.</td>
<td>April – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Astragalus leucolobus</em> Big Bear Valley woollypod</td>
<td>Perennial herb occurring in upper and lower montane coniferous forest, pebble plain, pinyon and juniper woodland. Also in dry pine woods, gravelly knolls within sagebrush, or stony lake shores in the pine belt from 5,480 to 8,745 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| **Astragalus pachypus** var. *jaegeri*  
Jaeger’s milk-vetch | Shrub occurring in chaparral, cismontane woodland, coastal scrub, and in valley and foothill grassland, usually on sandy or rock soils. From 1,200 to 3,000 feet in elevation. | December – June | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-3-3 | Low |
| **Astragalus tricarinatus**  
triple-ribbed milk-vetch | Perennial herb. Occurs in Joshua tree woodland and Sonoran desert scrub on sandy or gravelly soils. From 1,475 to 2,725 feet in elevation. | February – May | Fed: END  
CA: None  
CNPS: List 1B  
R-E-D: 3-3-2 | Moderate |
| **Atriplex coulteri**  
Coulter’s saltbush | Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland on alkaline or clay soils. From 30 to 1,510 feet in elevation. | March – October | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-2 | Moderate |
| **Atriplex parishii**  
Parish’s brittleglades | Annual herb. Occurs in chenopod scrub, vernal pools, and playas, usually, on drying alkali flay with fine soils. From 10 to 6,230 feet in elevation. | June – October | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-3-2 | Moderate |
| **Berberis fremontii**  
Fremont barberry | Evergreen shrub. Occurs in chaparral, Joshua tree woodland, and pinyon and juniper woodland in rocky soils. From 2,755 to 6,070 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 3  
R-E-D: 3-3-3 | Moderate |
| **Berberis nevinii**  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| **Botrychium crenulatum**  
scalloped moonwort | Perennial rhizomatous herb. Occurs in bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes and swamps, from 5,000 to 10,765 feet in elevation. | June – July | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-2-1 | Moderate |
| **Botrychium minganense**  
Mingan moonwort | Perennial rhizomatous herb. Occurs in lower montane coniferous forest on mesic sites. From 4,920 to 7,460 feet in elevation. | July – August | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| **Boykenia rotundifolia**  
round-leaved boykenia | Perennial herb. Occurs in chaparral and lower montane coniferous forest on mesic soils, such as along stream sides. Generally below 6,000 feet in elevation. | June – July | Fed: None  
CA: None  
CNPS: List 4  
R-E-D: 1-1-3 | Low |
| **Brodiaea filifolia**  
thread-leaved brodiaea | Bulbiferous perennial herb. Occurs in chapparral, cismontane woodlands, coastal scrub, playas, vernal pools, and valley and foothill grasslands, usually in clay soils. From 115 to 4,003 feet in elevation. | March – June | Fed: THR  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| **Calochortus clavatus** var. *gracilis*  
slender mariposa lily | Bulbiferous perennial herb. Occurs in chaparral and coastal scrub. Often in shaded foothill canyons and on grassy slopes with other habitat. From 1,180 to 3,280 feet in elevation. | March – May | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-2-3 | Moderate |
| **Calochortus palmeri** var. *munzii*  
Munz’s mariposa lily | Perennial bulbiferous herb. Occurs in chaparral and lower montane coniferous forest. From 2,950 to 7,220 feet in elevation. | June – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-2-3 | Low |
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Calochortus plummerae</em></td>
<td>Plummer’s mariposa lily. Bulbiferous perennial herb. Occurs in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland on alluvial or granitic, rocky or sandy soils. From 295 to 5,850 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Calochortus striatus</em> alkali mariposa lily</td>
<td>Perennial bulbiferous herb occurring in chaparral, chenopod and Mojavean desert scrub, and meadows and seeps (alkaline, mesic). From 230 to 5,230 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Carex comosa</em> bristly sedge</td>
<td>Perennial rhizomatous herb. Occurs in coastal prairies, marshes and swamps, lake margins, and valley and foothill grassland, up to 1,395 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-3-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Carex occidentalis</em> western sedge</td>
<td>Perennial rhizomatous herb. Occurs in lower montane forest, and in meadows and seeps, at approximately 6,230 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 2-1-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Castilleja cinerea</em> ash-gray Indian</td>
<td>paintbrush. Perennial hemiparasitic herb. Occurs in Mojavean desert scrub, meadows and seeps, on pebble plain pavement, within pinyon and juniper woodland and upper montane coniferous forests typically on clay openings. From 5,905 to 9,300 feet in elevation.</td>
<td>June – August</td>
<td>Fed: THR</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3</td>
</tr>
<tr>
<td><em>Castilleja lasiorhyncha</em></td>
<td>San Bernardino Mountains owl’s clover. Hemiparasitic annual herb. Occurs in chaparral, meadows and seeps, on pebble plain pavement, in pinyon and juniper woodland and upper montane coniferous forest. Usually found in clay openings. From 4,265 to 7,841 feet in elevation. Also found at approximately 3,300 feet near Lake Silverwood in San Bernardino County.</td>
<td>June – August</td>
<td>Fed: none</td>
<td>CA: none CNPS: List 1B R-E-D: 2-2-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Castilleja montigena</em> Heckard’s paintbrush</td>
<td>Perennial hemiparasitic herb. Occurs in upper and lower montane coniferous forest and in pinyon and juniper woodland. From 5,430 to 9,190 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 4 R-E-D: 1-1-3</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><em>Castilleja plagiotoma</em></td>
<td>Perennial hemiparasitic herb. Occurs in Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, and pinyon and juniper woodland. From 985 to 8,200 feet in elevation.</td>
<td>April – June Fed: None CA: None CNPS: List 4 R-E-D: 1-1-3</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td><em>Caulanthus simulans</em> Payson’s jewel-flower</td>
<td>Annual herb. Occurs in chaparral, coastal scrub, in sandy, granitic soil. Frequently in burned areas, or in disturbed sites such as streambeds, and rocky steep slopes. From 295 to 7,215 feet in elevation.</td>
<td>March – June Fed: None CA: None CNPS List 4 R-E-D: 1-2-3</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td><em>Centromadia pungens</em> ssp. laevis smooth tarplant</td>
<td>Annual herb occurring in chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland. Often in alkaline soils. Sea level to 1,575 feet in elevation.</td>
<td>April – September Fed: None CA: None CNPS: List 1B R-E-D: 2-3-3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Chaenactis parishii</em> Pariah’s chaenactis</td>
<td>Perennial herb. Occurs in chaparral on rocky soils. From 4,265 to 8,200 feet in elevation.</td>
<td>May – July Fed: None CA: None CNPS: List 1B R-E-D: 2-1-2</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td><em>Chamaesyce platysperma</em> flat-seeded spurge</td>
<td>Annual herb. Occurs in desert dunes and Sonoran desert scrub on sandy soils, often on shifting dunes. From 195 to 3,115 feet in elevation.</td>
<td>February – September Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Chorizanthe parryi</em> var. parryi Parry’s spineflower</td>
<td>Annual herb. Occurs in chaparral, coastal scrub. In openings, slopes, and flats on dry, sandy or rocky soil. From 130 to 5,595 feet in elevation.</td>
<td>April – June Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Chorizanthe polygonoides</em> var. longispina long-spined spineflower</td>
<td>Annual herb occurring in chaparral, coastal scrub, meadows, and valley and foothill grassland. Often in clay or gabbroic clay soils. Seldom in sandy and rocky soils. From 100 to 4,760 feet in elevation.</td>
<td>April – July Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td><em>Chorizanthe xanti</em> var. leucotheca white-bracted spineflower</td>
<td>Annual herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland. From 985 to 3,950 feet in elevation.</td>
<td>April – June Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Cladium californicum</em> California sawgrass</td>
<td>Perennial rhizomatous herb. Occurs in meadows and seeps, and in freshwater and alkaline marshes and swamps. From 200 to 1,970 feet in elevation.</td>
<td>June – September Fed: None CA: None CNPS: List 2 R-E-D: *</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Claytonia lanceolata</em> var. peirsonii Peirson’s spring beauty</td>
<td>Perennial herb. Occurs in subalpine coniferous forest, upper montane coniferous forest on scree. From 7,005 to 9,005 feet in elevation.</td>
<td>May – June Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Cordylanthyus eremicus</em> ssp. eremicus desert bird’s beak</td>
<td>Annual hemiparasitic herb. Occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. From 3,280 to 9,840 feet in elevation.</td>
<td>July – October Fed: None CA: None CNPS: List 4 R-E-D: 1-1-3</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td><em>Cordylanthus maritimus</em> ssp. maritimus salt marsh bird’s-beak</td>
<td>Hemiparasitic annual herb. Occurs in coastal dunes and coastal salt marshes and swamps. Up to 100 feet in elevation.</td>
<td>May – October Fed: END CA: END CNPS: List 1B R-E-D: 2-2-2</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><em>Deinandra mohavensis</em> Mojave tarplant</td>
<td>Annual herb. Occurs in mesic chaparral and riparian scrub. From 2,790 to 5,250 feet in elevation.</td>
<td>July – October Fed: None CA: END CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------</td>
<td>-----------------</td>
<td>------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><em>Delphinium hesperium</em> ssp. <em>cuyamacae</em> Cuyamaca larkspur</td>
<td>Perennial herb. Occurs in lower montane coniferous forest, and in meadows and seeps on mesic soils. From 4,000 to 5,350 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: Rare&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Dodecatheoa leptocerus</em> slender-horned spineflower</td>
<td>Annual herb. Occurs in chaparral, and coastal scrub (alluvial fan sage scrub) along flood-deposited terraces and washes from 600 to 2280 feet; associated with <em>Encelia</em>, <em>Dalea</em>, and <em>Lepidospartum</em></td>
<td>April – June</td>
<td>Fed: END&lt;br&gt;CA: END&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Draba corrugata</em> var. saxosa rock draba</td>
<td>Perennial herb. Occurs in alpine boulder and rock fields, subalpine coniferous forest, and upper montane coniferous forest, on rocky soils. From 7,875 to 11,810 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Dryopteris filix-mas</em> male fern</td>
<td>Perennial rhizomatous herb. Occurs in upper mountain coniferous forest on granitic, rocky soils, usually in crevices. From 7,880 to 10,170 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Dudleya abramsii</em> ssp. <em>affinis</em> San Bernardino Mountains dudleya</td>
<td>Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodlands, and upper montane coniferous forests typically on granitic, quartzite, or carbonate soils. Elevation ranges from 5,200 to 8,530 feet.</td>
<td>April – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Dudleya multicaulis</em> many-stemmed dudleya</td>
<td>Perennial herb. Occurs in coastal scrub, chaparral, and valley and foothill grassland, usually on clay soils or grassy slopes. Up to 2,590 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Eriastrum densifoliium</em> ssp. <em>sanctorum</em> Santa Ana River woollystar</td>
<td>Perennial herb. Occurs in coastal scrub and chaparral on sandy soils. Usually on river floodplains or terraced fluvial deposits. From 490 to 2,000 feet in elevation.</td>
<td>June – September</td>
<td>Fed: END&lt;br&gt;CA: END&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Erigeron breweri</em> var. <em>jacinteus</em> San Jacinto Mts. daisy</td>
<td>Perennial rhizomatous herb. Occurs in subalpine coniferous forest and upper montane coniferous forest, on gravelly soils. From 8,860 to 9,515 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Erigeron parishii</em> Parish’s daisy</td>
<td>Perennial herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland usually on carbonate soils. From 2,625 to 6,561 feet in elevation.</td>
<td>May – June</td>
<td>Fed: THR&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-3-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Erigeron uncialis</em> var. <em>uncialis</em> limestone daisy</td>
<td>Perennial herb. Occurs in Great Basin scrub and subalpine coniferous forest on carbonate soils. From 8,890 to 10,270 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-2-1</td>
<td>Low</td>
</tr>
<tr>
<td><em>Eriogonum evanidum</em> vanishing wild buckwheat</td>
<td>Herb. Occurs in montane coniferous woodland, oak woodland, and sagebrush communities, on sandy to gravelly flats and slopes. From 3,610 to 3,940 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Low</td>
</tr>
<tr>
<td><em>Eriogonum foliosum</em> leafy buckwheat</td>
<td>Annual herb. Occurs in chaparral, lower montane coniferous forest, and pinyon and juniper woodland typically on sandy soils. From 3,935 to 7,215 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Eriogonum kennedyi var. alpigenum southern alpine buckwheat</td>
<td>Perennial herb. Occurs in alpine boulder and rock field, subalpine coniferous forest on granitic, gravelly soils. From 8,530 to 11,480 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriogonum kennedyi var. austromontanum southern mountain buckwheat</td>
<td>Perennial herb. Occurs in lower montane coniferous forest typically on gravelly soils and on pebble plain pavement at elevations from 7,300 to 9,515 feet in elevation.</td>
<td>July – September</td>
<td>Fed: THR &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Eriogonum microthecum var. corymbosoides San Bernardino Mountains buckwheat</td>
<td>Perennial shrub. Occurs in oak woodlands, chaparral, montane coniferous woodland, and pinyon and juniper woodlands on rocky, granitic slopes. From 5,900 to 9,515 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: * &lt;br&gt; R-E-D: *</td>
<td>Low</td>
</tr>
<tr>
<td>Eriogonum microthecum var. johnstonii Johnston’s buckwheat</td>
<td>Deciduous shrub. Subalpine coniferous forest on rocky soils. From 7,300 to 9,515 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eriogonum ovalifolium var. vineum Cushenbury buckwheat</td>
<td>Perennial herb. Occurs in Joshua tree “woodland,” Mojavean desert scrub, and pinyon and juniper woodland. From 4,595 to 8,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 3-3-3</td>
<td>High</td>
</tr>
<tr>
<td>Eriogonum umbellatum var. minus alpine sulphur-flowered buckwheat</td>
<td>Perennial herb. Occurs in subalpine and upper montane coniferous forest, on gravelly soils. From 5,905 to 9,840 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 3-3-3</td>
<td>Low</td>
</tr>
<tr>
<td>Eriophyllum lanatum var. obovatum southern Sierra woolly sunflower</td>
<td>Perennial herb. Occurs in meadows and in alkaline seeps near hot springs, from 395 to 4,400 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 4 &lt;br&gt; R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Fimbristylis thermalis hot springs fimbristylis</td>
<td>Perennial rhizomatous herb. Occurs in meadows and in alkaline seeps near hot springs, from 395 to 4,400 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 2 &lt;br&gt; R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Galium angustifolium ssp. gabrielense San Antonio Canyon bedstraw</td>
<td>Perennial herb. Occurs in chaparral and lower montane coniferous forest, on sandy or rocky, granitic soils. From 3,940 to 8,695 feet in elevation.</td>
<td>April – August</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 4 &lt;br&gt; R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Galium angustifolium ssp. jacinticum San Jacinto Mountains bedstraw</td>
<td>Perennial herb. Occurs in lower montane coniferous forest. From 4,430 to 8,690 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 3-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Galium californicum ssp. primum California bedstraw</td>
<td>Perennial herb. Occurs in chaparral and lower montane coniferous forest on granitic, sandy soils from 4,430 to 5,580 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 1B &lt;br&gt; R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gentiana fremontii moss gentian</td>
<td>Annual herb. Occurs in meadows and seeps on mesic soils and in upper montane coniferous forest. From 7,870 to 8,860 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 2 &lt;br&gt; R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Galium jepsonii Jepson’s bedstraw</td>
<td>Perennial rhizomatous herb. Occurs in upper and lower montane coniferous forest, on rocky or gravelly, granitic soils. From 5,050 to 8,200 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None &lt;br&gt; CA: None &lt;br&gt; CNPS: List 4 &lt;br&gt; R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Galium johnstonii</em></td>
<td>Johnston’s bedstraw. Occurs in chaparral, lower montane coniferous forest, pinyon</td>
<td>June – July</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>and juniper woodland, and riparian woodland. From 4,000 to 7,545 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Gentiana fremontii</em></td>
<td>moss gentian. Occurs in meadows and seeps on mesic soils and in upper</td>
<td>June – August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>montane coniferous forest. From 7,870 to 8,860 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-1-1</td>
<td></td>
</tr>
<tr>
<td><em>Gilia leptantha</em> ssp. leptantha*</td>
<td>San Bernardino gilia. Occurs in lower montane coniferous forest on sandy or gravelly</td>
<td>June – August</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>soils. From 4,920 to 7,985 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Heuchera elegans</em></td>
<td>urn-flowered alumroot. Occurs in cismontane woodland, lower montane</td>
<td>May – August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>coniferous woodland, and upper montane coniferous woodland, on rocky soils. From 3,790</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to 8,695 feet in elevation.</td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Heuchera hirsutissima</em></td>
<td>shaggy-haired alumroot. Occurs in subalpine coniferous forest and upper montane</td>
<td>June – July</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>coniferous woodland, on rocky soils. From 4,920 to 11,480 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Heuchera parishii</em></td>
<td>Parish’s alumroot. Occurs in alpine boulder and rock fields, and lower, upper, and</td>
<td>June – August</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>subalpine coniferous forest, usually in rocky soils. From 4,920 to 12,470 feet in</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>elevation.</td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Horkelia cuneata ssp.</em></td>
<td>mesa horkelia. Occurs in coastal scrub, chaparral and cismontane woodland on sandy</td>
<td>February –</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>or gravelly soils. From 230 to 2,660 feet in elevation.</td>
<td>September</td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-3-3</td>
<td></td>
</tr>
<tr>
<td><em>Horkelia wilderae</em></td>
<td>Barton Flats horkelia. Occurs in upper and lower montane coniferous forest and edges</td>
<td>May – September</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>of chaparral. From 6,000 to 9,840 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-3-3</td>
<td></td>
</tr>
<tr>
<td><em>Hulsea vestita ssp.</em></td>
<td>beautiful hulsea. Occurs in chaparral and lower montane coniferous forest, in rocky,</td>
<td>May – October</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>mildy disturbed areas. Often appears after a fire. From 3,000 to 10,000 feet in</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>elevation.</td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-2-3</td>
<td></td>
</tr>
<tr>
<td><em>Hulsea vestita ssp.</em></td>
<td>San Gabriel Mtns. sunflower. Occurs in upper and lower montane coniferous forest, on</td>
<td>May – July</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>rocky soils. From 4,920 to 8,200 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Hulsea vestita ssp.</em></td>
<td>San Gabriel Mountains sunflower. Occurs in pinyon and juniper woodland, and upper and</td>
<td>April – August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>lower montane coniferous forest on granitic and carbonate soils in openings. From 4,500</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to 8,860 feet in elevation.</td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><em>Hulsea vestita</em> ssp. <em>pygmaea</em> pygmy hulsea</td>
<td>Perennial herb. Occurs in alpine boulder and rock fields and Subalpine coniferous forest, usually in granitic soils. From 9,300 to 12,800 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-1-3</td>
</tr>
<tr>
<td><em>Ivesia argyrocoma</em> silver-haired ivesia</td>
<td>Perennial herb. Occurs in alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 4,900 to 8,800 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-2</td>
</tr>
<tr>
<td><em>Ivesia callida</em> Tahquitz ivesia</td>
<td>Perennial herb. Occurs in upper montane coniferous forest on rocky, granitic soils. From 7,840 to 8,040 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-1-3</td>
</tr>
<tr>
<td><em>Juncus duranii</em> Duran’s rush</td>
<td>Perennial rhizomatous herb. Occurs in upper and lower montane coniferous forest, meadows, and seeps, in mesic soils. From 5,900 to 9,020 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 4 R-E-D: 1-1-3</td>
</tr>
<tr>
<td><em>Lepidium virginicum</em> var. <em>robinsonii</em></td>
<td>Annual herb. Occurs in coastal scrub and chaparral on dry soils. Up to 3,100 feet in elevation.</td>
<td>January – July</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-2-2</td>
</tr>
<tr>
<td><em>Leptosiphon floribundus</em> ssp. <em>hallii</em></td>
<td>Perennial herb. Occurs in Sonoran desert scrub. From 2,950 to 6,660 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-1-3</td>
</tr>
<tr>
<td><em>Lesquerella kingii</em> ssp. <em>bernardina</em></td>
<td>Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland usually on carbonate soils. Found at elevations of 6,070 to 8,860 feet.</td>
<td>May – June</td>
<td>Fed: END</td>
<td>CA: None CNPS: List 1B R-E-D: 3-3-3</td>
</tr>
<tr>
<td><em>Lilium parryi</em> lemon lily</td>
<td>Bulbiferous perennial herb. Upper and lower montane coniferous forest, meadows and seeps, riparian forest. Wet terrain, forested, mountainous, or boggy areas. On mesic soil. From 4,000 to 9,150 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-2</td>
</tr>
<tr>
<td><em>Linanthus concinnus</em> San Gabriel linanthus</td>
<td>Annual herb. Occurs in lower and upper montane coniferous forest in rocky soils and on dry slopes. From 5,170 to 9,190 feet in elevation.</td>
<td>April - July</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-2-3</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Linanthus jaegeri</td>
<td>Perennial herb. Occurs in subalpine coniferous forest and upper montane coniferous forest, on rocky, granitic soils. From 6,070 to 10,000 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Low</td>
</tr>
<tr>
<td>Linanthus killipii</td>
<td>Annual herb. Occurs in alkaline meadows and seeps, pebble pavement, pinyon and juniper woodland, and upper montane coniferous woodland. From 5,580 to 7,880 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Linanthus maculatus</td>
<td>Annual herb. Occurs in desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub, sandy soils. From 640 to 6,810 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Linanthus orcuttii</td>
<td>Annual herb occurring in chaparral, lower montane coniferous forest, and in pinyon and juniper woodland, usually in disturbed areas and gravelly openings in vegetation. From 3,000 to 7,040 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Loeflingia squarrosa var. artemisiarum sagebrush loeflingia</td>
<td>Annual herb. Occurs in desert dunes, Great Basin scrub, and Sonoran desert scrub, in sandy soils. From 2,300 to 5,300 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lycium parishii</td>
<td>Shrub. Occurs in coastal scrub and Sonoran desert scrub. From 1,000 to 3,280 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Machaeranthera canescens var. ziegleri Ziegler’s aster</td>
<td>Perennial herb. Occurs in upper and lower montane coniferous forest. From 4,595 to 8,100 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-3</td>
<td>Low</td>
</tr>
<tr>
<td>Malacothamnus davidsonii Davidson’s bush mallow</td>
<td>Deciduous shrub. Occurs in coastal scrub, cismontane woodland, riparian woodland, and chaparral, often in sandy washes. From 610 to 2,805 feet in elevation.</td>
<td>June - January</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Malacothamnus parishii Parish’s bush mallow</td>
<td>Deciduous shrub occurring in chaparral and coastal scrub. From 1,000 to 1,490 feet in elevation. Presumed extinct in California.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 1A R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td>Malaxix monophyllos ssp. brachypoda adder’s mouth</td>
<td>Perennial bulbiferous herb. Occurs in bogs and fens, meadows and seeps, and upper montane coniferous forest on mesic soils. From 7,220 to 8,860 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-3-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Marina orcuttii var. orcuttii California marina</td>
<td>Perennial herb. Occurs in chaparral, pinyon and juniper woodland, and Sonoran desert scrub, on rocky soils. From 3,440 to 3,805 feet in elevation.</td>
<td>May – October</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-2</td>
<td>Low</td>
</tr>
<tr>
<td>Matelea parvifolia spearleaf</td>
<td>Perennial herb. Occurs in Mojavean and Sonoran desert scrub on rocky soils. From 1,445 to 3,590 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Minimus exigus San Bernardino Mountains monkeyflower</td>
<td>Annual herb. Occurs in meadows and seeps, pebble pavement plain, and upper montane coniferous forest on mesic and clay soils. From 5,900 to 7,600 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-2</td>
<td>High</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>Mimulus mohavensis</strong>&lt;br&gt;Mojave monkeyflower</td>
<td>Annual herb. Occurs in Joshua tree woodland and Mojavean desert scrub, on gravelly soils, usually in dry washes near the Mojave River. From 1,970 to 3,940 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Mimulus purpureus</strong>&lt;br&gt;purple monkeyflower</td>
<td>Annual herb occurring in meadows, pebble plain, and upper montane coniferous forest. From 6,235 to 7,550 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-2</td>
<td>High</td>
</tr>
<tr>
<td><strong>Monardella cinerea</strong>&lt;br&gt;gray monardella</td>
<td>Perennial rhizomatous herb. Occurs in upper and lower montane coniferous forest, and subalpine coniferous forest. From 5,900 to 10,000 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Monardella macrantha</strong>&lt;br&gt;ssp. hallii&lt;br&gt;Hall’s monardella</td>
<td>Rhizomatous perennial herb. Broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. On dry slopes and ridges in openings within the above communities. Occurs at elevations of 2,395 to 7,200 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Monardella nana</strong>&lt;br&gt;ssp. leptosiphon&lt;br&gt;San Felipe monardella</td>
<td>Perennial rhizomatous herb. Occurs in chaparral and lower montane coniferous forest. From 3,940 to 6,085 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Monardella pringlei</strong>&lt;br&gt;Pringle’s monardella</td>
<td>Annual herb. Occurs in sandy coastal scrub, from 655 to 2,625 feet in elevation. Known only from occurrences in the vicinity of Colton.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1A&lt;br&gt;R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Monardella viridis</strong> var. saxicola&lt;br&gt;green monardella</td>
<td>Perennial rhizomatous herb. Occurs in broadleaved upland forest, chaparral, and cismontane woodland from 985 to 3,315 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Muhlenbergia Californica</strong>&lt;br&gt;California muhly</td>
<td>Perennial herb. Occurs in coastal sage, chaparral, lower montane coniferous forest, and meadows. Usually near streams and seeps. From 1,312 to 6,560 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Muilla coronata</strong>&lt;br&gt;crowned muilla</td>
<td>Perennial bulbiferous herb. Occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. From 2,510 to 6,430 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-2-2</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Myosurus minimus</strong> ssp. apus&lt;br&gt;little mouse tail</td>
<td>Annual herb occurring in valley and foothill grassland and vernal pools in alkaline soils. From 65 to 2,100 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Navarretia pennisularis</strong>&lt;br&gt;Baja navarretia</td>
<td>Annual herb. Chaparral (openings), lower montane coniferous forest in mesic soils. From 4,920 to 7,550 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Navarretia prostrata</strong>&lt;br&gt;prostrate navarretia</td>
<td>Annual herb. Occurs in coastal scrub, vernal pools, and valley and foothill grasslands in mesic soils. From 50 to 2,300 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Opuntia basilaris</em> var. <em>brachyclada</em></td>
<td>Short-joint beavertail Stem succulent shrub. Occurs in chaparral, joshua tree “woodland,”</td>
<td>April - June</td>
<td>Fed: None</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>mojavean desert scrub, and in pinyon and juniper woodland, often on sandy soils or coarse,</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>granitic loam. From 1,395 to 5,910 feet in elevation.</td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-2-3</td>
<td></td>
</tr>
<tr>
<td><em>Oreonana vestita</em></td>
<td>Perennial herb. Lower montane, subalpine, and montane forests. On gravelly soils. Occurs</td>
<td>May - September</td>
<td>Fed: None</td>
<td>High</td>
</tr>
<tr>
<td><em>woolly mountain-parsley</em></td>
<td>at elevations of 7,495 to 11,480 feet.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Orobanche valida ssp. valida</em></td>
<td>Rock creek broomrape Perennial parasitic herb. Chaparral, pinyon and juniper woodland on</td>
<td>May - July</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>granitic soil. Occurs at elevations of 4,100 - 6,560 feet.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-2-3</td>
<td></td>
</tr>
<tr>
<td><em>Oxtheca caryophylloides</em></td>
<td>Chickweed puncturebract. Annual herb. Occurs in lower montane coniferous forest on sandy</td>
<td>July - September</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>soils. From 3,940 to 8,530 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Oxytheca parishii var. cinerengensis</em></td>
<td>Genega Seca oxytheca Annual herb. Occurs in upper montane coniferous forest in sandy,</td>
<td>June - September</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>granitic soils. From 6,900 to 8,040 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Oxytheca emarginata</em></td>
<td>White-margined puncturebract Annual herb. Occurs in chaparral, lower montane coniferous</td>
<td>April - July</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>forest, pinyon and juniper woodland. (occasionally blooms as early as February and as late</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as August) From 3,940 to 6,200 feet in elevation.</td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Oxytheca parishii var. goodmaniana</em></td>
<td>Cushenbury oxytheca Annual herb occurring in pinyin and juniper woodland usually on carbonate</td>
<td>May - September</td>
<td>Fed: END</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>and talus soils. From 4,265 to 7,790 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-3-3</td>
<td></td>
</tr>
<tr>
<td><em>Oxytropis orephila</em></td>
<td>Mountain oxytrope Perennial herb. Occurs in alpine boulder and rock fields and subalpine</td>
<td>June - September</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>coniferous forests often on gravelly or rocky soils. From 11,150 to 12,470 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-1-1</td>
<td></td>
</tr>
<tr>
<td><em>Parnassia cirrata</em></td>
<td>Fringed grass-of-parnassus Perennial herb. Lower and upper montane coniferous forest on</td>
<td>August - September</td>
<td>Fed: None</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>mesic soils. From 7,000 to 9,840 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Penstemon californicus</em></td>
<td>California beardtongue Perennial herb. Occurs in chaparral, lower montane coniferous</td>
<td>May - August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>forest, and pinyon and juniper woodland on sandy soils. From 3,840 to 7,545 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 3-2-2</td>
<td></td>
</tr>
<tr>
<td><em>Perideridia parishii</em></td>
<td>Parish’s yampah Perennial herb. Occurs in lower and upper montane coniferous forest, and</td>
<td>June - August</td>
<td>Fed: None</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>meadows and seeps. From 4,805 to 3,840 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 2-2-1</td>
<td></td>
</tr>
<tr>
<td><em>Phacelia exilis</em></td>
<td>Transverse Range phacelia Annual herb. Occurs in upper and lower montane coniferous forest,</td>
<td>May - August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>meadows, and seeps, on sandy or gravelly soils. From 3,610 to 8,860 feet in elevation.</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td><em>Phacelia mohavensis</em></td>
<td>Mojave phacelia Annual herb. Occurs in cismontane woodland, lower montane coniferous</td>
<td>April - August</td>
<td>Fed: None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>forest, meadows, seeps, and in pinyon and juniper woodland, on sandy or gravelly soils. From</td>
<td></td>
<td>CA: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4,595 to 8,200 feet in elevation.</td>
<td></td>
<td>CNPS: List 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-E-D: 1-1-3</td>
<td></td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Phacelia parishii</td>
<td>Annual herb. Occurs in Mojavean desert scrub and on playas, in clay or alkaline soils. From 1,755 to 3,940 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Phlox dolichantha</td>
<td>Perennial herb. Occurs in pebble pavement plain and openings in upper montane coniferous forest. From 6,000 to 9,745 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Physaria kingii ssp. bernardina</td>
<td>Perennial herb. Occurs in lower montane coniferous forest and in pinyon and juniper woodland, usually on carbonate soils. From 6,070 to 8,860 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Low</td>
</tr>
<tr>
<td>Piperia leptopetala</td>
<td>Perennial herb. Occurs in cismontane woodland, upper montane coniferous woodland, and lower montane coniferous woodland. From 1,250 to 7,300 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 4 R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Plagiobothrys parishii</td>
<td>Annual herb. Occurs in Great Basin scrub and Joshua tree woodland often on alkaline and mesic soils at elevations from 2,460 to 4,600 feet.</td>
<td>March – November</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Poa atropurpurea</td>
<td>Annual herb. Occurs in meadows and seeps. From 4,460 to 8,055 feet in elevation.</td>
<td>April – August</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Polomintha incana</td>
<td>Shrub. Occurs in lower montane coniferous forest in mesic soils. From 5,250 to 5,580 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 1A R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td>Populus angustifolia</td>
<td>Deciduous tree occurring in riparian forests. From 3,940 to 5,905 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Potentilla glandulosa ssp. ewani</td>
<td>Perennial herb. Occurs in lower montane coniferous forests often near seeps and springs at elevations from 6,235 to 7,875 feet.</td>
<td>June – July</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Potentilla rimicola</td>
<td>Perennial herb. Occurs in subalpine coniferous forest and upper montane coniferous forest, on rocky, granitic soils. From 7,840 to 9,940 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Puccinellia parishii</td>
<td>Annual herb. Occurs in meadows and alkaline seeps and springs. From 2,280 to 3,280 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Pyrocoma uniflora var. gossypina</td>
<td>Perennial herb. Occurs in meadows and seeps, and pebble pavement plain. From 5,250 to 7,550 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Ribes divaricatum var. parishii</td>
<td>Deciduous shrub. Occurs in riparian woodland. From 200 to 1,000 feet in elevation.</td>
<td>February – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><em>Rorippa gambelii</em> Gambel's water cress</td>
<td>Rhizomatous perennial herb. Occurs in freshwater or brackish marshes and swamps. From 15 to 1,085 feet in elevation.</td>
<td>April – September</td>
<td>Fed: END&lt;br&gt;CA: THR&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Rupertia rigida</em> Parish's rupertia</td>
<td>Perennial herb. Occurs in chaparral, cismontane woodland, and lower montane coniferous forest. From 2,300 to 8,200 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-2</td>
<td>Low</td>
</tr>
<tr>
<td><em>Saltugilia latimeri</em> Latimer's woodland-gilia</td>
<td>Annual herb. Occurs in chaparral, Mojavean desert scrub, and Pinyon and juniper woodland, usually on granitic rocky or sandy soils, sometimes near washes. From 1,310 to 6,235 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Schoenus nigricans</em> black sedge</td>
<td>Perennial herb. Occurs in marshes and swamps often associated with alkaline soils. From 500 to 6,565 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Scutellaria bolanderi</em> ssp. austromontana southern skullcap</td>
<td>Perennial herb. Occurs in chaparral, cismontane woodland, and lower montane coniferous forest. From 1,395 to 6,560 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Sedum niveum</em> Davidson's stonecrop</td>
<td>Perennial rhizomatous herb. Occurs in upper and lower montane coniferous forest and subalpine coniferous forest, on rocky soils. From 6,810 to 9,840 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-2</td>
<td>Low</td>
</tr>
<tr>
<td><em>Senecio bernardinus</em> San Bernardino ragwort</td>
<td>Perennial herb. Occurs in mesic or alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 5,900 to 7,550 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Senecio ionophylla</em> Tehachapi ragwort</td>
<td>Perennial herb. Occurs in upper and lower montane coniferous forest, on rocky, granitic soils. From 4,920 to 8,860 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td><em>Sidalcea hickmanii</em> ssp. <em>parishii</em> Parish’s checkerblom</td>
<td>Perennial herb occurring in chaparral, cismontane woodland, and lower montane coniferous forest. From 3,280 to 8,200 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: Rare&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Sidalcea neomexicana</em> salt spring checkerblom</td>
<td>Perennial herb. Occurs in coastal scrub, chaparral, lower montane coniferous forest, brackish marshes, Mohavean desert scrub, and playas on alkaline, mesic soils. Up to 5,020 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Sidalcea pedata</em> bird-foot checkerblom</td>
<td>Perennial herb. Occurs in meadows and seeps on mesic soils and on pebble plain pavement. From 5,250 to 8,200 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END&lt;br&gt;CA: END&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Sphenopholis obtusata</em> prairie wedge grass</td>
<td>Perennial herb. Occurs in cismontane woodland and meadows and seeps in mesic soils. From 985 to 6,560 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Streptanthus bernardinus</em> Laguna Mountains jewel flower</td>
<td>Perennial herb. Occurs in upper and lower montane coniferous forest on rocky, granitic soils. From 2,200 to 8,200 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 4&lt;br&gt;R-E-D: 1-1-3</td>
<td>Low</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| *Streptanthus campestris*  
Southern jewel-flower | Annual herb. Occurs in chaparral, lower montane coniferous forest, and pinyon-juniper woodland in open, rocky areas. From 1,970 to 9,150 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-2 | Moderate |
| *Swertia neglecta*  
Pinque green-gentian | Perennial herb. Occurs in lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest. From 4,590 to 8,200 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 4  
R-E-D: 1-1-3 | Low |
| *Symphyotrichum defoliatum*  
San Bernardino aster | Rhizomatous perennial. Occurs in meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and valley and foothill grasslands, often in disturbed places. Up to 6,690 feet in elevation. | July – November | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
| *Swertia neglecta*  
Pinque green-gentian | Perennial herb. Occurs in lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest. From 4,590 to 8,200 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 4  
R-E-D: 1-1-3 | Low |
| *Syntrichopappus lemmonii*  
Lemmon’s syntrichopappus | Annual herb. Occurs in chaparral, Joshua tree woodland, and pinyon and juniper woodland, on sandy or gravelly soils. From 1,640 to 6,000 feet in elevation. | April – May | Fed: None  
CA: None  
CNPS: List 4  
R-E-D: 1-1-3 | Moderate |
| *Taraxacum californicum*  
California dandelion | Perennial herb. Occurs in meadows and seeps on mesic soils. From 5,315 to 9,185 feet in elevation. | May – August | Fed: END  
CA: none  
CNPS: List 1B  
R-E-D: 3-2-3 | High |
| *Thelypodium stenopetalum*  
Slender-petaled thelypodium | Perennial herb. Occurs in meadows and seeps on mesic, alkaline soils. From 5,250 to 8,205 feet in elevation. | May – September | Fed: END  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | High |
| *Thelypteris puberula var. sonorensis*  
Sonoran maiden fern | Perennial rhizomatous herb. Occurs in meadows, seeps and streams. From 165 to 2,000 feet in elevation. | January – September | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-1 | Moderate |
| *Viola aurea*  
Golden violet | Perennial herb. Occurs in Great Basin scrub and pinyon and juniper woodland often with sandy soils. From 3,280 to 5,905 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-2-1 | Moderate |
| *Viola pinetorum* ssp. *grisea*  
Grey-leaved violet | Perennial herb. Occurs in meadows and seeps and subalpine and upper montane coniferous forest. From 4,920 to 11,150 feet in elevation. | April – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-1-3 | Low |

General references: Hickman (ed.) 1993; Munz 1974; CNPSEI 2006; CNDDB 2006

*Federal designations:* (federal Endangered Species Act, USFWS):
END: Federal-listed, endangered.
THR: Federal-listed, threatened.
CAN: Proposed federal listed, endangered.

*State designations:* (California Endangered Species Act, CDFG)
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
</table>

California Native Plant Society (CNPS) designations:
- List 1A: Plants presumed extinct in California.
- List 1B: Plants rare and endangered in California and throughout their range.
- List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
- List 3: Plants about which we need more information; a review list.
- List 4: Plants of limited distribution; a watch list.

CNPS R-E-D Code:
- **Rarity**:
  - 1 Rare, found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
  - 2 Occurrence confined to several populations or one extended population.
  - 3 Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.
- **Endangerment**:
  - 1 Not endangered.
  - 2 Endangered in a portion of its range.
  - 3 Endangered throughout its range.
- **Distribution**:
  - 1 More or less widespread outside California.
  - 2 Rare outside California.
  - 3 Endemic to California (i.e., does not occur outside California)

Definitions of Occurrence Probability:
- **Absent**
  - Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.
- **Low**
  - Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.
- **Moderate**
  - Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **High**
  - Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **Present**
  - Species observed on the site during surveys described here, or recorded onsite by other qualified biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State U.S. FS</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accipiter cooperii</td>
<td>Cooper’s hawk</td>
<td>None</td>
<td>Inhabits deciduous, coniferous, and mixed riparian or wetland forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Accipiter gentilis</td>
<td>northern goshawk</td>
<td>FSS</td>
<td>Breeds in upland and lowland mature broadleaved and coniferous woodlands. Winters near woodland and in more open country.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Accipiter striatus</td>
<td>sharp-shinned hawk</td>
<td>FSS</td>
<td>Breeding habitat is usually deciduous or evergreen woodlands, commonly in mountainous areas</td>
<td>Moderate</td>
</tr>
<tr>
<td>Agelaius tricolor</td>
<td>tri-colored blackbird</td>
<td>None</td>
<td>Inhabits freshwater marshes with dense cattails and shrubs and also grain fields</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aimophila ruficeps canescens</td>
<td>Southern California rufus-crowned sparrow</td>
<td>None</td>
<td>Inhabits grassy rocky slopes with sparse low bushes, open pine-oak woodlands.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Amphispiza belli belli</td>
<td>Bell’s sage sparrow</td>
<td>FSS</td>
<td>Nesting) nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aquila chrysaetos</td>
<td>Golden eagle</td>
<td>None</td>
<td>Found along rolling foothills or coast-range terrain with large trees (scattered oaks, sycamores, and digger pines) in open areas. Cliff-walled canyons provide nesting habitat.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Asio otus</td>
<td>long-eared owl</td>
<td>None</td>
<td>Nesting) Riparian bottomlands grown to tall willows &amp; cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Athene cunicularia</td>
<td>Burrowing owl</td>
<td>None</td>
<td>Prefers open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent on small mammal burrows (particularly ground squirrels) for its subterranean nesting.</td>
<td>High</td>
</tr>
<tr>
<td>Botaurus lentiginosus</td>
<td>American bittern</td>
<td>FSS</td>
<td>Inhabits freshwater or brackish marshes with tall vegetation.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Buteo albonotatus</td>
<td>zone-tailed hawk</td>
<td>FSS</td>
<td>Open, rugged country near canyons and cliffs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Buteo regalis</td>
<td>ferruginous hawk</td>
<td>FSS</td>
<td>And open land and grassland.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Campylorhynchus brunicepalli sandiegoense</td>
<td>San Diego cactus wren</td>
<td>FSS</td>
<td>Inhabits deserts and semideserts with cactus , such as prickly pear and cholla.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Caprimulgus vociferus</td>
<td>whip-poor-will</td>
<td>FSS</td>
<td>Open woods, canyons, and dry, bushy areas.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Carduelis lawrencei</td>
<td>Lawrence’s goldfinch</td>
<td>FSS</td>
<td>And grassy slopes, chaparral, open oak, or pine forest.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cathartes aura</td>
<td>turkey vulture</td>
<td>FSS</td>
<td>Inhabits open country and land fills, occasionally roosts in urban areas.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Catharus ustulatus</td>
<td>Swainson’s thrush</td>
<td>FSS</td>
<td>Inhabits coniferous and mixed woods, and shrub hickeries along streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State U.S. FS</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------</td>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Circus cyaneus</td>
<td>northern harrier</td>
<td>FSS</td>
<td>Inhabits open fields, grasslands, prairies, and marshes.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Coccyzus americanus occidentalis</td>
<td>Western yellow-billed cuckoo</td>
<td>FSOC FSS SE</td>
<td>Inhabits dense cottonwood/willow stands, although mesquite and salt cedar may be utilized.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Columba fasciata</td>
<td>band-tailed pigeon</td>
<td>FSS</td>
<td>Inhabits dry pine forests inland; oak forests along the coast; may be seen in parks and gardens.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Contopus borealis</td>
<td>olive-sided flycatcher</td>
<td>FSS</td>
<td>Northern and mountainous coniferous forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cypseloides niger</td>
<td>black swift</td>
<td>None</td>
<td>Inhabits coastal belt of Santa Cruz &amp; Monterey Co; Central &amp; Southern Sierra Nevada; San Bernardino &amp; San Jacinto Mtns. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above surf; forages widely.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Dendroica petechia brewsteri</td>
<td>yellow warbler</td>
<td>None</td>
<td>(Nesting) Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, &amp; alders for nesting &amp; foraging. Also nests in montane shrubbery in open conifer forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Elanus leucus</td>
<td>white-tailed kite</td>
<td>FSS</td>
<td>Grasslands with scattered trees, near marshes, and along highways.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Empidonax traillii extimus</td>
<td>southwestern willow flycatcher</td>
<td>FE SE FSE</td>
<td>(Nesting) riparian woodlands in southern California. State listing includes all subspecies.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eremophila alpestris actia</td>
<td>California horned lark</td>
<td>None</td>
<td>Associated with desert brushlands, grasslands, and similar open habitats, as well as alpine meadows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Falco columbarius</td>
<td>merlin</td>
<td>FSS</td>
<td>Summers in a variety of habitats, including forest edges, farmland, urban areas; winters on coastal lowlands, prairies, and marshes.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Falco mexicanus</td>
<td>prairie falcon</td>
<td>None</td>
<td>(Nesting) Inhabits dry, open terrain, either level or hilly, Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Falco peregrinus anatum</td>
<td>American peregrine falcon</td>
<td>FSS</td>
<td>Open country near cliffs, urban areas, and coastal areas.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gallinago gallinago</td>
<td>common snipe</td>
<td>FSS</td>
<td>Wet marshes, meadows, and bogs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Glauclidium gnoma</td>
<td>northern pygmy owl</td>
<td>FSS</td>
<td>Inhabits open woods and forest edges in mountains and foothills.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Glaucomys sabrinus Californicus</td>
<td>San Bernardino flying squirrel</td>
<td>None</td>
<td>Black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gymnogyps californianus</td>
<td>California condor</td>
<td>FSE</td>
<td>Chaparral, coniferous forests, and oak savannah habitats in southern and central California.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Haliaeetus leucocephalus</td>
<td>bald eagle</td>
<td>FT SE FST</td>
<td>(Nesting &amp; wintering) Ocean shore, lake margins, &amp; rivers for both nesting &amp; wintering. Most nests within 1 mi of water. Nests in lg., old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>U.S. FS</td>
<td>Habitat</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>-----------------------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Icteria virens</td>
<td>yellow-breasted chat</td>
<td>None</td>
<td>CSC</td>
<td>(Nesting) Summer resident; inhabits riparian thickets of willow &amp; other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest within 10 ft of ground.</td>
</tr>
<tr>
<td>Ixobrychus exilis hesperis</td>
<td>western least bittern</td>
<td>FSS</td>
<td></td>
<td>Marshes with dense vegetation such as sedges and cattails.</td>
</tr>
<tr>
<td>Lanius ludovicianus</td>
<td>loggerhead shrike</td>
<td>FSS</td>
<td>CSC</td>
<td>(Nesting) Broken woodlands, savannah, pinyon-juniper, Joshua tree, &amp; riparian woodlands, desert oases, scrub &amp; washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.</td>
</tr>
<tr>
<td>Melanerpes lewis</td>
<td>Lewis' woodpecker</td>
<td>FSS</td>
<td></td>
<td>Dry open woods, orchards, farmlands, and foothills.</td>
</tr>
<tr>
<td>Melospiza lincolnii</td>
<td>Lincoln's sparrow</td>
<td>FSS</td>
<td></td>
<td>Summers in bogs and wet meadows; winters in weedy fields and shrub edges.</td>
</tr>
<tr>
<td>Opporornis tolmiei</td>
<td>MacGillivray's warbler</td>
<td>FSS</td>
<td></td>
<td>Mountain forests or shrubby hillside with dense understory.</td>
</tr>
<tr>
<td>Oreoryx pictus</td>
<td>mountain quail</td>
<td>FSS</td>
<td></td>
<td>Inhabits mountain areas with shrubs.</td>
</tr>
<tr>
<td>Otus flammeolus</td>
<td>flammulated owl</td>
<td>FSS</td>
<td></td>
<td>Pine (especially ponderosa) and oak forests.</td>
</tr>
<tr>
<td>Pardion haliaetus</td>
<td>osprey</td>
<td>FSS</td>
<td></td>
<td>Large lakes, rivers, and coasts.</td>
</tr>
<tr>
<td>Pelecanus erythrorhynchos</td>
<td>American white pelican</td>
<td>FSS</td>
<td></td>
<td>Summers on large inland lakes; winters along coasts.</td>
</tr>
<tr>
<td>Pelecanus occidentalis californicus</td>
<td>California brown pelican</td>
<td>FSE</td>
<td></td>
<td>Coastal areas.</td>
</tr>
<tr>
<td>Phalacrocorax auritus</td>
<td>double-crested cormorant</td>
<td>FSS</td>
<td></td>
<td>Coasts, inland rivers, and lakes.</td>
</tr>
<tr>
<td>Picoides albolarvatus</td>
<td>white-headed woodpecker</td>
<td>FSS</td>
<td></td>
<td>Coniferous woods in mountain regions.</td>
</tr>
<tr>
<td>Picoides nuttallii</td>
<td>Nuttall's woodpecker</td>
<td>FSS</td>
<td></td>
<td>Shrublands, streamsides, and oak woodlands.</td>
</tr>
<tr>
<td>Piranga flava</td>
<td>hepatic tanager</td>
<td>FSS</td>
<td>CSC</td>
<td>(Nesting) White fir-pinyon forest on desert peaks, 5300-8100 ft elev. Understory of xerophytic shrubs.</td>
</tr>
<tr>
<td>Piranga rubra</td>
<td>summer tanager</td>
<td>None</td>
<td>CSC</td>
<td>(Nesting) Summer resident of desert riparian along lower Colorado River, &amp; locally elsewhere in California deserts. Require cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.</td>
</tr>
<tr>
<td>Plegadis chihi</td>
<td>white-faced ibis</td>
<td>FSS</td>
<td></td>
<td>Salt and freshwater lakes, marshes, swamps, tidal mudflats, shores.</td>
</tr>
<tr>
<td>Polioptila californica californica</td>
<td>Coastal California gnatcatcher</td>
<td>FT</td>
<td>CSC</td>
<td>Occurs in coastal sage scrub vegetation on mesas, arid hillsides, and in washes and nests almost exclusively in California sagebrush.</td>
</tr>
<tr>
<td>Polioptila melanura</td>
<td>black-tailed gnatcatcher</td>
<td>FSS</td>
<td></td>
<td>Deserts and dry creeks.</td>
</tr>
<tr>
<td>Progne subis</td>
<td>purple martin</td>
<td>None</td>
<td>CSC</td>
<td>(Nesting) Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, &amp; Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State U.S. FS</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------------</td>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Selasphorus sasin</td>
<td>Allen's hummingbird</td>
<td>FSS</td>
<td>Woods, thickets, gardens, and parks.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sphyrapicus thyroideus</td>
<td>Williamson’s sapsucker</td>
<td>FSS</td>
<td>Inhabits forests with large trees and sparse to moderate canopy cover.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Spizella atragularis</td>
<td>black-chinned sparrow</td>
<td>FSS</td>
<td>Sagebrush and shrubby hillsides.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Stellula calliope</td>
<td>calliope hummingbird</td>
<td>FSS</td>
<td>Mountain meadows and open forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Strix occidentalis occidentalis</td>
<td>California spotted owl</td>
<td>FSS</td>
<td>Old growth forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Tachycineta bicolor</td>
<td>tree swallow</td>
<td>FSS</td>
<td>Open areas near woods and water.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Toxostoma bendirei</td>
<td>Bendire’s thrasher</td>
<td>None CSC</td>
<td>Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, paloverde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Toxostoma lecontei</td>
<td>Le Conte’s thrasher</td>
<td>None CSC FSS</td>
<td>Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Toxostoma redivivum</td>
<td>California thrasher</td>
<td>FSS</td>
<td>Chaparral habitat.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vermivora ruficapilla</td>
<td>Nashville warbler</td>
<td>FSS</td>
<td>Open second-growth woods, thickets, and woodlands edges.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vireo bellii pusillus</td>
<td>Least Bell’s vireo</td>
<td>FE SE FSE</td>
<td>Spring and summer breeding resident, migrating south for fall and winter. Primarily inhabits riparian woodlands, willow scrub, and thickets for breeding.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vireo vicinior</td>
<td>gray vireo</td>
<td>FSS CSC</td>
<td>(Nesting) Dry chaparral; w of desert, in chamise-dominated habitat; mtls of Mojave Desert, assoc w/juniper-Artemisia. Forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Wilsonia pusilla</td>
<td>Wilson's warbler</td>
<td>FSS</td>
<td>Willow and alder thickets near water; moist woodlands.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Mammals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antrozous pallidus</td>
<td>pallid bat</td>
<td>FSS</td>
<td>Arid deserts and grasslands, often near rocky outcrops and water. Less abundant in evergreen and mixed conifer woodland. usually roosts in rock crevice or building, less often in cave, tree hollow, mine, etc.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Bassariscus astutus</td>
<td>ringtail</td>
<td>FSS</td>
<td>Typically in rocky areas with cliffs or crevices for daytime shelter; desert scrub, chaparral, pine-oak and conifer woodland. Usually within 0.5 miles of water.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Chaetodipus fallax fallax</td>
<td>Northwestern San Diego pocket mouse</td>
<td>None CSC FSS</td>
<td>Inhabits coastal sage scrub, sage scrub/grassland and chaparral communities.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>------------------------------</td>
<td>----------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Chaetodipus fallax pallidus</td>
<td>pallid San Diego pocket mouse</td>
<td>None CSC</td>
<td>Desert border areas in eastern San Diego Co. In desert wash, desert scrub, desert succulent scrub, pinyon-juniper, sandy herbaceous areas, etc. usually in association with rocks or coarse gravel.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Corynorhinus townsendii</td>
<td>Townsend's big-eared bat</td>
<td>None CSC</td>
<td>Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls &amp; ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Corynorhinus townsendii</td>
<td>Pacific western big-eared bat</td>
<td>FSS</td>
<td>Caves typically in limestone karst regions dominated by mature hardwood forests of hickory, beech, maple, and hemlock. Prefers cool, well-ventilated caves for hibernation.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Dipodomys merriami parvus</td>
<td>San Bernardino kangaroo rat</td>
<td>FE None FSE</td>
<td>Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Dipodomys stephensi</td>
<td>Stephens’ kangaroo rat</td>
<td>FE ST</td>
<td>These rats need sparsely vegetated habitats (i.e., sagebrush and grass patches) on sandy or gravelly soils.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Euderma maculatum</td>
<td>spotted bat</td>
<td>FSS</td>
<td>Found foraging in many different habitats, especially in and or ponderosa pine forests, and marshlands. Roost in the small cracks found in cliffs and stony outcrops.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eumops perotis californicus</td>
<td>Western mastiff bat</td>
<td>None CSC FSS</td>
<td>Found in all but sub-alpine and alpine habitats. Limited roosting sites in caves and buildings.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Felis concolor</td>
<td>mountain lion</td>
<td>FSS</td>
<td>Inhabits a variety of habitats including montane coniferous forests, lowland tropical forests, grassland, dry brush country, swamps, and any areas with adequate cover and prey. Dense vegetation, caves, and rocky crevices provide shelter.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lasius blossevillii</td>
<td>western red bat</td>
<td>FSS</td>
<td>Prefer riparian areas where they roost in tree foliage. Occasionally captured in riparian habitats dominated by cottonwoods, oaks, sycamores, and walnuts and is rarely found in desert habitats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lepus californicus bennettii</td>
<td>San Diego black-tailed jackrabbit</td>
<td>None CSC FSS</td>
<td>Occurs in intermediate canopy stages of shrub habitats and open shrub, along herbaceous and tree edges within coastal sage scrub habitats in southern California.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Macrotus californicus</td>
<td>California leaf-nosed bat</td>
<td>FSS</td>
<td>Found in lowland desert associations. They appear to be limited to areas with suitable day-roosts, which must provide shelter from excessive heat and aridity.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Microtus californicus stephensi</td>
<td>South coast marsh vole</td>
<td>None CSC</td>
<td>Tidal marshes in Los Angeles, orange and southern Ventura Counties.</td>
<td>Low</td>
</tr>
<tr>
<td>Myotis ciliolabrum</td>
<td>small-footed myotis</td>
<td>FSS</td>
<td>Occurs in deserts, chaparral, riparian zones, and western coniferous forest; it is most common above pinyon-juniper forest.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Myotis evotis</td>
<td>long-eared myotis</td>
<td>FSS</td>
<td>Occurs in coniferous forest. Ponderosa pine woodland is the most common habitat type, although the animals also range down into pi-on-juniper woodland. Roosts are in trees (often behind loose bark), in sheds, cabins, caves, abandoned mines and other such sheltered areas.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Myotis lucifugus</td>
<td>occult little brown bat</td>
<td>FSS</td>
<td>Adapted to using human-made structures for resting and maternity sites; also uses caves and hollow trees. Foraging habitat requirements are generalized; usually forages in woodlands near water.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Myotis thysanodes</td>
<td>fringed myotis</td>
<td>FSS</td>
<td>Found in hot desert scrubland, grassland, xeric woodland (most commonly), sage-grass steppe, mesic old-growth forest, and multi-aged subalpine coniferous and mixed-deciduous forest.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Myotis volans</td>
<td>long-legged myotis</td>
<td>FSS</td>
<td>Primarily coniferous forests, but the species also occurs seasonally in riparian and desert habitats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Myotis yumanensis</td>
<td>Yuma myotis</td>
<td>FSS</td>
<td>Found in a wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands and forests, but usually found near open water.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Neotoma lepida intermedia</td>
<td>San Diego desert woodrat</td>
<td>None CSC FSS</td>
<td>In a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Nyctinomops femorosacca</td>
<td>pocketed free-tailed bat</td>
<td>FSS</td>
<td>Inhabits semiarid deserts. Their roosts can be found in caves, tunnels, mines, and rock crevices.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Onychomys torridus ramona</td>
<td>southern grasshopper mouse</td>
<td>FSS</td>
<td>Occurs in alkali desert scrub and also succulent, wash, and riparian communities.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ovis canadensis crenonbates</td>
<td>Peninsular bighorn sheep</td>
<td>FSE</td>
<td>Dry, rocky, low-elevation desert slopes, canyons, and washes.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ovis canadensis nelsoni</td>
<td>Nelson's bighorn sheep</td>
<td>FSS</td>
<td>Alpine meadows, grassy mountain slopes and foothill country near rugged, rocky cliffs and bluffs, allowing for quick escape.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Parus inornatus</td>
<td>oak titmouse</td>
<td>FSS</td>
<td>Oak and pine-oak woodland, arborescent chaparral, oak-riparian associations.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Perognathus alticolus alticolus</td>
<td>White-eared Pocket Mouse</td>
<td>None CSC FSS</td>
<td>Ponderosa &amp; Jeffrey pine habitats; also in mixed chaparral &amp; sagebrush habitats in the San Bernardino Mtns burrows are constructed in loose soil.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Perognathus longimembris brevinasus</td>
<td>Los Angeles pocket mouse</td>
<td>None CSC FSS</td>
<td>Occurs in lower elevation grasslands and coastal sage communities in the Los Angeles basin. Requires open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and leaves instead.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Spermophilus mohavensis</td>
<td>Mohave ground squirrel</td>
<td>None ST FSS</td>
<td>Open desert scrub, alkali scrub &amp; joshua tree woodland. Also feeds in annual grasslands. Restricted to Mohave Desert. Prefers sandy to gravely soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>---------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Taxidea taxus</td>
<td>American badger</td>
<td>None, CSC, FSS</td>
<td>Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food, friable soils &amp; open, uncultivated ground. Prey on burrowing rodents. Dig burrows.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Reptiles

<table>
<thead>
<tr>
<th>Aniella pulchra</th>
<th>California legless lizard</th>
<th>FSS</th>
<th>Coastal dunes, valley foothill, chaparral, and coastal sage scrub in sandy soils.</th>
<th>Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspidoscelis hyperythra</td>
<td>Orange throated whiptail</td>
<td>None, CSC</td>
<td>Inhabits sandy washes, rocky hillsides, and coastal sage scrub that support adequate prey species.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Bufo californicus</td>
<td>arroyo toad</td>
<td>FE, CSC, FSE</td>
<td>Semi-arid regions near washes or intermittent streams, including valley-footihl and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Charina umbratica</td>
<td>southern rubber boa</td>
<td>None, ST, FSS</td>
<td>Restricted to the San Bernardino and San Jacinto Mtns; found in a variety of montane forest habitats. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs.</td>
<td>High</td>
</tr>
<tr>
<td>Clemmys marmorata pallida</td>
<td>southwestern pond turtle</td>
<td>FSS</td>
<td>Inhabits permanent or nearly permanent bodies of water in many habitat types including ponds, marshes, rivers, and streams with suitable basking sites.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cnemidophorus hyperthrus beldingi</td>
<td>Belding’s orange-throated whiptail</td>
<td>FSS</td>
<td>Open, sparsely covered land, often with well-drained sandy or loose soils in coastal sage scrub, grassland, chaparral, oak woodland and riparian habitats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cnemidophorus tigris multiscutatus</td>
<td>coastal western whiptail</td>
<td>FSS</td>
<td>Deserts and semi-arid areas with sparse vegetation and open areas; woodland and riparian areas.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Coleonyx swataki</td>
<td>barefoot banded gecko</td>
<td>FSS</td>
<td>Inhabits rocky, boulder-strewn desert foothills, where it spends most of its life deep in rock crevices and subterranean chambers.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Coleonyx variegatus abbotti</td>
<td>San Diego banded gecko</td>
<td>FSS</td>
<td>Found in open areas, often near rocks, and may seek shelter under them, or in crevices. It is found from sea-level up to an elevation of 4000 feet.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Crotalus ruber ruber</td>
<td>Northern red-diamond rattlesnake</td>
<td>None, CSC, FSS</td>
<td>Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Diadophis punctatus modestus</td>
<td>San Bernardino ringneck snake</td>
<td>FSS</td>
<td>Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Diadophis punctatus similis</td>
<td>San Diego ringneck snake</td>
<td>FSS</td>
<td>Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>---------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Eumeces skiltonianus interparietalis</td>
<td>Coronado skink</td>
<td>FSS</td>
<td>Occurs in a variety of plant associations ranging from coastal sage, chaparral, oak woodlands, pinon-juniper, and riparian woodlands to pine forests, but within these associations it is often restricted to the more mesic pockets.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gopherus agassizii</td>
<td>desert tortoise</td>
<td>FT</td>
<td>Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Requires friable soil for burrow and nest construction. Creosote bush habitat with lg. annual wildflower blooms preferred.</td>
<td>High</td>
</tr>
<tr>
<td>Lampropeltis zonata (parvirubra)</td>
<td>California mountain kingsnake (San Bernardino population)</td>
<td>None</td>
<td>Bigcone spruce &amp; chaparral at lower elev. Black oak, incense cedar, Jeffrey pine &amp; ponderosa pine at higher elevations. Well lit canyons with rocky outcrops or rocky talus.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lampropeltis zonata pulchra</td>
<td>San Diego mountain kingsnake</td>
<td>FSS</td>
<td>Found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub, often in wooded areas near a stream with rock outcrops, talus or rotting logs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lichanura trivirgata rosafusca</td>
<td>coastal rosy boa</td>
<td>FSS</td>
<td>Rocky shrubland areas of desert, chaparral, and coastal sage habitats. Attracted to water sources such as permanent and intermittent streams, but does not require permanent water.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Phrynosoma coronatum (frontale population)</td>
<td>Coast (California) horned lizard</td>
<td>None</td>
<td>Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial &amp; abundant supply of ants &amp; other insects.</td>
<td>Low</td>
</tr>
<tr>
<td>Phrynosoma coronatum blainvillii</td>
<td>San Diego horned lizard</td>
<td>None</td>
<td>Occurs in coastal sage scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana aurora draytonii</td>
<td>California red-legged frog</td>
<td>FT</td>
<td>Requires emergent riparian vegetation near deep, still or slow-moving ponds or intermittent streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana boylii</td>
<td>foothill yellow-legged frog</td>
<td>None</td>
<td>Partly-shaded, shallow streams &amp; riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana muscosa</td>
<td>mountain yellow-legged frog</td>
<td>FT</td>
<td>Federal listing refers to populations in the San Gabriel, San Jacinto &amp; San Bernardino mountains only. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Salvadora hexalepis virgultea</td>
<td>coast patch-nosed snake</td>
<td>FSS</td>
<td>Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sauromalus obesus</td>
<td>common chuckwalla</td>
<td>FSS</td>
<td>Inhabits rocky desert; lava flows, hillsides, and outcrops. Creosote bush occurs throughout most of the range.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Sceloporus graciosus vandenburgianus</em></td>
<td>southern sagebrush lizard</td>
<td>FSS</td>
<td>Habitats include sagebrush and other types of shrublands (e.g., manzanita and ceanothus brushland), also pinyon-juniper woodland and open pine and douglas-fir forests; occupied areas have with open ground and some low bushes.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Spea hamondii</em></td>
<td>western spadefoot toad</td>
<td>FSS</td>
<td>Washes, floodplains of rivers in valley and foothill grasslands, open chaparral.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Thamnophis hammondii</em></td>
<td>Two-striped garter snake</td>
<td>None</td>
<td>Highly aquatic. Found in or near permanent fresh water, often along streams with rocky beds and riparian growth.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Uma inornata</em></td>
<td>Coachella Valley fringe-toed lizard</td>
<td>FT</td>
<td>Limited to sandy areas in the Coachella Valley, Riverside County. Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely spaced desert shrubs.</td>
<td>Low</td>
</tr>
<tr>
<td><em>Xantusia henshawi</em></td>
<td>granite night lizard</td>
<td>FSS</td>
<td>Habitat encompasses rocky canyons, foothill, and hillsides in and semiarid areas of chaparral, other shrubland, or pinyon-juniper woodland, particularly massive exfoliating granitic outcrops in shadier parts of canyons or near water.</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Batrachoseps gabieli</em></td>
<td>San Gabriel Mountain slender salamander</td>
<td>FSS</td>
<td>Found under rocks, wood, or fern fronds on a steep northwest-facing talus slope shaded by <em>Quercus chrysolepis</em> and <em>Pseudotsuga macrocarpa</em>, on soil along soldier creek at the base of the talus slope, and under rocks and logs.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Ensatina eschscholtzii croceater</em></td>
<td>yellow-blotched ensatina</td>
<td>FSS</td>
<td>Found in evergreen and deciduous forests, under rocks, logs, and other surface debris, especially bark that has peeled off and fallen beside decaying logs.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Ensatina eschscholtzii klauberi</em></td>
<td>large-blotched ensatina</td>
<td>FSS</td>
<td>Inhabits moist shaded evergreen and deciduous forests and oak woodlands.</td>
<td></td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Catostomus santaanae</em></td>
<td>Santa Ana sucker</td>
<td>FT</td>
<td>Endemic to Los Angeles basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, &amp; algae.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Gasterosteus aculeatus microcephalus</em></td>
<td>partially armored threespine stickleback</td>
<td>FSS</td>
<td>Found in marine, brackish and fresh waters.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Gasterosteus aculeatus willamsoni</em></td>
<td>unarmored threespine stickleback</td>
<td>FE</td>
<td>Weedy pools, backwaters, and among emergent vegetation at the stream edge in small southern California streams. Cool (&lt;24 °C), clear water with abundant vegetation.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Gila bicolor mohavensis</em></td>
<td>Mohave tui chub</td>
<td>FE</td>
<td>Endemic to the Mohave River basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Gila orcutti</em></td>
<td>Arroyo chub</td>
<td>None</td>
<td>Occurs in slow water stream sections with mud or sand bottoms. Often found in intermittent streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Rhinichthys osculus ssp. 3</td>
<td>Santa Ana speckled dace</td>
<td>None</td>
<td>Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles river system. Requires permanent flowing streams with summer water temps of 17-20 °C. Usually inhabit shallow cobble and gravel riffles.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Tanichthys torosa</td>
<td>Coast range newt</td>
<td>None</td>
<td>Found in wet forests, oak forests, chaparral, and rolling grasslands.</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Invertebrates**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euchloe hyantis andrewsi</td>
<td>Andrew's marble butterfly</td>
<td>FSS</td>
<td>Rocky canyons, cliffs, moraines, gravelly flats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Euphilotes baueri</td>
<td>Vernal blue butterfly (Coxey Meadow)</td>
<td>FSS</td>
<td>Associated with spring-blooming populations of wild buckwheat.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Euphilotes enoptes</td>
<td>Dark Aurora blue butterfly</td>
<td>FSS</td>
<td>Associated with the wild buckwheat species <em>Eriogonum davidsonii</em>.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Euphydryas editha quino</td>
<td>Quino checkerspott butterfly</td>
<td>FSE</td>
<td>Coastal sage scrub with larval food plant (native <em>Plantago</em>, <em>Castilleja</em> and <em>Antirrhinum</em>).</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hydroporus simplex</td>
<td>Simple hydroporus diving beetle</td>
<td>FSS</td>
<td>Found in freshwater and vernal pools.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Incisalia mossii ssp. (undescribed)</td>
<td>San Gabriel Mountains elfin</td>
<td>FSS</td>
<td>Coastal brushland dominated by <em>Baccharis pilularis</em> and other coastal chaparral species.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Plebejus saepiolus aureolus</td>
<td>San Gabriel Mountains blue butterfly</td>
<td>FSS</td>
<td>Occurs in mountain meadows.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
### Mountain Region Special Status Wildlife Species

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Potential for Occurrence (PFO) definitions:**

- **Absent:** Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.
- **Low:** Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.
- **Moderate:** Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **High:** Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.
- **Present:** Species observed within the study area during surveys, or recorded onsite by other biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.

---

**Status Codes**

**Federal**
- **FE** = Federally listed; Endangered
- **FT** = Federally listed; Threatened
- **FSOC** = Federal Species of Concern
- **FSS** = U.S. Forest Service Sensitive
- **FST** = U.S. Forest Service Threatened
- **FSE** = U.S. Forest Service Endangered

**State**
- **ST** = State listed; Threatened
- **SE** = State listed; Endangered
- **CSC** = California Species of Special Concern

**Source:**
CNDDB, November 2006 for all mountain region quadrangles.
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abronia villosa var. aurita chaparral sand-verbena</td>
<td>Annual herb. Occurs in coastal scrub and chaparral on sandy soils. From 260 to 5,250 feet in elevation.</td>
<td>January – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Abutilon parvulum dwarf Indian-mallow</td>
<td>Perennial herb. Occurs in chenopod scrub on rocky soils. From 2,950 to 4,265 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Achnatherum aridum Mormon needle grass</td>
<td>Perennial herb. Occurs in Joshua tree woodland and pinyon and juniper woodland on carbonate soils. From 1,640 to 8,430 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ageratina herbacea desert ageratina</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on rocky soils. From 5,000 to 7,220 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aliciella ripleyi Ripley's aliciella</td>
<td>Perennial herb. Occurs in Mojavean desert scrub on carbonate soils. From 1,000 to 6,400 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Allium nevadense Nevada onion</td>
<td>Perennial bulbiferous herb. Occurs in pinyon and juniper woodland on sandy or gravelly soils. From 4,265 to 5,580 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Androstephium breviflorum Small-flowered androstaphyllum</td>
<td>Perennial bulbiferous herb. Occurs in desert dunes and bajadas in Mojavean desert scrub. From 720 to 5,250 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>High</td>
</tr>
<tr>
<td>Arabis dispar pinyon rock cress</td>
<td>Perennial herb. Occurs in Joshua tree &quot;woodland,&quot; Mojavean desert scrub and pinyon and juniper woodland on granitic and gravelly soils. From 3,940 to 7,875 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis parishii Parish's rock cress</td>
<td>Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodland, and upper montane coniferous forests. Typically found on rocky, quartzite clays or sometimes carbonate soils. From 5,800 to 9,515 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis pulchra var. munciensis Darwin rock cress</td>
<td>Perennial herb. Occurs in chenopod scrub, Mojavean desert scrub on carbonate soils. From 3,610 to 6,810 feet in elevation.</td>
<td>April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arabis shockleyi Shockley's rock cress</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on carbonate or quartzite, rocky or gravelly soils. From 2,870 to 7,500 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arctomecon merriamii white bear poppy</td>
<td>Perennial herb. Occurs in chenopod scrub and Mojavean desert scrub on rocky soils. From 1,810 to 5,905 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>High</td>
</tr>
<tr>
<td>Arctostaphylos canescens ssp. sonomensis Sonoma manzanita</td>
<td>Perennial evergreen shrub. Occurs in chaparral and lower montane coniferous forest, occasionally on serpentinite soils. From 590 to 5,500 feet in elevation. (Occasionally blooms into June)</td>
<td>January – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Arctostaphylos stanfordiana ssp. raichei Raiche’s manzanita</td>
<td>Perennial evergreen shrub. Occurs in chaparral and openings in lower montane coniferous forest on rocky soils, usually on serpentine soils. From 1,480 to 3,280 feet in elevation.</td>
<td>February – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arenaria congesta var. charlestonensis Charleston sandwort</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on sandy soils. From 7,220 to 7,300 feet in elevation.</td>
<td>June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Arenaria ursina Big Bear Valley sandwort</td>
<td>Perennial herb. Occurs on pebble plains pavement and in pinyon and juniper woodland on mesic and rocky soils. From 5,905 to 9,515 feet in elevation.</td>
<td>May – August</td>
<td>Fed: THR CA: none CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Argyrochosma limitanea var. limitanea cloak fern</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on rocky, carbonate soils. At approximately 5,900 feet in elevation.</td>
<td>April – October</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Asclepias nyctaginifolia Mojave milkweed</td>
<td>Perennial herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland. From 3,280 to 5,580 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aster greatae Greata’s aster</td>
<td>Rhizomatous perennial herb. Occurs in chaparral, broadleafed upland forest, cismontane woodland, lower montane coniferous forest, and riparian woodland on mesic soils. From 985 to 6,595 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Astragalus allochrous var. playanus playa milk-vetch</td>
<td>Perennial herb. Occurs in Mojavean desert scrub on sandy soils. From 2,560 to 2,640 feet in elevation.</td>
<td>April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Astragalus cimae var. cimae Cima milk-vetch</td>
<td>Perennial herb. Occurs in Great Basin scrub, Joshua tree woodland, and pinyon and juniper woodland, in clay soils. From 2,920 to 6,070 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-2</td>
<td>High</td>
</tr>
<tr>
<td>Astragalus jaegerianus Lane Mountain milk-vetch</td>
<td>Perennial herb. Occurs in Mojavean desert scrub, in granitic, sandy, or gravelly soils. From 300 to 3,940 feet in elevation.</td>
<td>April – June</td>
<td>Fed: END CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Astragalus lentiginosus var. antonius San Antonio milk-vetch</td>
<td>Perennial herb. Occurs in lower montane coniferous forest, upper montane coniferous forest. From 4,920 to 8,530 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Astragalus lentiginosus var. sierrae Big Bear Valley milk-vetch</td>
<td>Perennial herb. Occurs in Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, and upper montane coniferous forests typically on gravelly or rocky soils. From 5,905 to 8,530 feet in elevation.</td>
<td>April – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Astragalus leucolobus</td>
<td>Perennial herb occurring in upper and lower montane coniferous forest, pebble plain, pinyon and juniper woodland. Also in dry pine woods, gravelly knolls within sagebrush, or stony lake shores in the pine belt from 5,480 to 8,745 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Big Bear Valley woollypod</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astragalus presussi var. preussi</td>
<td>Perennial herb. Occurs in chenopod scrub and Mojavean desert scrub, in clay soils. From 2,640 to 5,990 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Preuss's milk-vetch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astragalus tricarinatus triple-ribbed milk-vetch</td>
<td>Perennial herb. Occurs in Joshua tree woodland and Sonoran desert scrub on sandy or gravelly soils. From 1,475 to 2,725 feet in elevation.</td>
<td>February – May</td>
<td>Fed: END&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Astrolepis cochisensis ssp. cochisensis scaly cloak fern</td>
<td>Perennial rhizomatous herb occurring in Joshua tree woodland and Sonoran desert scrub, on sandy or gravelly soils. From 2,950 to 5,905 feet in elevation.</td>
<td>April – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ayenia compacta ayenia</td>
<td>Perennial herb. Occurs in Mojavean desert scrub and Sonoran desert scrub, on rocky soils. From 490 to 3,590 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Berberis fremontii Fremont barberry</td>
<td>Evergreen shrub. Occurs in chaparral, Joshua tree woodland, and pinyon and juniper woodland in rocky soils. From 2,755 to 6,070 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 3&lt;br&gt;R-E-D: ?-?1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Berberis harrisoniana Kofa Mountain barberry</td>
<td>Perennial evergreen shrub. Occurs in chaparral and Mojavean desert scrub, usually on north-facing talus or volcanic (breccia) slopes. From 2,560 to 2,755 feet in elevation.</td>
<td>January – March</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td>Botrychium crenulatum scalloped moonwort</td>
<td>Perennial rhizomatous herb. Occurs in bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes and swamps, from 5,000 to10,765 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Mingan moonwort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botrychium minganense</td>
<td>Perennial rhizomatous herb. Occurs in lower montane coniferous forest on mesic sites. From 4,920 to 7,465 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Bouteloua trifida red grama</td>
<td>Perennial herb. Occurs in Mojavean desert scrub on rocky, carbonate soils. From 2,300 to 6,560 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Calochortus clavatus var. gracilis slender mariposa lily</td>
<td>Bulbiferous perennial herb. Occurs in chaparral and coastal scrub. Often in shaded foothill canyons and on grassy slopes with other habitat. From 1,180 to 3,280 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Calochortus palmeri var. palmeri Palmer’s mariposa lily</td>
<td>Perennial bulbiferous herb. Occurs in chaparral, lower montane coniferous forest, meadows, and seeps in mesic soils. From 1,970 to 7,840 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Calochortus plummerae</em> Plummer’s mariposa lily</td>
<td>Bulbiferous perennial herb. Occurs in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland on alluvial or granitic, rocky or sandy soils. From 295 to 5,580 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Calochortus striatus</em> alkali mariposa lily</td>
<td>Perennial bulbiferous herb occurring in chaparral, chenopod and Mojavean desert scrub, and meadows and seeps (alkaline, mesic). From 230 to 5,230 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Camissonia boothii</em> spp. boothii Booth’s evening-primrose</td>
<td>Annual herb. Occurs in Joshua tree woodland, and pinyon and juniper woodland. From 2,953 to 7,875 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Carex comosa</em> bristly sedge</td>
<td>Perennial rhizomatous herb. Occurs in coastal prairies, marshes and swamps, lake margins, and valley and foothill grassland, up to 1,395 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Carex occidentalis</em> western sedge</td>
<td>Perennial rhizomatous herb. Occurs in lower montane forest, and in meadows and seeps, at approximately 6,230 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Carnegiea gigantea</em> saguaro</td>
<td>Perennial stem succulent. Occurs in Sonoran desert scrub on rocky soils. From 490 to 4,920 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Castella emoryi</em> crucifixion thorn</td>
<td>Perennial deciduous shrub. Occurs in Mojavean desert scrub, playas, and Sonoran desert scrub on gravelly soils. From 280 to 2,525 feet in elevation. (occasionally known to bloom as early as April)</td>
<td>June – July</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Castilleja lasiorhyncha</em> San Bernardino Mountains owl’s clover</td>
<td>Hemiparasitic annual herb. Occurs in chaparral, meadows and seeps, on pebble plain pavement, in pinyon and juniper woodland and upper montane coniferous forest. Usually found in clay openings. From 4,265 to 7,841 feet in elevation. Also found at approximately 3,300 feet near Lake Silverwood in San Bernardino County.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Chamaesyce abramsiana</em> Abrams’s spurge</td>
<td>Annual herb. Occurs in Mojave desert scrub and Sonoran desert scrub on sandy soils. From 3,725 to 7,840 feet in elevation.</td>
<td>September – November</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Chamaesyce parryi</em> Parry’s spurge</td>
<td>Annual herb. Occurs in desert dunes and Mojavean desert scrub on sandy soils. From -15 to 3000 feet in elevation.</td>
<td>May – November</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Chamaesyce platysperma</em> flat-seeded spurge</td>
<td>Annual herb. Occurs in desert dunes and Sonoran desert scrub on sandy soils, often on shifting dunes. From 195 to 3,115 feet in elevation.</td>
<td>February – September</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cheilanthes wootonii</em> Wooton’s lace fern</td>
<td>Perennial rhizomatous herb. Occurs in Joshua tree woodland and pinyon and juniper woodland on rocky soils. From 4,760 to 6,235 feet in elevation.</td>
<td>May – October</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Chorizanthe parryi</em> var. <em>parryi</em></td>
<td>Parry’s spineflower. Occurs in chaparral, coastal scrub. In openings, slopes, and flats on dry, sandy or rocky soil. From 130 to 5,595 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Claytonia lanceolata</em> var. <em>peirsonii</em></td>
<td>Peirson’s spring beauty. Occurs in subalpine coniferous forest, upper montane coniferous forest on scree. From 7,005 to 9,005 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cordylanthus parviflorus</em></td>
<td>Purple bird’s-beak. Occurs in subalpine coniferous forest and upper montane coniferous forest, usually on scree. From 2,285 to 7,220 feet in elevation.</td>
<td>August – October</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cordylanthus tecopensis</em> Tecopa bird’s-beak</td>
<td>Annual hemiparasitic herb. Occurs in Mojavean desert scrub, meadows, and seeps, usually in mesic, alkaline soils. From 195 to 2,950 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Coryphantha vivipara</em> var. <em>rosea</em></td>
<td>Viviparous foxtail cactus. Occurs in Mojavean desert scrub and pinyon and juniper woodland, usually on carbonate soils. From 2,625 to 4,200 feet in elevation.</td>
<td>April</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cryptantha clokeyi</em> Clokey’s cryptantha</td>
<td>Annual herb. Occurs in Mojavean desert scrub. From 2,625 to 4,200 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cymopterus deserticola</em> desert cymopterus</td>
<td>Annual herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland, on carbonate soils. From 4,100 to 8,860 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Cymopterus gilmanii</em> Gilman’s cymopterus</td>
<td>Annual herb. Occurs in Mojavean desert scrub, usually on carbonate soils. From 3,000 to 6,560 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Delphinium recurvatum</em> recurred larkspur</td>
<td>Perennial herb. Occurs in chenopod scrub, cismontane woodland, and valley and foothills grassland, often on alkaline soils. Up to 2,460 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Delphinium scaposum</em> bare-stem larkspur</td>
<td>Perennial herb. Occurs in Sonoran desert scrub on rocky soils, and occasionally in washes. From 885 to 3,460 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Digitaria californica</em> Arizona cottontop</td>
<td>Perennial herb. Occurs in Mojavean and Sonoran desert scrub on rocky soils. From 950 to 4,890 feet in elevation.</td>
<td>June – November</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td><em>Digitaxis claryana</em> glandular ditaxis</td>
<td>Perennial herb. Occurs in Mojavean and Sonoran desert scrub on sandy soils. Up to 1,522 feet in elevation.</td>
<td>October – March</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
</tbody>
</table>
| *Ditaxis serrata* var. *californica*  
California *ditaxis* | Perennial herb. Occurs in Sonoran desert scrub. From 100 to 3,280 feet in elevation. | March – December | Fed: None  
CA: None  
CNPS: List 3  
R-E-D: 7-2-3 | Moderate |
| *Dodecahema leptocerus*  
slender-horned spineflower | Annual herb. Occurs in chaparral, and coastal scrub (alluvial fan sedge scrub) along flood-deposited terraces and washes from 600 to 2280 feet; associated with *Encelia*, *Dalea*, and *Lepidospartum* | April – June | Fed: END  
CA: END  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| *Dudleya abramsii* ssp. *affinis*  
San Bernardino Mountains *dudleya* | Perennial herb. Occurs on pebble plain pavement, pinyon and juniper woodlands, and upper montane coniferous forests typically on granitic, quartzite, or carbonate soils. Elevation ranges from 4,165 to 8,530 feet. | April – June | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
| *Echinocereus engelmannii* var. *howei*  
Howe’s hedgehog cactus | Perennial herb. Occurs in coastal scrub, chaparral, and valley and foothill grassland, usually on clay soils or grassy slopes. Up to 2,590 feet in elevation. | April – July | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| *Enneapogon desvauxii*  
nine-awned pappus grass | Perennial herb. Occurs in pinyon and juniper woodland on rocky, carbonate soils. From 4,070 to 5,990 feet in elevation. | August – September | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| *Erigeron oxyphyllus*  
wand-like fleabane daisy | Perennial herb. Occurs in Sonoran desert scrub on dry rocky slopes and washes. From 2,115 to 2,590 feet in elevation. | May | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: * | Moderate |
| *Erigeron parishii*  
Parish’s daisy | Perennial herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland usually on carbonate soils. From 2,625 to 6,561 feet in elevation. | May – June | Fed: THR  
CA: None  
CNPS: List 2  
R-E-D: 2-3-3 | Moderate |
| *Erigeron uncialis* var. *uncialis*  
limestone daisy | Perennial herb. Occurs in Great Basin scrub and subalpine coniferous forest on carbonate soils. From 6,890 to 10,270 feet in elevation. | June – July | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-2-1 | Moderate |
| *Erigeron utahensis*  
Utah daisy | Perennial herb. Occurs in pinyon and juniper woodland on carbonate soils. From 4,920 to 6,235 feet in elevation. | May – July | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| *Eriodictyon angustifolium*  
narrow-leaved yerba santa | Perennial evergreen shrub. Occurs in pinyon and juniper woodland. From 4,920 to 6,235 feet in elevation. | May – August | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| *Eriogonum bifurcatum*  
forked buckwheat | Annual herb. Occurs in chenopod scrub on sandy soils. From 2,300 to 2,600 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | Moderate |
| *Eriogonum ericifolium* var. *thornei*  
Thorne’s buckwheat | Perennial herb occurring in pinyon and juniper woodland on gravelly soils. From 5,900 to 6,000 feet in elevation. | July – August | Fed: None  
CA: END  
CNPS: List 1B  
R-E-D: 3-2-2 | Moderate |
| *Eriogonum kennedyi* var. *alpinum*  
southern alpine buckwheat | Perennial herb. Occurs in alpine boulder and rock field, subalpine coniferous forest on granitic, gravelly soils. From 8,530 to 11,480 feet in elevation. | July – September | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-3 | Moderate |
| *Eriogonum kennedyi* var. *austromontanum*  
southern mountain buckwheat | Perennial herb. Occurs in lower montane coniferous forest typically on gravelly soils and on pebble plain pavement at elevations from 5,760 to 7,790 feet. | July – September | Fed: THR  
CA: None  
CNPS: List 1B  
R-E-D: 2-2-3 | Moderate |
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eriogonum microthecum var. johnstonii</strong>&lt;br&gt;Johnston’s buckwheat</td>
<td>Deciduous shrub. Subalpine coniferous forest, upper montane coniferous forest on rocky soils. From 7,250 to 9,515 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eriogonum ovalifolium var. vineum</strong>&lt;br&gt;Cushenbury buckwheat</td>
<td>Perennial herb. Occurs in Joshua tree “woodland,” Mojavean desert scrub, and pinyon and juniper woodland. From 4,595 to 8,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eriogonum umbellatum var. juniperinum</strong>&lt;br&gt;juniper buckwheat</td>
<td>Perennial herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland. From 4,265 to 8,200 feet in elevation.</td>
<td>July – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eriogonum ovalifolium var. vineum</strong>&lt;br&gt;Cushenbury buckwheat</td>
<td>Perennial herb. Occurs in Joshua tree “woodland,” Mojavean desert scrub, and pinyon and juniper woodland. From 4,595 to 8,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eriogonum ovalifolium var. vineum</strong>&lt;br&gt;Cushenbury buckwheat</td>
<td>Perennial herb. Occurs in Joshua tree “woodland,” Mojavean desert scrub, and pinyon and juniper woodland. From 4,595 to 8,005 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eriophyllum mohavense</strong>&lt;br&gt;Barstow woolly sunflower</td>
<td>Annual herb. Occurs in chenopod scrub, playas, and Mojavean desert scrub. From 1,840 to 3,150 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-2-3</td>
<td>High</td>
</tr>
<tr>
<td><strong>Erdium macrophyllum</strong>&lt;br&gt;round-leaved filaree</td>
<td>Annual herb occurring in cismontane woodland and valley and foothill grassland. Often in clay soils, grassy areas within shrubland. From 50 to 3,940 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-3-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eschscholzia minutiflora</strong>&lt;br&gt;ssp. twisselmanni&lt;br&gt;Red Rock poppy</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on rocky, and sometimes carbonate, soils. From 4,920 to 6,595 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Euphorbia exstipulata</strong>&lt;br&gt;var. exstipulata&lt;br&gt;Clark Mountain spurge</td>
<td>Annual herb. Occurs in Mojavean desert scrub on rocky soils. From 5,900 to 6,560 feet in elevation.</td>
<td>September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eschscholzia minutiflora</strong>&lt;br&gt;ssp. twisselmanni&lt;br&gt;Red Rock poppy</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on rocky, and sometimes carbonate, soils. From 4,920 to 6,595 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Erodeum macrophyllum</strong>&lt;br&gt;round-leaved filaree</td>
<td>Annual herb occurring in cismontane woodland and valley and foothill grassland. Often in clay soils, grassy areas within shrubland. From 50 to 3,940 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-3-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Eschscholzia minutiflora</strong>&lt;br&gt;ssp. twisselmanni&lt;br&gt;Red Rock poppy</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on rocky, and sometimes carbonate, soils. From 4,920 to 6,595 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Glossopetalon pungens</strong>&lt;br&gt;pungent glossopetalon</td>
<td>Perennial deciduous shrub. Occurs in chaparral and pinyon and juniper woodland on carbonate soils. From 5,250 to 6,560 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Gallium hilendiae</strong>&lt;br&gt;sp. kingstonense&lt;br&gt;Kingston Mountains bedstraw</td>
<td>Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland on rocky soils. From 3,940 to 6,890 feet in elevation.</td>
<td>June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Galium wrighti</strong>&lt;br&gt;Wright’s bedstraw</td>
<td>Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland on rocky soils. From 3,940 to 6,890 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Glossopetalon pungens</strong>&lt;br&gt;pungent glossopetalon</td>
<td>Perennial deciduous shrub. Occurs in chaparral and pinyon and juniper woodland on carbonate soils. Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland on rocky soils. From 5,495 to 6,560 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Helianthus nuttallii</strong>&lt;br&gt;ssp. parishii&lt;br&gt;Los Angeles sunflower</td>
<td>Rhizomatous perennial herb. Occurs in coastal salt and freshwater marshes and swamps. From 15 to 5,500 feet in elevation.</td>
<td>August – October</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1A&lt;br&gt;R-E-D: *</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Hesperolinon adenophyllum</td>
<td>Annual herb. Occurs in chaparral, cismontane woodland, and valley and foothill grassland, usually on serpentine soils. Perennial herb. Occurs in lower montane coniferous forest and pinyon and juniper woodland on rocky soils. From 490 to 4,315 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 2-2-3</td>
</tr>
<tr>
<td>Ivesia argyrocoma</td>
<td>Perennial herb. Occurs in alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 4,955 to 6,890 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 2-2-2</td>
</tr>
<tr>
<td>Ivesia jaegeri</td>
<td>Perennial herb. Occurs in upper montane coniferous woodland and pinyon and juniper woodland on rocky, carbonate soils. From 5,955 to 11,810 feet in elevation.</td>
<td>June – July</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Jaeger’s ivesia</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 3-1-2</td>
</tr>
<tr>
<td>Ivesia patellifera</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on granitic, rocky soils. From 4,955 to 6,890 feet in elevation.</td>
<td>June – October</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Kingston Mountains ivesia</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 3-1-3</td>
</tr>
<tr>
<td>Juncus nodosus</td>
<td>Perennial rhizomatous herb. Occurs in mesic meadows and seeps, and marshes and swamps on the margins of lakes. From 100 to 6,500 feet in elevation.</td>
<td>July – September</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>knotted rush</td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td>R-E-D: 2-1-1</td>
</tr>
<tr>
<td>Lasthenia glabrata ssp. Coulter’s goldfields</td>
<td>Annual herb. Occurs in coastal salt marshes and swamps, valley and foothill grasslands, playas, sinks, and vernal pools. Up to 4,590 feet in elevation.</td>
<td>February – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 2-3-2</td>
</tr>
<tr>
<td>Lewisia brachycalyx</td>
<td>Perennial herb. Occurs in lower montane coniferous forest and meadows and seeps in mesic soils. From 4,500 to 7,550 feet in elevation.</td>
<td>February – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>short-sealed lewisia</td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td>R-E-D: 2-2-1</td>
</tr>
<tr>
<td>Leymus salinus ssp.</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on rocky soils. From 4,430 to 7,000 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>mojavensis hillside wheat grass</td>
<td></td>
<td></td>
<td>CNPS: List 2</td>
<td>R-E-D: 3-1-1</td>
</tr>
<tr>
<td>Lilium parryi</td>
<td>Bulbiferous perennial herb. Upper and lower montane coniferous forest, meadows and seeps, riparian forest. Wet terrain, forested, mountainous, or boggy areas. On mesic soil. From 4,000 to 9,150 feet in elevation.</td>
<td>July – August</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>lemon lily</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 2-2-1</td>
</tr>
<tr>
<td>Linanthus concinnus</td>
<td>Annual herb. Occurs in lower and upper montane coniferous forest in rocky soils and on dry slopes. From 5,170 to 9,190 feet in elevation.</td>
<td>April - July</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>San Gabriel linanthus</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 3-2-3</td>
</tr>
<tr>
<td>Linanthus killipii</td>
<td>Annual herb. Occurs in alkaline meadows and seeps, pebble pavement, pinyon and juniper woodland, and upper montane coniferous woodland. From 5,580 to 7,880 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Baldwin Lake linanthus</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 2-2-3</td>
</tr>
<tr>
<td>Linanthus maculatus</td>
<td>Annual herb. Occurs in desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub, on sandy soils. From 840 to 6,810 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None</td>
<td>CA: None</td>
</tr>
<tr>
<td>Little San Bernardino Mtns. linanthus</td>
<td></td>
<td></td>
<td>CNPS: List 1B</td>
<td>R-E-D: 3-2-3</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Linanthus orcutti Orcutt's linanthus</td>
<td>Annual herb occurring in chaparral, lower montane coniferous forest, and in pinyon and juniper woodland, usually in disturbed areas and gravelly openings in vegetation. From 3,000 to 7,040 feet in elevation.</td>
<td>May – June</td>
<td>Fed: None</td>
<td>CNPS: List 1B R-E-D: 2-1-2</td>
</tr>
<tr>
<td>Lithospermum incisum plains stoneseed</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland. From 5,415 to 5,645 feet in elevation.</td>
<td>May</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-1-1</td>
</tr>
<tr>
<td>Loeflingia squarrosa var. artemisiarum sagebrush loeflingia</td>
<td>Annual herb. Occurs in desert dunes, Great Basin scrub, and Sonoran desert scrub, in sandy soils. From 2,300 to 5,300 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-1-2</td>
</tr>
<tr>
<td>Lotus argyraeus var. multicaulis scrub lotus</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on granitic soils. From 3,940 to 4,920 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-1-3</td>
</tr>
<tr>
<td>Lotus argyaeus var. nottius Providence Mountains lotus</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland. From 1,395 to 6,560 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 3-1-1</td>
</tr>
<tr>
<td>Lycium parishii Parish's desert-thorn</td>
<td>Shrub. Occurs in coastal scrub and Sonoran desert scrub. From 1,000 to 3,280 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 2-1-1</td>
</tr>
<tr>
<td>Lycurus phleoides var. phleoides wolfail</td>
<td>Perennial herb. Occurs in Joshua tree woodland and pinyon and juniper woodland. At approximately 1,640 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 2-1-1</td>
</tr>
<tr>
<td>Malacothamnus davidsonii Davidson's bush mallow</td>
<td>Deciduous shrub. Occurs in coastal scrub, cismontane woodland, riparian woodland, and chaparral, often in sandy washes. From 690 to 2,800 feet in elevation.</td>
<td>June – January</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3</td>
</tr>
<tr>
<td>Matelea parvifolia spearleaf</td>
<td>Perennial herb. Occurs in Mojavean and Sonoran desert scrub on rocky soils. From 1,445 to 3,590 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-1-1</td>
</tr>
<tr>
<td>Maurandya antirrhiniflora ssp. antirrhiniflora violet twinning snapdragon</td>
<td>Perennial herb. Occurs in Joshua tree woodland and Mojavean desert scrub on carbonate soils. From 2,495 to 5,000 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 3-1-1</td>
</tr>
<tr>
<td>Mentzelia tridentata creamy blazing star</td>
<td>Annual herb. Occurs in Mojavean desert scrub. From 2,300 to 3,800 feet in elevation.</td>
<td>March – May</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-1-3</td>
</tr>
<tr>
<td>Mimulus mohavensis Mojave monkeyflower</td>
<td>Annual herb. Occurs in Joshua tree woodland and Mojavean desert scrub, on gravelly soils, usually in dry washes near the Mojave River. From 1,970 to 3,940 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 1B R-E-D: 2-2-3</td>
</tr>
<tr>
<td>Mirabilis coccinea red four o'clock</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland. From 3,510 to 5,900 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None</td>
<td>CA: None CNPS: List 2 R-E-D: 2-1-1</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Monarda pectinata</strong></td>
<td>plains bee balm</td>
<td>Annual herb. Occurs in Joshua tree woodland and pinyon and juniper woodland on rocky soils. From 3,770 to 5,000 feet in elevation.</td>
<td>July – September Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Monardella robindii</strong></td>
<td>Robison's monardella</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland. From 2,000 to 4,920 feet in elevation. (occasionally blooms as early as February and as late as October)</td>
<td>April – September Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>High</td>
</tr>
<tr>
<td><strong>Muhlenbergia appressa</strong></td>
<td>appressed muhly</td>
<td>Annual herb. Occurs in coastal scrub, Mojavean desert scrub, and valley and foothill grassland on rocky soils. From 65 to 5,250 feet in elevation.</td>
<td>April – May Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Muhlenbergia arsenii</strong></td>
<td>tough muhly</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on gravelly, carbonate soils. From 4,595 to 6,560 feet in elevation.</td>
<td>August – October Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Muhlenbergia fragilis</strong></td>
<td>delicate muhly</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on gravelly, carbonate soils. From 1,690 to 5,250 feet in elevation.</td>
<td>October Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Muhlenbergia pauciflora</strong></td>
<td>few-flowered muhly</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on rocky soils. From 5,725 to 6,100 feet in elevation.</td>
<td>September – October Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Munroa squarrosa</strong></td>
<td>false buffalo-grass</td>
<td>Annual herb. Occur in pinyon and juniper woodland on gravelly or rocky soils. From 4,920 to 7,880 feet in elevation.</td>
<td>October Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Myosurus minimus</strong> ssp. apus</td>
<td>little mouse-tail</td>
<td>Annual herb occurring in valley and foothill grassland and vernal pools in alkaline soils. From 65 to 2,100 feet in elevation.</td>
<td>March – June Fed: None CA: None CNPS: List 3 R-E-D: 2-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Nama dichotomum</strong> var. dichotomum</td>
<td>forked purple mat</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on granitic or carbonate soils. Known in California only from the New York Mountains. From 6,235 to 7,220 feet in elevation.</td>
<td>September – October Fed: None CA: None CNPS: List 2 R-E-D: 2-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Namacaulis denudata</strong> var. gracilis</td>
<td>slender woolly-heads</td>
<td>Annual herb. Occurs in coastal and desert dunes, and Sonoran desert scrub. From -165 to 1,840 feet in elevation.</td>
<td>April – May Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Opuntia basilaris</strong> var. brachyclada</td>
<td>short-joint beavertail</td>
<td>Stem succulent shrub. Occurs in chaparral, Joshua tree “woodland,” Mojavean desert scrub, and in pinyon and juniper woodland, often on sandy soils or coarse, granitic loam. From 1,395 to 5,910 feet in elevation.</td>
<td>April – June Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>High</td>
</tr>
<tr>
<td><strong>Opuntia curvospina</strong> short-joint beavertail</td>
<td>Perennial stem succulent. Occurs in chaparral, Mojavean desert scrub, and pinyon and juniper woodland. From 3,280 to 4,595 feet in elevation.</td>
<td>April – June Fed: None CA: None CNPS: List 2 R-E-D: 2-2-2</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td><strong>Opuntia wigginii</strong> Wiggin’s cholla</td>
<td>Perennial stem succulent. Occurs in Sonoran desert scrub on sandy soils. From 100 to 2,805 feet in elevation.</td>
<td>March Fed: None CA: None CNPS: List 3 R-E-D: 3-2-1</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| Oreonana vestita       | Perennial herb. Lower montane, subalpine, and montane forests. On gravelly soils. Occurs at elevations of 7,495 to 11,480 feet. | May – September | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-3 | Moderate |
CA: None  
CNPS: List 1B  
R-E-D: 3-2-3 | Moderate |
| Oxytheca parishii var. | Annual herb occurring in pinyon and juniper woodland usually on carbonate and talus soils. From 4,265 to 7,790 feet in elevation. | May – September | Fed: END  
CA: None  
CNPS: List 1B  
R-E-D: 3-3-3 | Moderate |
| Oxytropis oreophila var. oreophila | Perennial herb. Occurs in alpine boulder and rock fields and subalpine coniferous forests often on gravelly or rocky soils. From 11,150 to 12,470 feet in elevation. | June – September | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| Parnassia cirrata      | Perennial herb. Occurs in upper and lower montane coniferous forest, meadows, and seeps in mesic areas and stream sides, occasionally on calcareous soils. From 7,000 to 9,840 feet in elevation. | August – September | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-3 | Moderate |
| Pellaea truncata       | Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on rocky volcanic or granitic soils. From 3,940 to 7,055 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | High |
| Penstemon albomarginatus | Perennial herb. Occurs in stabilized desert dunes and Mojavean desert scrub with sandy soils. From 2,080 to 3,495 feet in elevation. | March – May | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | Moderate |
| Penstemon bicolor      | Perennial herb. Occurs in Joshua tree woodland and Mojavean desert scrub on rocky or gravelly soils, occasionally in areas of disturbance. From 2,300 to 4,920 feet in elevation. | May | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| Penstemon calcareus     | Perennial herb. Occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland on rocky, carbonate soils. From 1,130 to 6,760 feet in elevation. | April – May | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | Moderate |
| Penstemon fruticiformis | Perennial herb. Occurs in Mojavean desert scrub. From 2,790 to 4,595 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | Moderate |
| Penstemon stephensii    | Perennial herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland, often on rocky, carbonate soils. From 3,805 to 6,070 feet in elevation. | April – June | Fed: None  
CA: None  
CNPS: List 1B  
R-E-D: 2-1-3 | Moderate |
| Penstemon thompsoniae   | Perennial herb. Occurs in pinyon and juniper woodland on gravelly, carbonate soils. From 4,920 to 8,860 feet in elevation. | May – June | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 3-1-1 | Moderate |
| Penstemon utahensis     | Perennial herb occurring in chenopod scrub, Great Basin scrub, Mojavean desert scrub, and pinyon and juniper woodland on rocky soils. From 3,495 to 8,200 feet in elevation. | April – May | Fed: None  
CA: None  
CNPS: List 2  
R-E-D: 2-1-1 | Moderate |
<table>
<thead>
<tr>
<th>Special Status Species</th>
<th>Habitat and Distribution</th>
<th>Flowering Season</th>
<th>Status Designation</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perideridia parishii</strong> ssp. parishii&lt;br&gt;Parish’s yampah</td>
<td>Perennial herb. Occurs in lower and upper montane coniferous forest, and meadows and seeps. From 4,560 to 9,840 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Petalonyx thurberi</strong> ssp. gilmanii&lt;br&gt;Death Valley sandpaper-plant</td>
<td>Perennial evergreen shrub. Occurs in desert dunes and Mojavean desert scrub. From 835 to 4,740 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phacelia anelsonii</strong>&lt;br&gt;Aven Nelson’s phacelia</td>
<td>Annual herb. Occurs in Joshua tree woodland and in pinyon and juniper woodland, on sandy or gravelly, carbonate soils. From 3,940 to 5,170 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phacelia coerulea</strong>&lt;br&gt;sky-blue phacelia</td>
<td>Annual herb. Occurs in Mojavean desert scrub and pinyon and juniper woodland. From 4,595 to 6,560 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phacelia parishii</strong>&lt;br&gt;Parish’s phacelia</td>
<td>Annual herb. Occurs in Mojavean desert scrub and on playas, in clay or alkaline soils. From 1,755 to 3,940 feet in elevation.</td>
<td>April – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-3-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phacelia perityloides</strong>&lt;br&gt;var. jaegeri&lt;br&gt;Jaeger’s phacelia</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on rocky, often carbonate soils. From 6,000 to 7,695 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phacelia pulchella</strong>&lt;br&gt;var. gooddingii&lt;br&gt;Goodding’s phacelia</td>
<td>Annual herb. Occurs in Mojavean desert scrub on clay, and occasionally alkaline, soils. From 2,575 to 3,280 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Phlox dolichantha</strong>&lt;br&gt;Big Bear Valley phlox</td>
<td>Perennial herb. Occurs in pebble pavement plain and openings in upper montane coniferous forest. From 6,000 to 9,745 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 1B&lt;br&gt;R-E-D: 3-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Physalis lobata</strong>&lt;br&gt;lobed ground-cherry</td>
<td>Perennial herb. Occurs in Mojavean desert scrub on decomposed granite and on playas. From 1,640 to 2,625 feet in elevation.</td>
<td>September – January</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Physaria chambersii</strong>&lt;br&gt;Chambers’s physaria</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on rocky, carbonate soils. From 4,920 to 8,500 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Pinus edulis</strong>&lt;br&gt;two-needle pinyon pine</td>
<td>Perennial evergreen tree. Occurs in lower montane coniferous forest and pinyon and juniper woodland. From 4,265 to 8,860 feet in elevation.</td>
<td>-</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 3&lt;br&gt;R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Piptatherum micranthum</strong>&lt;br&gt;small-flowered rice grass</td>
<td>Perennial herb. Occurs in pinyon and juniper woodland on gravelly, carbonate soils. From 2,300 to 8,860 feet in elevation.</td>
<td>June – September</td>
<td>Fed: None&lt;br&gt;CA: None&lt;br&gt;CNPS: List 2&lt;br&gt;R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Plagiobothrys parishii</em> Parish’s popcorn-flower</td>
<td>Annual herb. Occurs in Great Basin scrub and Joshua tree “woodland” often on alkaline and mesic soils at elevations from 2,460 to 4,600 feet.</td>
<td>March – November</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Polygaloides acanthoclada</em> thorny milkwort</td>
<td>Perennial shrub. Occurs in chenopod scrub, Joshua tree woodland, and pinyon and juniper woodland. From 2,495 to 7,500 feet in elevation.</td>
<td>May – August</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Prunus eremophila</em> desert plum</td>
<td>Perennial deciduous shrub. Occurs in Mojavean desert scrub, usually in washes, on granitic or rhyolitic soils. From 3,200 to 3,855 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-3</td>
<td>High</td>
</tr>
<tr>
<td><em>Psorothamnus fremontii</em> var. attenuatus narrow-leaved psorothamnus</td>
<td>Perennial shrub. Occurs in Sonoran desert scrub on granitic or volcanic soils. From 1,100 to 3,000 feet in elevation.</td>
<td>April</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-3-2</td>
<td>High</td>
</tr>
<tr>
<td><em>Puccinellia parishii</em> Parish’s alkali grass</td>
<td>Annual herb. Occurs in meadows and seeps, often alkaline springs and seeps. From 2,280 to 3,280 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Robinia neomexicana</em> New Mexico locust</td>
<td>Perennial deciduous shrub occurring in pinyon and juniper woodland on sandy soils. From 4,920 to 5,810 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Saltugilia latimeri</em> Latimer’s woodland-gilia</td>
<td>Annual herb. Occurs in chaparral, Mojavean desert scrub, and pinyon and juniper woodland, usually on granitic rocky or sandy soils, sometimes near washes. From 1,310 to 6,235 feet in elevation.</td>
<td>March – June</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Salvia greatae</em> Orcopica sage</td>
<td>Perennial evergreen shrub. Occurs in Mojavean desert scrub and Sonoran desert scrub. From -130 to 2,705 feet in elevation.</td>
<td>March – April</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-1-3</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Sanvitalia abertii</em> Abert’s sanvitalia</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on carbonate soils. From 5,150 to 5,905 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Sarcocorma utahensis</em> Utah glasswort</td>
<td>Perennial evergreen shrub. Occurs in chenopod scrub and playas on alkaline soils. At approximately 1,050 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Schkuhria multiflora</em> var. <em>multiflora</em> many-flowered schkuhria</td>
<td>Annual herb. Occurs in pinyon and juniper woodland on sandy soils. From 4,920 to 5,580 feet in elevation.</td>
<td>September – October</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Schoenus nigricans</em> black sedge</td>
<td>Perennial herb. Occurs in marshes and swamps often associated with alkaline soils. From 500 to 6,565 feet in elevation.</td>
<td>August – September</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Sclerocactus johnsonii</em> bee-hive cactus</td>
<td>Stem succulent shrub. Occurs in Mojavean desert scrub on granitic soils. From 1,640 to 3,940 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Scleropogon brevifolius</em> burro grass</td>
<td>Perennial stoloniferous herb. Occurs in Mojavean desert scrub on decomposed granitic soils. Known in California only from the New York Mountains. From 5,170 to 5,250 feet in elevation.</td>
<td>October</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Status Species</td>
<td>Habitat and Distribution</td>
<td>Flowering Season</td>
<td>Status Designation</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>------------------</td>
<td>--------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Scutellaria bolanderi ssp. austromontana southern skullcap</td>
<td>Perennial herb. Occurs in chaparral, cismontane woodland, and lower montane coniferous forest. From 1,395 to 6,560 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Senecio bernardinus San Bernardino ragwort</td>
<td>Perennial herb. Occurs in mesic or alkaline meadows and seeps, pebble pavement plain, and upper montane coniferous forest. From 5,900 to 7,550 feet in elevation.</td>
<td>May – July</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sidalcea hickmanii ssp. parishii Parish’s checkerbloom</td>
<td>Perennial herb occurring in chaparral, cismontane woodland, and lower montane coniferous forest. From 3,260 to 8,200 feet in elevation.</td>
<td>June – August</td>
<td>Fed: None CA: Rare CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sidalcea pedata bird-foot checkerbloom</td>
<td>Perennial herb. Occurs in meadows and seeps on mesic soils and on pebble plain pavement. From 5,250 to 8,200 feet in elevation.</td>
<td>May – August</td>
<td>Fed: END CA: END CNPS: List 1B R-E-D: 3-3-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Symphyotrichum defoliatum San Bernardino aster</td>
<td>Rhizomatous perennial. Occurs in meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and valley and foothill grasslands, often in disturbed places. Up to 6,690 feet in elevation.</td>
<td>July – November</td>
<td>Fed: None CA: None CNPS: List 1B R-E-D: 2-2-3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Teucrium glandulosum sticky germander</td>
<td>Perennial stoloniferous herb. Occurs in Sonoran desert scrub on rocky soils. From 1,130 to 2,590 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Tripterocalyx micranthus small-flowered sandverna</td>
<td>Perennial herb. Occurs in desert dunes and Mojavean desert scrub with sandy soils. From 1,805 to 2,805 feet in elevation.</td>
<td>April – May</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Viola aurea golden violet</td>
<td>Perennial herb. Occurs in Great Basin scrub and pinyon and juniper woodland often with sandy soils. From 3,280 to 5,905 feet in elevation.</td>
<td>April – June</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 2-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Wislizenia refracta ssp. refracta jackass clover</td>
<td>Annual herb. Occurs in desert dunes, Mojavean and Sonoran desert scrub, and playas. From 425 to 2,625 feet in elevation.</td>
<td>April – November</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-2-1</td>
<td>Moderate</td>
</tr>
<tr>
<td>Woodsia plummerae Plummer’s woodsia</td>
<td>Perennial rhizomatous herb. Occurs in pinyon and juniper woodland on rocky, granitic soils. From 5,250 to 6,560 feet in elevation.</td>
<td>May – September</td>
<td>Fed: None CA: None CNPS: List 2 R-E-D: 3-1-1</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

General references: Hickman (ed.) 1993; Munz 1974; CNPSEI 2006; CNDDB 2006
**Federal designations:** (federal Endangered Species Act, USFWS):
END: Federal-listed, endangered.
THR: Federal-listed, threatened.
CAN: Proposed federal listed, endangered.

**State designations:** (California Endangered Species Act, CDFG)
END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare

**California Native Plant Society (CNPS) designations:**
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

**CNPS R-E-D Code:**

**Rarity:**
1. Rare, found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2. Occurrence confined to several populations or one extended population.
3. Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

**Endangerment:**
1. Not endangered.
2. Endangered in a portion of its range.
3. Endangered throughout its range.

**Distribution:**
1. More or less widespread outside California.
2. Rare outside California.
3. Endemic to California (i.e., does not occur outside California)

**Definitions of Occurrence Probability:**
Absent
Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.

Low
Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is obligatory to determine likely presence or absence of this species within the study area.

Moderate
Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

High
Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

Present
Species observed on the site during surveys described here, or recorded onsite by other qualified biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.
### Table 6.
Special Status Wildlife Species Potentially Occurring within the Desert Region

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accipiter cooperii</td>
<td>Cooper's hawk</td>
<td>None CSC</td>
<td>Inhabits deciduous, coniferous, and mixed riparian or wetland forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aquila chrysaetos</td>
<td>Golden eagle</td>
<td>None CSC</td>
<td>Found along rolling foothills or coast-range terrain with large trees (scattered oaks, sycamores, digger pines) in open areas. Cliff-walled canyons provide nesting habitat.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Asio otus</td>
<td>long-eared owl</td>
<td>None CSC</td>
<td>(Nesting) Riparian bottomlands grown to tall willows &amp; cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Athene cunicularia</td>
<td>Burrowing owl</td>
<td>None CSC</td>
<td>Prefers open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent on small mammal burrows (particularly ground squirrels) for its subterranean nesting.</td>
<td>High</td>
</tr>
<tr>
<td>Buteo swainsoni</td>
<td>Swainson's hawk</td>
<td>None ST</td>
<td>(Nesting) Breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cardinalis cardinalis</td>
<td>northern cardinal</td>
<td>None CSC</td>
<td>Extremely rare resident along the Colorado River. Dense brushy river bottom thickets, well-vegetated dry washes &amp; dense desert scrub.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Charadrius alexandrinus nivosus</td>
<td>western snowy plover</td>
<td>FT CSC</td>
<td>(Nesting) federal listing applies only to the pacific coastal population. Sandy beaches, salt pond levees &amp; shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Coccyzus americanus occidentalis</td>
<td>Western yellow-billed cuckoo</td>
<td>FSOC SE</td>
<td>Inhabits dense cottonwood/willow stands, although mesquite and salt cedar may be utilized.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Colaptes chrysoides</td>
<td>gilded flicker</td>
<td>None SE</td>
<td>Sonoran Desert habitat and riparian woodlands along the Colorado River. Uses willows, cottonwood, tree yucca and, when available, saguaro cactus.</td>
<td>Low</td>
</tr>
<tr>
<td>Dendroica petechia brewsteri</td>
<td>yellow warbler</td>
<td>None CSC</td>
<td>(Nesting) Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, &amp; alders for nesting &amp; foraging. Also nests in montane shrubbery in open conifer forests.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>---------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><em>Dendroica petechia sonorana</em></td>
<td>Sonoran yellow warbler</td>
<td>None</td>
<td>(Nesting) Summer resident of Colorado River valley, in riparian deciduous habitat. Below 600 ft elev. Inhabits cottonwoods and willows, particularly the crown foliage; nests in understory, usually 2-16 ft above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Empidonax traillii extimus</em></td>
<td>southwestern willow flycatcher</td>
<td>FE SE</td>
<td>(Nesting) Riparian woodlands in southern California. State listing includes all subspecies.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Falco mexicanus</em></td>
<td>prairie falcon</td>
<td>None</td>
<td>(Nesting) inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.</td>
<td>High</td>
</tr>
<tr>
<td><em>Haliaeetus leucocephalus</em></td>
<td>bald eagle</td>
<td>FT SE</td>
<td>(Nesting &amp; wintering) Ocean shore, lake margins, &amp; rivers for both nesting &amp; wintering. Most nests within 1 mi of water. Nests in lg., old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Icteria virens</em></td>
<td>yellow-breasted chat</td>
<td>None</td>
<td>(Nesting) summer resident; inhabits riparian thickets of willow &amp; other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest w/in 10 ft of ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Junco hyemalis caniceps</em></td>
<td>gray-headed junco</td>
<td>None</td>
<td>(Nesting) Summer resident of Clark Mtn (eastern San Bernardino County) &amp; Grapevine Mtns (Inyo County). Inhabits white fir association at 7300 ft (Clark Mtn); also, from dense pinyons above 6700 ft (Grapevine Mtns).</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Melanerpes uropygialis</em></td>
<td>Gila woodpecker</td>
<td>None</td>
<td>In California, inhabits cottonwoods and other desert riparian trees, shade trees, and date palms. Cavity nester in riparian trees or saguaro cactus.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Micrathene whitneyi</em></td>
<td>elf owl</td>
<td>None</td>
<td>(Nesting) in California, nesting area limited to cottonwood-willow &amp; mesquite riparian zone along the Colorado River. Nest in deserted woodpecker holes, often in larger trees which offer insulation from high daytime temperatures.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Myiarchus tyrannulus</em></td>
<td>brown-crested flycatcher</td>
<td>None</td>
<td>(Nesting) Inhabits desert riparian along Colorado River, as well as other desert oases &amp; riparian NW to Victorville. Requires riparian thickets, trees, snags, and shrubs for foraging perches, nesting cavities, and cover.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Piranga flava</em></td>
<td>hepatic tanager</td>
<td>None</td>
<td>(Nesting) white fir-pinyon forest on desert peaks, 5300-8100 ft elev. Understory of xerophytic shrubs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------</td>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Piranga rubra</td>
<td>summer tanager</td>
<td>None CSC</td>
<td>(Nesting) summer resident of desert riparian along lower Colorado River, &amp; locally elsewhere in California deserts. Require cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Pyrocephalus rubinus</td>
<td>vermilion flycatcher</td>
<td>None CSC</td>
<td>(Nesting) During nesting, inhabits desert riparian adj. to irrigated fields and ditches, pastures, and other open, mesic areas. Nests in cottonwood, willow, mesquite, and other large desert riparian trees.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rallus longirostris yumanensis</td>
<td>Yuma clapper rail</td>
<td>FE ST</td>
<td>Nests in fresh-water marshes along the Colorado River and along the south and east ends of the Salton Sea. Prefers stands of cattails and tules dissected by narrow channels of flowing water; principle food is crayfish.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Toxostoma bendirei</td>
<td>Bendire's thrasher</td>
<td>None CSC</td>
<td>Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, paloverde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.</td>
<td>High</td>
</tr>
<tr>
<td>Toxostoma crissale</td>
<td>Crissal thrasher</td>
<td>None CSC</td>
<td>Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Toxostoma lecontei</td>
<td>Le Conte's thrasher</td>
<td>None CSC</td>
<td>Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vermivora virginiae</td>
<td>Virginias warbler</td>
<td>None CSC</td>
<td>(Nesting) E Slope of S Sierra Nevada, in arid, shrubby, mixed-conifer, pinyon-juniper, montane-chaparral. 7000-9000 ft. Nest on arid slopes w/ stands of tall shrubs/scattered trees; also, riparian thickets of willow/wild rose along streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vireo bellii arizonae</td>
<td>Arizona bell’s vireo</td>
<td>None SE</td>
<td>(Nesting) Summer resident along Colorado River. Chiefly inhabits willow thickets with undergrowth of Baccharis glutinosa nests in willow, mesquite, or other small tree/shrub, within 8 ft (usually 2-3 ft) of ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vireo bellii pusillus</td>
<td>Least Bell’s vireo</td>
<td>FE SE</td>
<td>Spring and summer breeding resident, migrating south for fall and winter. Primarily inhabits riparian woodlands, willow scrub, and thickets for breeding.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Vireo vicinior</td>
<td>gray vireo</td>
<td>None</td>
<td>(Nesting) Dry chaparral; W of desert, in chamise-dominated habitat; mtns of Mojave Desert, assoc w/juniper-artemisia. Forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Antrozous pallidus</td>
<td>pallid bat</td>
<td>None</td>
<td>Deserts, grasslands, shrublands, woodlands &amp; forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Chaetodipus fallax</td>
<td>pallid San Diego pocket mouse</td>
<td>None</td>
<td>Desert border areas in eastern San Diego co. in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, sandy herbaceous areas, etc. usually in association with rocks or coarse gravel.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Corynorhinus townsendii</td>
<td>Townsend's big-eared bat</td>
<td>None</td>
<td>Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls &amp; ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Eumops perotis californicus</td>
<td>Western mastiff bat</td>
<td>None</td>
<td>Found in all but sub-alpine and alpine habitats. Limited roosting sites in caves and buildings.</td>
<td>Low</td>
</tr>
<tr>
<td>Glaucomys sabrinus californicus</td>
<td>San Bernardino flying squirrel</td>
<td>None</td>
<td>Black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges. Black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lontra canadensis sonora</td>
<td>southwestern river otter</td>
<td>None</td>
<td>Aquatic habitats along the Colorado River. Needs abundant food sources and sufficient water for shelter and foraging.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Macrotus californicus</td>
<td>California leaf-nosed bat</td>
<td>None</td>
<td>Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Microtus californicus mohavensis</td>
<td>Mohave river vole</td>
<td>None</td>
<td>Occurs only in weedy herbaceous growth in wet areas along the Mohave River. May be found in some irrigated pastures. Burrows into soft soil. Feeds on leafy parts of grasses, sedges and herbs. Clips grasses to form runways from burrow.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Microtus californicus stephensi</td>
<td>South coast marsh vole</td>
<td>None</td>
<td>Tidal marshes in Los Angeles, Orange and southern Ventura counties.</td>
<td>Low</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Myotis velifer</td>
<td>cave myotis</td>
<td>None</td>
<td>Lowlands of the Colorado River and adjacent mountain ranges. Require caves or mines for roosting.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Neotoma lepida</td>
<td>San Diego desert woodrat</td>
<td>None</td>
<td>Found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.</td>
<td>Low</td>
</tr>
<tr>
<td>Nyctinomops</td>
<td>pocketed free-tailed bat</td>
<td>None</td>
<td>Variety of arid areas in so. California. Pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, rocky areas with high cliffs, etc.</td>
<td>Low</td>
</tr>
<tr>
<td>Perognathus</td>
<td>Palm Springs pocket mouse</td>
<td>None</td>
<td>Desert riparian, desert scrub, desert wash &amp; sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.</td>
<td>Low</td>
</tr>
<tr>
<td>Phrynosoma</td>
<td>San Diego horned lizard</td>
<td>None</td>
<td>Occurs in coastal sage scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sigmodon</td>
<td>Colorado River cotton rat</td>
<td>None</td>
<td>Coloration River floodplain from the Nevada border to about Bard. Distribution is spotty. Isolated sections of alluvial bottom along the Colorado River in areas supporting sedges, rushes, &amp; other marsh plants.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Spermophilus</td>
<td>Mohave ground squirrel</td>
<td>None</td>
<td>Open desert scrub, alkali scrub &amp; Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mohave Desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.</td>
<td>High</td>
</tr>
<tr>
<td>Taxidea taxus</td>
<td>American badger</td>
<td>None</td>
<td>Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food, friable soils &amp; open, uncultivated ground. Prey on burrowing rodents. Dig burrows.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Reptiles

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status: Federal State</th>
<th>Habitat</th>
<th>Potential For Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bufo alvarius</td>
<td>Colorado river toad</td>
<td>None</td>
<td>Breeds in temporary pools &amp; irrigation ditches along the Colorado River and southern Imperial Valley.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Bufo californicus</td>
<td>arroyo toad</td>
<td>FE</td>
<td>Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Charina umbratica</td>
<td>southern rubber boa</td>
<td>None ST</td>
<td>Restricted to the San Bernardino and San Jacinto Mtns; found in a variety of montane forest habitats. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotted logs.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Crotalus ruber</td>
<td>Northern red-diamond rattlesnake</td>
<td>None CSC</td>
<td>Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Emys (=Clemmys)</td>
<td>northwestern pond turtle</td>
<td>None CSC</td>
<td>Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites. Nests sites may be found up to 0.5 km from water.</td>
<td>Low</td>
</tr>
<tr>
<td>Emys (Clemmys)marmarata</td>
<td>southwestern pond turtle</td>
<td>None CSC</td>
<td>Inhabits permanent or nearly permanent bodies of water in many habitat types including ponds, marshes, rivers, and streams with suitable basking sites.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gopherus agassizii</td>
<td>desert tortoise</td>
<td>FT ST</td>
<td>Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with lg. annual wildflower blooms preferred.</td>
<td>High</td>
</tr>
<tr>
<td>Heloderma suspectum</td>
<td>banded gila monster</td>
<td>None CSC</td>
<td>Inhabits the lower slopes of rocky canyons and arroyos, but is also found on desert flats among scrub and succulents. Eggs are laid in soil in excavated nests; thus, soil must be sandy or friable. Found in areas moister than surroundings.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lampropeltis zonata</td>
<td>California mountain kingsnake (San Bernardino population)</td>
<td>None CSC</td>
<td>Bigcone spruce &amp; chaparral at lower elev. black oak, incense cedar, Jeffrey pine &amp; ponderosa pine at higher elevations. Well lit canyons with rocky outcrops or rocky talus.</td>
<td>Low</td>
</tr>
<tr>
<td>Phrynosoma coronatum</td>
<td>Coast (California) horned lizard</td>
<td>None CSC</td>
<td>Frequent a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, &amp; abundant supply of ants &amp; other insects.</td>
<td>Low</td>
</tr>
<tr>
<td>Rana boylii</td>
<td>foothill yellow-legged frog</td>
<td>None CSC</td>
<td>Partly-shaded, shallow streams &amp; riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.</td>
<td>Low</td>
</tr>
<tr>
<td>Rana aurora draytonii</td>
<td>California red-legged frog</td>
<td>FT CSC</td>
<td>Requires emergent riparian vegetation near deep, still or slow-moving ponds or intermittent streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Rana muscosa</td>
<td>mountain yellow-legged frog</td>
<td>FE CSC</td>
<td>Federal listing refers to populations in the San Gabriel, San Jacinto &amp; San Bernardino mountains only. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Rana yavapaiensis</td>
<td>lowland (=Yavapai &amp; San Felipe) leopard frog</td>
<td>None CSC</td>
<td>Found along the Colorado River and in streams near the Salton Sea.</td>
<td>Low</td>
</tr>
<tr>
<td>Thamnophis hammondii</td>
<td>Two-striped garter snake</td>
<td>None CSC</td>
<td>Highly aquatic. Found in or near permanent fresh water, often along streams with rocky beds and riparian growth.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Uma scoparia</td>
<td>Mojave fringe-toed lizard</td>
<td>None CSC</td>
<td>Fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub &amp; desert scrub. Shrub or annual plants may be necessary for arthropods found in the diet.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Uma inomata</td>
<td>Coachella Valley fringe-toed lizard</td>
<td>FT SE</td>
<td>Limited to sandy areas in the Coachella Valley, Riverside County. Requires fine, loose, windblown sand for burrowing, interspersed with hardpan and widely spaced desert shrubs.</td>
<td>Low</td>
</tr>
<tr>
<td>Catostomus santeanae</td>
<td>Santa Ana sucker</td>
<td>FT CSC</td>
<td>Endemic to Los Angeles basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, &amp; algae.</td>
<td>Low</td>
</tr>
<tr>
<td>Cyprinodon nevadensis amargosae</td>
<td>Amargosa pupfish</td>
<td>None CSC</td>
<td>Permanent water sections of the lower Amargosa River. Two types of habitat - broad marshes fed by hot springs and a narrow steep-sided canyon area with swift flows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cyprinodon nevadensis nevadensis</td>
<td>Saratoga Springs pupfish</td>
<td>None CSC</td>
<td>Only known from Saratoga Springs and its outflow in death valley. A series of marshes and shallow lakes. Water temps vary from 10 to 49 °C.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gila bicolor mohavensis</td>
<td>Mohave tui chub</td>
<td>FE SE</td>
<td>Endemic to the Mohave River basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gila elegans</td>
<td>bonytail</td>
<td>FE SE</td>
<td>Found in the Colorado River bordering California. Adapted for swimming in swift water, but both adults &amp; young need backwaters &amp; eddies. Need gravel riffles for spawning.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Gila orcutti</td>
<td>Arroyo chub</td>
<td>None CSC</td>
<td>Occurs in slow water stream sections with mud or sand bottoms. Often found in intermittent streams.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status: Federal State</td>
<td>Habitat</td>
<td>Potential For Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>---------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><em>Oncorhynchus mykiss irideus</em></td>
<td>steelhead-central California coast esu</td>
<td>FT None</td>
<td>From Russian River, south to Soquel Creek &amp; to, but not including, Pajaro River. Also San Francisco &amp; San Pablo Bay basins.</td>
<td>Low</td>
</tr>
<tr>
<td><em>Rhinichthys osculus ssp. 1</em></td>
<td>Santa Ana speckled dace</td>
<td>None CSC</td>
<td>Found only in Amargosa Canyon and tributaries, esp. Willow Creek &amp; Willow Creek Reservoir. Prefers pools with relatively deep water (0.5 - 0.75 m) and slow water velocity.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Rhinichthys osculus ssp. 3</em></td>
<td>Santa Ana speckled dace</td>
<td>None CSC</td>
<td>Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 °C. usually inhabit shallow cobble and gravel riffles.</td>
<td>Moderate</td>
</tr>
<tr>
<td><em>Xyrauchen texanus</em></td>
<td>razorback sucker</td>
<td>FE SE</td>
<td>Found in the Colorado River, bordering California. Adapted for swimming in swift currents but also need quiet waters. Spawn in areas of sand/gravel/rocks in shallow water.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**Status Codes**

**Federal**

| FE | Federally listed; Endangered |
| FT | Federally listed; Threatened |
| FSOC | Federal Species of Concern |

**State**

| ST | State listed; Threatened |
| SE | State listed; Endangered |
| CSC | California Species of Special Concern |

**Source:**

CNDDDB, November 2006 for all desert region quadrangles.

Potential for Occurrence (PFO) definitions:

**Absent:**
Species distribution is restricted by substantive habitat requirements, which do not occur within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.

**Low:**
Species distribution is restricted by substantive habitat requirements, which marginally occur or are negligible within the study area, and no further survey or study is necessary to determine likely presence or absence of this species within the study area.

**Moderate:**
Species distribution is restricted by substantive habitat requirements, which partly or mostly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

**High:**
Species distribution is restricted by substantive habitat requirements, which predominantly occur within the study area, and further survey or study is necessary to determine likely presence or absence of species from the study area.

**Present:**
Species observed within the study area during surveys, or recorded onsite by other biologists.

Absent, Low, and Present categories correspond to a recommendation of not conducting a focused survey. The Moderate and High categories correspond to a recommendation of conducting a focused survey.
### Table 7.
**Valley Region Local, State and Federally Administered Lands and Regional Planning Documents**

<table>
<thead>
<tr>
<th>Preserves / Sanctuaries</th>
<th>Mitigation Banks</th>
<th>State Parks</th>
<th>Regional Planning Documents / Habitat Conservation Plans</th>
<th>Movement and Dispersal Corridors via Watersheds, Creeks, Streams, Washes, and Lakes</th>
<th>Federal Register Designated Critical Habitat</th>
<th>Movement and Dispersal Corridors via County Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chino Dairy Preserve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Etiwanda Preserve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Ana Wooly Star Preserve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spineflower Preserve of the Santa Ana River</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vulcan Materials Alluvial Fan Sage Scrub Mitigation Bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prado Basin Mitigation Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Ana Wooly Star Mitigation Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slender-Horned Spine Flower Mitigation Land</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chino Hills State Park</td>
<td></td>
<td></td>
<td>West Mojave Plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prado Dam</td>
<td></td>
<td></td>
<td>West Mojave HCP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Ana Watershed</td>
<td></td>
<td></td>
<td>City of Rialto Delhi Sands Flower-loving Fly HCP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Ana River</td>
<td></td>
<td></td>
<td>Glen Helen Specific Plan in County Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santiago Creek</td>
<td></td>
<td></td>
<td>Upper Santa Ana Wash Land Management and Conservation Plan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven Oaks Dam</td>
<td></td>
<td></td>
<td>Santa Ana Watershed Project Authority (SAWPA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventura - San Gabriel Coastal Hydrologic Accounting Unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cajon Wash</td>
<td></td>
<td></td>
<td>New Model Colonies Specific Plan in the City of Ontario</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day Canyon Wash</td>
<td></td>
<td></td>
<td>Resource Management Plans prepared for The Preserve Specific Plan in the City of Chino</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day Creek</td>
<td></td>
<td></td>
<td>Colton Substation HCP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eltiwanda Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lytle Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mill Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Antonio Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Timoteo Wash/ Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sevaine Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Least Bell's Vireo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Bernardino Kangaroo Rat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Coastal Gnatcatcher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Ana Sucker</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running Deer Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucamonga-Guasti Regional Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prado Regional Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8.
Mountain Region Local, State and Federally Administered Lands and Regional Planning Documents

Local, State, and Federally Administered Lands and Regional Planning Documents
Preserves / Sanctuaries

<table>
<thead>
<tr>
<th>Preserves / Sanctuaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baldwin Lake</td>
</tr>
<tr>
<td>Baldwin Lake Preserve</td>
</tr>
<tr>
<td>Big Bear Valley Preserve</td>
</tr>
<tr>
<td>Big Sur Valley Preserve</td>
</tr>
<tr>
<td>Castle Glen Bald Eagle Sanctuary</td>
</tr>
</tbody>
</table>

National Forests

<table>
<thead>
<tr>
<th>National Forests</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Bernardino National Forest</td>
</tr>
<tr>
<td>Angeles National Forest</td>
</tr>
</tbody>
</table>

Federal Wilderness Areas

<table>
<thead>
<tr>
<th>Federal Wilderness Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucamonga Wilderness Area</td>
</tr>
<tr>
<td>San Gorgonio Wilderness Area</td>
</tr>
<tr>
<td>Bighorn Mountain Wilderness Area</td>
</tr>
<tr>
<td>San Jacinto Wilderness Area</td>
</tr>
<tr>
<td>Santa Rosa Wilderness Area</td>
</tr>
</tbody>
</table>

Regional Planning Documents / Habitat Conservation Plans

<table>
<thead>
<tr>
<th>Regional Planning Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Mojave HCP</td>
</tr>
<tr>
<td>Carbonate Habitat Management Strategy</td>
</tr>
<tr>
<td>San Bernardino National Forest Land Management Plan (LMP)</td>
</tr>
<tr>
<td>San Bernardino National Forest Business Plan</td>
</tr>
<tr>
<td>Angeles National Forest Land Management Plan (LMP)</td>
</tr>
</tbody>
</table>

Movement and Dispersal Corridors via Watersheds, Creeks, Streams, Washes, and Lakes

<table>
<thead>
<tr>
<th>Movement and Dispersal Corridors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Ana River</td>
</tr>
<tr>
<td>South Fork of Santa Ana River</td>
</tr>
<tr>
<td>Northern Mojave</td>
</tr>
<tr>
<td>Salton Sea</td>
</tr>
<tr>
<td>Southern Mojave</td>
</tr>
<tr>
<td>Ventura - San Gabriel Coastal</td>
</tr>
<tr>
<td>Alder Creek</td>
</tr>
<tr>
<td>Deep Creek</td>
</tr>
<tr>
<td>Plunge Creek</td>
</tr>
<tr>
<td>Shay Creek</td>
</tr>
<tr>
<td>Vivian Creek</td>
</tr>
<tr>
<td>Bear Creek a CDFG Designated Wild Trout Stream</td>
</tr>
<tr>
<td>Deep Creek a CDFG Designated Wild Trout Stream</td>
</tr>
<tr>
<td>Big Bear Lake</td>
</tr>
<tr>
<td>Bluff Lake</td>
</tr>
<tr>
<td>Erwin Lake</td>
</tr>
<tr>
<td>Lake Arrowhead</td>
</tr>
<tr>
<td>Lake Gregory</td>
</tr>
</tbody>
</table>

Movement and Dispersal Corridors via CDFG Areas of Special Biological Importance

<table>
<thead>
<tr>
<th>Movement and Dispersal Corridors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleghorn Mountain</td>
</tr>
<tr>
<td>East of Harrison Mtn.</td>
</tr>
<tr>
<td>Forks of Plunge Creek</td>
</tr>
<tr>
<td>Keller Meadows</td>
</tr>
<tr>
<td>Manzanita Flat to Plunge Creek in the Alder Creek Area</td>
</tr>
</tbody>
</table>
North of Barton Flats
North slope of San Bernardino Mtns. (E. of Deep Creek)
Northwest of Delaware Mtn.
Southwest of Luna Mountain

Federal Register Designated Critical Habitat

Bald Eagle
San Bernardino Kangaroo Rat
Southern Rubber Boa

Movement and Dispersal Corridors via State Parks
Silverwood Lake State Recreation Area

Movement and Dispersal Corridors via County Parks

Big Bear Park
Crest Park
Crestline Park
Dana Point Park
Enwin Lake Park
Grout Bay Park
Meadows Edge Park

San Bernardino National Forest Picnic Areas
Grout Bay Park
Meadows Edge Park
Switzer Park Picnic Area
Thurman Flats Picnic Grounds

Picnic Areas

Yucaipa Regional Park Picnic Shelter
Table 9.
Desert Region Local, State and Federally Administered Lands and Regional Planning Documents

Desert Region
Local, State, and Federally Administered Lands and Regional Planning Documents
Preserves / Sanctuaries

Death Valley and Mojave National Preserve (NPS)
Big Morongo Canyon Preserve
Fort Soda
Fort Piute
New York Mountains

National Parks
Joshua Tree National Park
Death Valley National Park

National Forests
San Bernardino National Forest
Angeles National Forest

Regional Parks
Glen Helen Regional Park
Lake Gregory Regional Park

Community Parks
Big Bear City Park
Crest Park
Crestline Park
Dana Point Park
Erwin Lake Park

Recreational Areas
Mojave River Dam/Forks Recreation Area
Providence Mountain State Recreation Area
Silverwood Lake State Recreation Area

Military installations
Fort Irwin U.S. Army Base Southern Expansion Biological Resource Management Plan

Regional Planning Documents / Habitat Conservation Plans
West Mojave Plan
Northern and Eastern Mojave Plan (NEMO)
Northern and Eastern Colorado Plan (NECO)

Movement and Dispersal Corridors via Watersheds, Creeks, Streams, Washes, and Lakes

Silverwood Lake
Amargosa River
Cedar Springs Dam
Colorado River
Mojave River
Mojave River Dam
Bill Williams River
Central Nevada Desert Basins
Lower Colorado River
Lower Colorado River - Lake Mead
Salton Sea

Federal Register Designated Critical Habitat

Desert Tortoise
Mojave Ground Squirrel

Movement and Dispersal Corridors via CDFG Areas of Special Biological Importance

Bums Pinyon Ridge
Camp Cady Wildlife Area
Day Canyon
Granite Mountains
King Clone Creosote Ring
Movement and Dispersal Corridors via County Parks

Calico Ghost Town Park
Moabi Regional Park
Mohave Narrow's Regional Park
Prado Regional Park
Big River Park and Recreation site
Chet Hoffman Park
Covington Park
Midway Park
Pioneer Park
Sugarloaf Park

Movement and Dispersal Corridors via BLM
ACEC's, DWMA's, Wilderness Areas, Scenic Areas and Natural Areas

Afton Canyon ACEC
Amargosa River ACEC
Barstow Woolly Sunflower ACEC
Bedrock Spring ACEC
Bendire’s Thrasher Conservation Areas
Big Morongo Canyon ACEC
Bigelow Cholla Research Natural Area
Black Mountain ACEC
Carbonate Endemics Plant RNA ACEC
Christmas Canyon ACEC (southern portion)
Coolgardie Mesa ACEC
Cronese Basin ACEC
Cronese Lake ACEC
Fossil Falls ACEC
Fremont-Kramer DWMA
Harper Dry Lake ACEC
Ivanpah Valley DWMA
Joshua Tree-to-Yucca Valley Linkage
Kingston Range Natural Area ACEC (southern portion)
Marix ACEC
Mojave Fishhook Cactus ACEC
Mojave Fringe-Toed Lizard ACEC
Mojave Ground Squirrel (HCA)
Mojave Monkeyflower ACEC
North Edwards Habitat Conservation Area (HCA)
North Harper Dry Lake ACEC
Ord-Rodman DWMA
Parish's Phacelia ACEC
Pinto Mountains DWMA
Pisgah ACEC
Piute Fenner DWMA
Rainbow Basin-Owl Canyon ACEC
Red Mountain Spring ACEC (formerly Squaw Spring)
Rodman Mountains ACEC
Salt Creek ACEC
Shadow Valley ACEC
Soggy Dry Lake ACEC
South Harper Dry Lake ACEC
Steam Well ACEC
Superior-Cronese DWMA
Turtle Mountains National Natural Landmark ACEC
Upper Johnson Valley ACEC
West Paradise ACEC
Whitewater Canyon ACEC (northern portion)
ATTACHMENT 2 – AIR QUALITY ANALYSIS SUPPLEMENTAL INFORMATION

The following supplemental air quality data is provided for information only. Since the NOP/IS was prepared regulatory standards have been revised by state and federal agencies. Also, authorizing agencies have accumulated and posted updated air quality data. It should be noted however, that the following information does not alter the findings or conclusions reached in the Draft EIR.

Table AQ-1 provides the most available SCAQMD air quality data [2005] from air monitoring stations within the South Coast Air Basin in San Bernardino County. This information was available as of mid-2006.

### Table AQ-1

#### 2005 SCAQMD Air Quality Data for San Bernardino County

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Max. Conc. (ppm, 1-hour)</th>
<th>Max. Conc. (ppm, 8-hour)</th>
<th>Federal 9.5 ppm, 8-hour</th>
<th>State 9.0 ppm, 8-hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest San Bernardino Valley</td>
<td>364</td>
<td>3</td>
<td>1.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>33</td>
<td>Southwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 1</td>
<td>365</td>
<td>3</td>
<td>2.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 2</td>
<td>356</td>
<td>4</td>
<td>2.4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>35</td>
<td>East San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>37</td>
<td>Central San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>38</td>
<td>East San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**KEY:** ppm = parts per million parts of air, by volume; SRA = Source/Receptor Area.

a) The federal 1-hour standard (1-hour average > 35 ppm) and state 1-hour standard (1-hour average > 20 ppm) were not exceeded.

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Max. Conc. (ppm, 1-hr)</th>
<th>Max. Conc. (ppm, 8-hr)</th>
<th>Fourth Highest Conc. (ppm, 8-hr)</th>
<th>Health Advisory 0.15 ppm, 1-hr</th>
<th>No. Days Standard Exceeded (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest SB Valley</td>
<td>365</td>
<td>0.149</td>
<td>0.121</td>
<td>0.101</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>33</td>
<td>Southwest SB Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>34</td>
<td>Central SB Valley 1</td>
<td>355</td>
<td>0.150</td>
<td>0.128</td>
<td>0.113</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>34</td>
<td>Central SB Valley 2</td>
<td>361</td>
<td>0.163</td>
<td>0.129</td>
<td>0.114</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>35</td>
<td>East SB Valley</td>
<td>364</td>
<td>0.146</td>
<td>0.123</td>
<td>0.113</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>37</td>
<td>Central SB Mountains</td>
<td>354</td>
<td>0.182</td>
<td>0.145</td>
<td>0.130</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>38</td>
<td>East SB Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

b) CARB established a new 8-hr ozone standard of 0.070 ppm effective May 17, 2005.

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Max. Conc. (ppm, 1-hour)</th>
<th>Annual Average AAM Conc. (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest San Bernardino Valley</td>
<td>364</td>
<td>0.10</td>
<td>0.0313</td>
</tr>
<tr>
<td>33</td>
<td>Southwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
### SULFUR DIOXIDE

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Maximum Concentration (ppm, 1-hour)</th>
<th>Maximum Concentration (ppm, 24-hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>33</td>
<td>Southwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 1</td>
<td>365</td>
<td>0.01</td>
<td>0.004</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>East San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>37</td>
<td>Central San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>38</td>
<td>East San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

c) The state standard is 1-hour average > 0.25 ppm. The federal standard is annual arithmetic mean (AAM) > 0.0534 ppm.

### SUSPENDED PARTICULATE MATTER (PM10)

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Max. Conc. µg/m$^3$ 24-hour</th>
<th>No. (%) Samples Exceeding Standard</th>
<th>Federal Average AAM µg/m$^3$</th>
<th>State Average AAM µg/m$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>33</td>
<td>Southwest San Bernardino Valley</td>
<td>60</td>
<td>74</td>
<td>0</td>
<td>19(31.7)</td>
<td>40.8</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 1</td>
<td>60</td>
<td>108</td>
<td>0</td>
<td>29(48.3)</td>
<td>50.0</td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 2</td>
<td>60</td>
<td>72</td>
<td>0</td>
<td>23(38.3)</td>
<td>42.3</td>
</tr>
<tr>
<td>35</td>
<td>East San Bernardino Valley</td>
<td>58</td>
<td>61</td>
<td>0</td>
<td>12(20.7)</td>
<td>33.2</td>
</tr>
<tr>
<td>37</td>
<td>Central San Bernardino Mountains</td>
<td>56</td>
<td>49</td>
<td>0</td>
<td>0</td>
<td>25.8</td>
</tr>
<tr>
<td>38</td>
<td>East San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

e) PM10 samples were collected every six days.
f) Federal PM10 standard is annual average AAM 50 µg/m$^3$. State standard is annual average AAM 20 µg/m$^3$.

### SUSPENDED PARTICULATE MATTER (PM2.5)

<table>
<thead>
<tr>
<th>SRA No.</th>
<th>Location of Air Monitoring Station</th>
<th>No. Days of Data</th>
<th>Max. Conc. µg/m$^3$ 24-hour</th>
<th>98th Percentile Conc. in µg/m$^3$ 24-hour</th>
<th>No. (%) Samples Exceeding Standard</th>
<th>Federal Average AAM µg/m$^3$</th>
<th>State Average AAM µg/m$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Northwest San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>33</td>
<td>Southwest San Bernardino Valley</td>
<td>110</td>
<td>87.8</td>
<td>49.6</td>
<td>10(0.9)</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 1</td>
<td>109</td>
<td>96.8</td>
<td>48.2</td>
<td>10(0.9)</td>
<td>18.9</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Central San Bernardino Valley 2</td>
<td>109</td>
<td>106.3</td>
<td>43.4</td>
<td>10(0.9)</td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>East San Bernardino Valley</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>37</td>
<td>Central San Bernardino Mountains</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>38</td>
<td>East San Bernardino Mountains</td>
<td>51</td>
<td>38.8</td>
<td>38.8</td>
<td>0</td>
<td>12.1</td>
<td></td>
</tr>
</tbody>
</table>

g) PM2.5 samples were collected every three days.
h) Federal standard is AAM 15 µg/m$^3$. State standard is AAM 12 µg/m$^3$. 
Table AQ-2 provides the most available SCAQMD air quality significance thresholds with the new PM2.5 standards. This table was revised and available as of October 2006.

### Table AQ-2
SCAQMD Air Quality Significance Thresholds  
(Revised October 2006)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Construction</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>100 lbs/day</td>
<td>55 lbs/day</td>
</tr>
<tr>
<td>VOC</td>
<td>75 lbs/day</td>
<td>55 lbs/day</td>
</tr>
<tr>
<td>PM10</td>
<td>150 lbs/day</td>
<td>150 lbs/day</td>
</tr>
<tr>
<td>PM2.5</td>
<td>55 lbs/day</td>
<td>55 lbs/day</td>
</tr>
<tr>
<td>SOx</td>
<td>150 lbs/day</td>
<td>150 lbs/day</td>
</tr>
<tr>
<td>CO</td>
<td>550 lbs/day</td>
<td>550 lbs/day</td>
</tr>
<tr>
<td>Lead</td>
<td>3 lbs/day</td>
<td>3 lbs/day</td>
</tr>
</tbody>
</table>

**Toxic Air Contaminants (TACs) and Odor Thresholds**

| TACs (including carcinogens and non-carcinogens) | Maximum Incremental Cancer Risk $\geq 10$ in 1 million  
Hazard Index $\geq 1.0$ (project increment) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor Project creates an odor nuisance pursuant to SCAQMD Rule 402</td>
<td></td>
</tr>
</tbody>
</table>

**Ambient Air Quality for Criteria Pollutants**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO2</td>
<td>0.25 ppm (state)</td>
</tr>
<tr>
<td></td>
<td>0.053 ppm (federal)</td>
</tr>
<tr>
<td>PM10</td>
<td>10.4 $\mu$g/m$^3$ (construction) &amp; 2.5 $\mu$g/m$^3$ (operation)</td>
</tr>
<tr>
<td></td>
<td>1.0 $\mu$g/m$^3$</td>
</tr>
<tr>
<td></td>
<td>20 $\mu$g/m$^3$</td>
</tr>
<tr>
<td>PM2.5</td>
<td>10.4 $\mu$g/m$^3$ (construction) &amp; 2.5 $\mu$g/m$^3$ (operation)</td>
</tr>
<tr>
<td>Sulfate</td>
<td>25 $\mu$g/m$^3$</td>
</tr>
<tr>
<td>CO</td>
<td>SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:</td>
</tr>
<tr>
<td></td>
<td>20 ppm (state)</td>
</tr>
<tr>
<td></td>
<td>9.0 ppm (state/federal)</td>
</tr>
</tbody>
</table>

---

$a$ Source: SCAQMD CEQA Handbook (SCAQMD, 1993)  
$b$ Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).  
$c$ For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.  
$d$ Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.  
$e$ Ambient air quality threshold based on SCAQMD Rule 403.
Table AQ-3 is the most current federal and state ambient air quality standards as published on the California Air Resources Control Board (CARB) website. This table was revised and available as of November 10, 2006.

<table>
<thead>
<tr>
<th>AIR POLLUTANT</th>
<th>STATE STANDARD (CONCENTRATION/ AVERAGING TIME)</th>
<th>FEDERAL PRIMARY STANDARD CONCENTRATION/ AVERAGING TIME</th>
<th>MOST RELEVANT EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>0.09 ppm, 1-hr average &gt; 0.070 ppm, 8-hr</td>
<td>0.08 ppm, 8-hr average &gt;</td>
<td>(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage.</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>9.0 ppm, 8-hr average &gt; 20 ppm, 1-hr average &gt;</td>
<td>9 ppm, 8-hr average &gt; 35 ppm, 1-hr average &gt;</td>
<td>(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>0.25 ppm, 1-hr average &gt; 0.053 ppm, annual arithmetic mean &gt;</td>
<td>0.030 ppm, annual arithmetic mean &gt; 0.14 ppm, 24-hr average &gt;</td>
<td>(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>0.04 ppm, 24-hr average &gt; 0.25 ppm, 1-hr. average &gt;</td>
<td>0.030 ppm, annual arithmetic mean &gt; 0.14 ppm, 24-hr average &gt;</td>
<td>Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.</td>
</tr>
<tr>
<td>Suspended Particulate Matter (PM10)</td>
<td>20 µg/m³, annual arithmetic mean &gt; 50 µg/m³, 24-hr average &gt;</td>
<td>50 µg/m³, annual arithmetic mean &gt; 150 µg/m³, 24-hr average &gt;</td>
<td>(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children.</td>
</tr>
<tr>
<td>Suspended Particulate Matter (PM2.5)</td>
<td>12 µg/m³, annual arithmetic mean &gt; 15 µg/m³, annual arithmetic mean &gt; 35 µg/m³, 24-hour average &gt;</td>
<td>Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.</td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>25 µg/m³, 24-hour average &gt;= 1.5 µg/m³, calendar quarter&gt;</td>
<td>No Federal Standard</td>
<td>(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.</td>
</tr>
<tr>
<td>Lead</td>
<td>1.5 µg/m³, 30-day average &gt;= 1.5 µg/m³, calendar quarter&gt;</td>
<td>No Federal Standard</td>
<td>(a) Increased body burden; (b) Impairment of blood formation and nerve conduction.</td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>In sufficient amount to give an extinction coefficient &gt;0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST)</td>
<td>No Federal Standard</td>
<td>Nephelometry and Airborne Instrumentation System-Internal (AISI) Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent.</td>
</tr>
<tr>
<td>AIR POLLUTANT</td>
<td>STATE STANDARD (CONCENTRATION/AVERAGING TIME)</td>
<td>FEDERAL PRIMARY STANDARD CONCENTRATION/AVERAGING TIME</td>
<td>MOST RELEVANT EFFECTS</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------</td>
<td>------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>0.03 ppm, 1-hr. average &gt; No Federal Standard</td>
<td>Odor annoyance.</td>
<td></td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>0.01 ppm, 24-hr average &gt; No Federal Standard</td>
<td>Known carcinogen.</td>
<td></td>
</tr>
</tbody>
</table>

Source: CARB Website (www.arb.ca.gov/aqs/aaqs2.pdf) (November 10, 2006).

Table AQ-4 is a list of typical mitigation measures that can be prescribed in “project-specific” CEQA documents and included in mitigation monitoring programs.

Table AQ-4
Mitigation Measures Which May be Applicable to Future Development

1. Revegetate disturbed areas as quickly as possible.
2. All excavating and grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 mph.
3. All streets shall be swept once a day if visible soil materials are carried to adjacent streets.
4. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site each trip.
5. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
6. Water active sites at least twice daily.
7. All trucks hauling dirt, sand, soil, or other loose materials are to be covered, or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).
8. Traffic speeds on all unpaved roads shall be reduced to 10 mph or less.
9. Low NOx construction equipment shall be used, where feasible.
10. All construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.
11. Electric power equipment in lieu of gasoline-powered engines shall be used where feasible.
12. Work crews will shut off equipment when not in use.
13. Plan construction activities so as to not interfere with peak hour traffic and minimize obstruction of through traffic lanes adjacent to the site.
14. Construction Contractor shall support and encourage ridesharing and transit incentives for the construction crew.
Table AQ-5 provides the most available Mojave Desert AQMD air quality data [2005] from air monitoring stations within their jurisdiction.

**Table AQ-5**  
Mojave Desert AQMD  
Exceedances of Standards and Maximum Concentrations for 2005

<table>
<thead>
<tr>
<th></th>
<th>OZONE</th>
<th>CARBON MONOXIDE</th>
<th>NITROGEN DIOXIDE</th>
<th>SULFUR DIOXIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Days Over State Standard</td>
<td>Days Over Federal 1 hour/8hour</td>
<td>Days Over State Standard 1 hour/8hour</td>
<td>Days Over State 24 hour/1hour</td>
</tr>
<tr>
<td></td>
<td>Maximum 8 hour (ppm)</td>
<td>Maximum 8 hour (ppm)</td>
<td>Maximum 1 hour (ppm)</td>
<td>Maximum 24 hour (ppm)</td>
</tr>
<tr>
<td></td>
<td>Maximum 1 hour (ppm)</td>
<td>Average 1 hour (ppm)</td>
<td></td>
<td>Average 1 hour (ppm)</td>
</tr>
<tr>
<td>OZONE</td>
<td>53</td>
<td>4/43</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td>0.123</td>
<td>0.145</td>
<td>1.6</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>0.036</td>
<td></td>
<td>3.3</td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARBON MONOXIDE</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NITROGEN DIOXIDE</td>
<td>0</td>
<td></td>
<td>0.087</td>
<td>0.015</td>
</tr>
<tr>
<td>SULFUR DIOXIDE</td>
<td>0/0</td>
<td></td>
<td>0.004</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.018</td>
<td>0.001</td>
</tr>
</tbody>
</table>
SECTION D. REVISIONS TO THE DRAFT EIR AND THE 2007 GENERAL PLAN
A. Revisions to the Draft EIR

Section 15132 of the CEQA Guidelines allows the Final EIR to contain revisions to the Draft EIR based on comments received on the Draft. This section contains changes to the Draft EIR providing clarification and revisions that have been made in response to the comment letters presented in Section C.

1. The third sentence of Section 2(a) on page III-2 of the Final EIR has been revised to read as follows:

   Of this non-jurisdiction land, approximately 6 million acres are owned by the United States and controlled by the Bureau of Land Management, Department of Interior; and 1.9 million acres are owned by the United States and controlled by various military branches within the United States Department of Defense.

   [Response F.2-1]

2. The first paragraph on page IV-69 of the Final EIR has been revised as follows:

   Mountain areas of the Desert region may be susceptible to landslides, particularly associated with large earthquakes. Desert soils are susceptible to erosion where disturbed due to the limited vegetation and low moisture content, and common high winds and infrequent high intensity rainfall events that may occur. Fragile desert pavements and biological crusts also occur in currently undisturbed portions of the Desert region. Currently, agricultural use of soils in the Desert region is generally limited by available water, and some areas have highly alkaline soils and playas that are unsuitable for agricultural use. Fallow or abandoned agricultural fields often lead to unstable surfaces that are subject to wind erosion that can lead to fugitive dust or even small dune formations that cause other indirect effects such as property damage and over-covering of native vegetation.

   [Response F.2-13]

3. Fort Cady Mineral Corporation mine has been removed from Table IV-J-1 in the EIR.

   [Response F.2-16]

4. Page IV-168 of the Final EIR now includes the following paragraph:

   A second, privately funded, high-speed rail project is currently in the preliminary stages of development. The proposed DesertXpress high-speed train project includes passenger stations, a maintenance facility, and a new railroad line along the I-15 corridor between Victorville and Las Vegas. The project would involve construction of a fully grade separated, dedicated double track passenger-only railroad along an approximately 200-mile corridor within or adjacent to the I-15 freeway for about 170 miles and adjacent to existing railroad lines for about 30 miles.

   [Response F.2-20]
5. The County, as Lead Agency, has endeavored to replace various references in the EIR to the Forest Service with the title: \emph{U.S. Forest Service}.  

[Response F.3-12]

6. Mitigation measure BIO-4 has been deleted from Section IV-D of the EIR, relocated to Section IV-H and redrafted as follows.  

\textit{Mitigation HWQ-16}  
The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.  

[Responses F.3-18, F.3-19]

7. The following text has been added to the geologic setting discussion in the last paragraph on page IV-70 of the Final EIR:  

\begin{quote}
Debris flows are a type of post-wildfire event that has come to be referred to as mudflows due to the heavy sediment load that is typically carried down steep slopes in defined channels. The flows may originate from mass wasting due to landslides and accumulated soil and rock from in-channel sediment and from extensive bank erosion as the flow moves down gradient. These flows typically accumulate debris in the form of rock, boulders, logs and so on that are carried by the energy of the flow. They are part of the commonly referred to fire/flood cycle that occurs in the mountain foothills in southern California. These events are triggered by heavy rainfall during the winter months following intensive wildfires in late summer and fall that denude the hillsides of vegetation leading to rapid water runoff.  
\end{quote}

[Response F.3-56]

8. The following Mitigation Measure will be added to Section IV-G of the EIR:  

\textit{Mitigation HAZ-19}  

Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies being developed by the U.S. Geological Survey and other federal agencies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement feasible advance public notification methods to warn of impending hazardous conditions.  

[Response F.3-57]

9. Third paragraph on Page IV-136 of the Final EIR has been revised as follows:  

\begin{quote}
The U.S. Department of Agriculture, U.S. Forest Service (USFS), and Department of Agriculture manages the majority of the geographic area within the Mountain Regions of the County totaling over 671,000 acres in the San Bernardino Mountains and a portion of the San Gabriel Mountains. The mission of the USFS is to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations. The \textit{National Forests} are managed by the USFS for multiple uses including recreation, watershed protection, grazing, wildlife, and forest stand management. Within the San Bernardino County portion of the San Bernardino National Forest lie the Cucamonga Wilderness, San Gorgonio Wilderness, and BigHorn  
\end{quote}
Mountain Wilderness. The USFS has recently updated the Land and Resource Management Plans for the Angeles, Cleveland, Los Padres, and San Bernardino National Forests. The USFS also administers the Pacific Crest Trail (PCT), which is a designated wilderness National Scenic Trail approximately 2,650 miles long running from Canada to Mexico. One hundred fifteen miles of the PCT trail runs through San Bernardino County.

[Response F.3-61]

10. The following paragraph on Page IV-137 of the Final EIR has been revised as follows:

b) Mountain Region

Most of the Mountain Region of the County of San Bernardino is covered by the Angeles and San Bernardino National Forests. State parks include Cucamonga Wilderness Area, San Gorgonio Wilderness Area, Bighorn Mountains Wilderness Area, and Silverwood Lake State Recreation Area. Table IV-N-3 lists the regional and community parks in the Mountain Region of the County.

[Response F.3-62]

11. As rewritten, Section IV-N(3) of the Final EIR now reads as follows:

3. Impact Analysis

Impacts related to increased demand for recreational opportunities will be significant if a proposed project requires new construction to maintain acceptable performance standards for public parks or recreational opportunities and that new construction causes new significant environmental impacts.

a) Valley Region

Impact REC-1

The County does not have adequate park space for the projected population called for by the updated General Plan in the Valley Region. The County would need an additional 1,712 acres of parkland to meet the accepted standard.

The 2030 projected unincorporated County population for the Valley Region is 186,224. The total projected population for incorporated city residents in the Valley Region is 1,716,384. This brings the projected total residents of the Valley Region to 1,902,608. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. Using the County standard, the required regional park space for the Valley Region would be approximately 4,757 acres. Currently, there are approximately 3,045 acres of regional and community parks in the Valley Region.

There is a planned regional park, Colton Regional Park, which will add 150 acres of parkland to the Valley Region. The County and local cities would still need an additional 1,562 acres of regional parkland in the Valley Region.
This impact can be mitigated by the adoption of certain mitigation measures presented in Section 4, below.

b) Mountain Region

Impact REC-2
The 2030 projected unincorporated County population for the Mountain Region is 72,833. The total projected population for incorporated city residents in the Mountain Region is 11,890. This brings the projected total residents of the Mountain Region to 84,723. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Mountain Region would be approximately 213 acres. Currently, there are approximately 1,551 acres of regional and community parks in the Mountain Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

c) Desert Region

Impact REC-3
The 2030 projected unincorporated County population for the Desert Region is 148,918. The total projected population for incorporated city residents in the Desert Region is 548,584. This brings the projected total residents of the Desert Region to approximately 698,000. The General Plan standard is 2.5 acres of developed regional parkland per 1,000 people. The required regional park space for the Desert Region would be approximately 1,745 acres. Currently, there are approximately 5,051 acres of regional and community parks in the Desert Region. The County shall exceed the standard of necessary park space for the projected population called for by the update to the County General Plan.

Since this Impact is not significant, no mitigation measures are necessary.

d) County

Impact REC-4
The 2030 projected population for the County, as a whole is 2,685,486. Under the County’s guidelines of 2.5 acres of parkland per 1,000 populations, there will need to be 6,714 acres of County parkland. The County as a whole currently has 9,647 acres of parkland. The County as a whole will meet the County standard.

While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, state parks and BLM land which the people of the County can use.

Since this Impact is not significant, no mitigation measures are necessary.
12. First paragraph on Page IV-139 of the Final EIR has been revised as follows:

   While the majority of the population of the County lives in the Valley Region, the residents of the Valley Region visit parkland in the Mountain and Desert Regions of the County. The County also has a large amount of national parks, national forests, state parks and BLM land which the people of the County can use.

13. Table IV-N-1 of the Final EIR has been revised to delete Grout Bay Park, Meadows Edge Park, Switzer Park, and Thurman Flats from the Table.

14. Table IV-N-3 of the Final has been revised to include Grout Bay Park, Meadows Edge Park, Switzer Park, and Thurman Flats to the Table.

15. Fifth paragraph on Page IV-137 of the Final EIR has been revised with an added sentence as follows:

   The U.S. Forest Service operates and maintains an additional 914 miles of roadway that is open to the general public for pursuit of various recreational opportunities.

16. The following roads have been removed from Table IV-A-2. County Designated Scenic Routes of the Final EIR: Kelbaker, Kelso-Cima, Cima, Cedar Canyon and Black Canyon.

17. The third paragraph on Page IV-44 of the Final EIR has been revised as follows:

   The BLM has designated locations within three desert biomes as Area of Critical Environmental Concern (ACEC) and Special Areas. By designating areas as ACEC the BLM can develop special management programs for specific resources. These management programs are site-specific and include patrolling, fencing, and signage implemented by the BLM. The programs also recommend actions that the BLM does not have direct authority to implement. There are 11 designated biological ACECs in the Desert Region of San Bernardino County. These include:

   - Fort Piute;
   - New York Mountain;
   - Dark Mountain;
   - Amargosa River;
• Salt Creek;
• Cronese Lake;
• Fort Soda;
• Upper Johnson Valley;
• Soggy Dry Lake;
• North Harper Dry Lake;
• South Harper Dry Lake;
• Afton Canyon; and
• Big Morongo Canyon.

18. Following are the revised mitigation measures for biological impacts that have been included in Section IV-D of the Final EIR:

**Mitigation BIO-1**
The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay as discussed in Mitigation Measures BIO-3 and BIO-13 below. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon.

**Mitigation BIO-2**
The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with ACOE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation.

**Mitigation BIO-3**
The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. A component of the Overlay will maintain a database of completed Biological Opinions that will contribute to assessments of cumulative impacts from previously approved projects. Development of an update
database that integrates CNDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and other sources.

Mitigation BIO -4
The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats.

Mitigation BIO -5
The County shall not permit land conversion until adequate mitigation is provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant.

Mitigation BIO -6
The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries).

Mitigation BIO -7
The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays.

Mitigation BIO -8
The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing.

Mitigation BIO -9
The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special
habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents.

**Mitigation BIO -10**

All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Land Use Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report.

The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.

**Mitigation BIO -11**

In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County’s role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights.

**Mitigation BIO -12**

Within the County’s Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated “BR” or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.

82.13.020 – Location Requirements

The BR overlay district shall be applied to areas that have been identified by a county, state or federal agency as habitat for species of unique, rare, threatened or endangered plants or animals or their habitats as listed in the General Plan. The overlay applies to policy areas identified on the Open Space Overlay.

82.13.030 – Application Requirements

When a land use is proposed, or an existing land use is increased by more than 25 percent of disturbed area within a BR overlay district, the land use application shall include a biotic resources report prepared as follows, except where the Director finds that prior environmental studies approved by the County have determined that the site does not contain viable habitat.
Report content. The biotic resources report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development, and shall also identify mitigation measures designed to reduce or eliminate impacts to the identified resources, and shall be submitted along with the application for the proposed development.

Report preparation. The biotic resources report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist, or other professional “life scientist”

82.13.040 – Development Standards

The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

Mitigation BIO-13

The County shall consider whether projects may lead to a significant environmental impact as a result of the conversion of oak woodlands consistent with new provisions added to the County Development Code Subsection 88.01.050(e)(4). Upon determination of a significant effect, the County shall employ one or more of the following measures: preservation, replacement or restoration, in-lieu mitigation fee, or other mitigation measures.

Preservation. Preserve existing oak woodlands by recording conservation easements in favor of the County or an approved organization or agency.

Replacement or restoration. Replace or restore former oak woodlands. The review authority may require the planting and maintenance of replacement trees, including replacing dead or diseased trees. The replacement ratio and tree sizes shall be based on the recommendation of an Oak Reforestation Plan prepared by a registered professional forester. The requirement to maintain trees in compliance with this paragraph shall terminate seven years after the trees are planted.

In-lieu mitigation fee. Contribute in-lieu mitigation fee to the Oak Woodlands Conservation Fund, established under Fish and Game Code Section 1363 for the purpose of purchasing oak woodlands conservation easements. A project applicant who contributes funds in compliance with this Subsection shall not receive or use a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project. The in-lieu fee for replacement trees shall be calculated based upon their equivalent value as established by the International Society of Arboriculture’s (ISA) current edition of Guide to Establishing Values for Trees and Shrubs, etc.

Other mitigation measures. Perform other mitigation measures as may be required by the review authority (e.g., inch-for-inch off-site replacement planting; transfer of development rights, enrollment of project with offset provider for carbon credits in greenhouse gas emission registry, carbon reduction, and carbon trading system; etc.).
Following are the revised mitigation measures for geological impacts that have been included in Section IV-F of the Final EIR:

**Mitigation GEO-1**
Use the requirements of the California Building Code to reduce the adverse effects on life and property by properly designing and constructing structures to withstand damage from severe seismic shaking.

**Mitigation GEO-2**
Enhance the mitigation of potential geologic hazards to new development by adding the requirements for evaluation of seiche and adverse soils conditions to the Geologic Hazards Overlay.

**Mitigation GEO-3**
Assess and mitigate the potential impacts of adverse soils conditions posed by hydro-collapsible, expandable, corrosive and other adverse soils that may be found in certain locations in the County, such as desert and mountain playas, fault zones and other special geologic features through the application of the provisions of the Geologic Hazard Overlay.

**Mitigation GEO-4**
Within the County’s Development Code, one overlay district has been established relating specifically to protect County citizens from geological hazards. These areas are designated Geologic Hazard “GH” Overlay District which identifies areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall and liquefaction. This District operates as shows below.

82.17.010 - Purpose
The Geologic Hazard (GH) overlay established by Sections 82.01.020 (Land Use Plan and Districts) and 82.01.030 (Overlays) is created to provide greater public safety by establishing investigation requirements for areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall, liquefaction, seiche, and adverse soil conditions.

82.17.020 - Location Requirements
The GH overlay district shall be designated:

A. In areas that are adjacent to active earthquake fault traces. In these cases, the overlay district shall adopt the boundaries of the Alquist-Priolo Earthquake Fault Zoning Act;

B. In areas where landslides, debris flows, rockfall or other slope instabilities occur; and

C. In areas where liquefaction of the soil or seiche is associated with earthquake activity.

D. In areas of adverse soil conditions, such as hydrocollapsible, expansive, corrosive, etc.

82.17.030 - Geology Reports
A detailed geologic study prepared by a California Professional Geologist shall be submitted with all land use applications and development permits proposed.
within the GH overlay district that would lead to the construction of roads or structures or the subdivision of land.

A. Report contents.

1. Areas of faulting. In areas of the GH overlay district where faulting is a concern, the geologic report shall confirm the presence or absence of active faults and, if applicable, shall establish appropriate construction setbacks from active faulting.

2. Areas of slope stability. In areas of the GH overlay district where slope stability is a concern, the geologic report shall evaluate landslides and other slope instabilities that could affect the project and, if applicable, shall include recommendations for mitigation.

3. Areas of liquefaction. In areas of the Geologic Hazard Overlay District where liquefaction is a concern, the geologic report shall evaluate the potential for liquefaction based upon anticipated ground shaking, historic groundwater levels and character of the alluvial materials. If the investigation determines that a potential for liquefaction exists, a geotechnical investigation may be required.

B. Exemptions from report requirements. Exemptions to the requirement for a geologic study include:

1. One single-family wood or steel frame dwelling not exceeding two stories unless the proposed dwelling falls within the boundaries of any mapped landslide as shown on the Geologic Hazard Overlay maps.

2. Single-family wood frame or steel dwellings located within a subdivision of land for which a geologic report was prepared and approved;

3. A non-habitable structure that is accessory to a residential use that is not physically connected to the principal structure; and

4. Alterations or additions to any structure where the value or area does not exceed 50% of the structure.

82.17.040 - Development Standards

Development and land uses proposed within the GH overlay district shall comply with the following standards.

A. A structure used for human occupancy shall be located 50 feet or farther from any active earthquake fault traces. Lesser setbacks may be applicable in certain situations as determined by an appropriate geologic investigation and approved by the County Geologist or other engineering geologist designated by the Building Official.

B. A structure used for critical facilities shall be located 150 feet or farther from any active earthquake fault trace as indicated by General Plan. Critical facilities shall include dams, reservoirs, fuel storage facilities, power plants, nuclear reactors, police and fire stations, schools, hospitals, rest homes, nursing homes and emergency communication facilities.

C. Utility lines and streets shall not be placed within the construction setback area of a hazardous fault except for crossing which can be made perpendicular to the fault trace or as recommended by the project geologist and approved by the County Geologist or individual designated by the Building Official.
D. The use of development restricted areas as recreation and common open spaces is encouraged.

Mitigation GEO-5
The County Development Code, updated as a program component to the General Plan Update, includes new hillside grading standards at Section 83.08. The purpose and applicability are listed below, refer the Development Code to view the full text of the standards. The application of the prescribed standards will reduce the potential impacts of grading on hillside terrain.

83.08.010 – Purpose
This Chapter establishes regulations for development within hillside areas to:

(a) Facilitate appropriate hillside development through standards and guidelines for hillside areas.

(b) Ensure that development in the hillside areas is designed to fit the existing landform.

(c) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(d) Provide a safe means of ingress and egress for pedestrian and vehicular traffic to and within hillside areas.

(e) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., land form, scenic quality, slopes, and vegetation).

(f) Encourage the planning, design, and development of sites that provide maximum safety with respect to fire hazards, exposure to geological hazards, drainage, erosion and siltation, and materials of construction; provide the best use of natural terrain; and to discourage development that will create or increase fire, flood, slide, or other safety hazards to public health, welfare, and safety.

83.08.020 – Applicability

(a) Slope gradient of 15 percent or greater. The standards contained in this Chapter apply to all uses and structures within areas having a natural slope gradient of 15 percent or greater over the area and requiring a Grading Permit. For the purpose of this Chapter, slope shall be computed as set forth in Section 83.08.040(c) for the area being graded before grading is commenced, as determined from a topographic map having a scale of not less than one inch equals 100 feet and a contour interval of not more than five feet.

(b) Site conditions requiring Hillside Grading Review. If any one of the following thresholds applies on a particular site meeting the criteria set forth in subsection (a) above, a full analysis and compliance with this Chapter shall be required and a Hillside Grading Review shall be conducted in compliance with Section 83.08.030 (Hillside Grading Review):

(1) The volume of proposed grading is more than 500 cubic yards.
If the proposed cut or fill slopes greater than 15 feet in height will be visible and exposed to permanent public view or will be adjacent to designated open space or public lands.

(3) The width of proposed cut or fill slopes is greater than 75 feet.

(4) The area of proposed disturbance is more than 50 percent of the site area, or the proposed disturbed area exceeds 10,000 square feet, whichever is less.

20. The following Mitigation Measure will be added to Section IV-G of the EIR:

**Mitigation HAZ-20**

The Office of Emergency Service (OES), County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

21. The following language has been removed from Mitigation Measure HAZ-17 in Section IV-G of the EIR:

The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County’s Development Code, Chapter 82.13, shall be strictly enforced. New development in this area shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.
B. REVISIONS TO THE GENERAL PLAN, COMMUNITY PLANS, AND DEVELOPMENT CODE

Following are changes to the proposed 2007 General Plan, providing clarification and revisions that were made in response to the comment letters presented in Section C. In addition to the revisions listed in this Section, all of the Mitigation Measures listed in the Final EIR, including those presented in Section A, above, will be incorporated as appropriate into the General Plan or Community Plans as policies, as encouraged by Section 21081.6 (b) of the Public Resources Code.

1. Subsequent to the first paragraph on Page VI-4 of the General Plan the following paragraphs have been added:

The San Bernardino National Forest manages 665,753 acres of land that provide open space and recreational opportunities for the 24 million residents of southern California. It is one of the most urban-influenced National Forests in the system with over 400 miles of urban interface and 147,313 acres of inholdings within its boundary. Significant portions of National Forest System (NFS) lands surround, are interspersed, or are adjacent to parcels under County jurisdiction.

One of the main challenges facing the San Bernardino National Forest is the rapidly increasing population of southern California and the resulting effects on NFS lands. Privately-owned open space is being rapidly converted to commercial and residential developments and supporting infrastructure (roads, utility corridors, landfills, etc.). This growth will continue with the expected increase by 500,000 people per year of the next 20 years for an additional 10 million people by 2026. Although there are numerous facilities such as utility corridors, communication sites, dams, diversions and highways already located on the San Bernardino National Forest, there will be an increased demand from private, semiprivate and public industry, corporations, associations, and private individuals for requests for additional use on these public lands.

The second paragraph on Page VI-4 of the General Plan has been revised as follows:

The San Bernardino National Forest covers over 671,686 acres, of which Of the 665,753 acres of land that is managed by the San Bernardino National Forest, 456,928.12 acres are located within San Bernardino County. The forest ranges in elevation from 2,000 feet on the valley floor to 11,502 feet at the top of Mount San Gorgonio. It contains many different habitats and over 440 species of wildlife (USFS, 2004). The Angeles National Forest covers over 650,000 acres, of which 10,352.42 acres are located within San Bernardino County. The forest elevations range from 1,200 to 10,064 feet. Much of the forest is covered with dense chaparral, which changes to pine and fir-covered slopes at higher elevations (USFS, 2004).

2. A new policy M/LU 1.20 has been added to the General Plan:

Closely review development projects on private land adjacent to National Forest lands to ensure that development projects are capable of meeting all development requirements within the project boundaries or other non-federal land. Provide opportunities for the U.S. Forest Service to consult with the County on development of private land that may have an adverse effect on adjoining National Forest land.
3. Following the second paragraph on Page VI-4 of the General Plan, the following paragraph has been added:

Carefully looking at the inherent limitations on future growth of the mountain communities by thoroughly analyzing issues such as water, sewer and transportation (circulation), will be necessary in future County decisions. Balancing the needs of people while protecting these resources can occur by educating and working closely with community members and local governments to find solutions to sustain these resources over the long term. The NFS lands are critical to the success of these efforts.

4. Program 3 under General Plan Policy S 1.2 has been amended to add the following:

Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement advance public notification methods to warn of impending hazardous conditions.

5. The following language has been added as a program to implement General Plan Policy CO 2.4. The text is as follows:

The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing.

6. The following Goal M/CI 4 and Policy M/CI 4.1 has been added to the General Plan:

**GOAL M/CI 4.** Ensure that infrastructure improvements are compatible with the natural environment of the region.

**POLICIES**

*M/CI 4.1* Retain the natural channel bottom for all storm drainage facilities and flood control channels when such facilities are required for a specific development. This protects wildlife corridors and prevents loss of critical habitat in the region.

7. The following bullet has been added to Page VI-2 of the General Plan.

- A number of respondents wanted to see more protection of Natural Areas.

8. The heading on the first paragraph on Page VI-4 of the General Plan now reads as follows:

*U.S. Forest Service – Department of Agriculture*

9. The last sentence of paragraph 2 on Page VI-4 of the General Plan now reads as follows:

*Much of the National Forest is covered with dense chaparral, which changes to pine and fir-covered slopes at higher elevations (USFS, 2004).*
10. An additional program statement (Program 3 under Policy OS 1.9) has been added to General Plan Goal OS 1:

   5. Use density transfer methods through the planned development process to preserve natural open space.”

11. Policy number M/OS 1.3 on Page VI-21 of the General Plan has been revised as follows:

   Work with the USFS to designate trails areas for Off-Highway Vehicle use and establish educational programs for Off-Highway Vehicle use.

12. General Plan Goal M/OS 2 has been included in the Valley Region as Goal V/OS 2.

13. A new General Plan policy, OS 3.7, has been added to the countywide goals on page VI-11. General Plan policy OS 3.7 reads as follows:

   OS 3.7 Use open space corridors to link natural areas.

14. Policy number M/OS 2.5 on Page VI-22 of the General Plan has been revised as follows:

   In the communities of Lake Gregory, Lake Arrowhead, Grass Valley Lake, Fawnskin and Big Bear City, establish a system of bicycle and hiking routes connecting major activity centers, where feasible.

15. The following policy statement has been added to General Plan Policy D/OS 2.3:

   The County shall, in cooperation with the San Bernardino National Forest, ensure that Off-Highway Vehicle (OHV) use within the plan area and in the surrounding region is restricted to designated trails.

16. The third paragraph on Page V-6 of the General Plan has been revised as follows:

   The National Park Service manages two special areas designated by the U.S. Congress for their rare, unique, or unusual qualities of scientific, educational, cultural, or recreational significance. The Mojave National Preserve, once known as the East Mojave National Scenic Area, was recognized by Congress in the Desert Protection Act of 1994. Joshua Tree National Park, once classified as a National Monument, was elevated to National Park status also by the Desert Protection Act. The Mojave Preserve includes such notable areas as the Kelso Dunes, which is recognized as a National Natural Landmark and the Granite Mountains, which is a Research Natural Area.

17. Policy ED 9.5 has been added under Goal ED 9 on Page IX-13 of the General Plan and will read as follows:

   The County will work with federal land management agencies, such as the National Park Service, U.S. Forest Service and Bureau of Land Management, to promote tourism activities appropriate to the federal lands open to the public that will benefit both the economic development of the County and the health and well being of the landscape and associated natural or cultural resources that attract people to visit.

18. The language of Bear Valley Community Plan Policy BV/LU 2.6 has been added to revise Regional Policy M/LU 2.8 in the General Plan. This Policy now reads as follows:

   Industrial land uses shall be located in areas where industrial uses will best serve the needs of the community and will have a minimum adverse effect upon surrounding
property with minimal disturbance to the mountain environment and the total community. This can be accomplished by:

a. Only permit those industrial uses within the Community Industrial (IC) land use district or zone that can adequately control all sources of pollution, including noise, water and air quality concerns.

b. Fully screen all open storage activities with fencing and indigenous landscaping, and limit open storage to the rear 75 percent of any parcel.

c. Require the architecture and appearance of all buildings to be compatible with the mountain character; natural wood and masonry shall be used.

19. The following program will be added to Policy CO 1.1 and CO 1.2 in the General Plan to read as follows:

The County will coordinate with appropriate agencies (e.g., USFWS, California Natural Diversity Data Base, BLM, National Park Service, California Native Plant Society, and so forth) and interested groups (e.g., Audubon Society, San Bernardino County Museum) to develop, fund and implement a geographic information and web-based database system for identifying important biological resources and natural open space areas within the Valley, Mountain, and Desert Regions of the County. The implementation of the aforementioned geographic information and database system is a commitment to update and enhance the Biological and Open Space Overlays within a specific area prior to approval of any subsequent development plans. This program includes the maintenance of the web-based database with completed Biological Opinions that will contribute to the evaluation of cumulative impacts from previously approved projects. Furthermore, the County shall quarterly fund the San Bernardino County Museum (Museum) to review and update the Biological Resources and Open Space Overlays to facilitate an accurate and current spatial data based on local, state, and federally protected species and their habitats.

20. Program 5 to Policy S 9.1 is added to the General Plan as follows:

The Office of Emergency Service (OES)s, County Fire Department shall be responsible for the continued update of emergency evacuation plans for wildland fire incidents as an extension of the agency’s responsibility for Hazard Mitigation Planning in San Bernardino County. OES shall update evacuation procedures in coordination with MAST and provide specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination is most critical in ensuring proper execution of successful evacuations. OES will monitor population growth and evaluate road capacities and hazard conditions along evacuation corridors to prepare contingency plans to correspond to the location, direction and rate of spread of wildland fires.

21. Program 3 to Policy CO 2.1 is added to the General Plan as follows:

The San Bernardino County Museum (Museum) will review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. An updated database that integrates CNDDB data with other occurrence data from the
Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society to indentify areas where biological surveys are required. Overlay maps will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. South Coast Wildlands Corridor Project and other data from the resource agencies will be consulted as an information reference base. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays.

22. A new standard has been incorporated into the Fire Safety Overlay at Section 82.13.60(b)(7)(C) as follows:

   (C) National Forest boundary. Each structure on a lot that was created after April 12, 2007 and abuts a boundary of the San Bernardino National Forest shall be set back at least 100 feet from the boundary.

23. Goal V/OS 2 has been added to the General Plan as follows:

   Improve and preserve open space corridors throughout the County.

   V/OS 2.1 Utilize the Open Space Overlay as a technique for identifying and preserving important open space corridors for multiple benefits including wildlife movement and compatible recreational uses in the Valley Region.

24. Policy S 2.5 with programs that implement the mitigation have been added to the General Plan Safety Element as follows:

   Minimize the risk of exposure to hazardous substances by residential and other sensitive receptors through the application of program review and permitting procedures.

   Program 1
   The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.

   Program 2
   The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.

   Program 3
   The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.

   Program 4
   The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.
Program 5
The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.

Program 6
The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.

Program 7
The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.

Program 8
The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.

Program 9
The County shall use the County’s Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.

25. Additional language has been added to Program 2 of Policy CO 4.4 as follows:

The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses, as recommended in California Air Resources Board’s Air Quality and Land Use Handbook: A Community Health Perspective, which includes the following:

Notable siting recommendations include avoiding siting new sensitive land uses within:

500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;

1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration units exceed 300 hours per week);

1,000 feet of a chrome plater;

300 feet of any dry cleaning operation; and 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater); a 50 foot separation is recommended for typical gas dispensing facilities.
26. The following program has been added to Policy CO 1.1 as follows:

The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay as discussed in Mitigation Measures BIO-3 and BIO-13 below. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon.

27. The following program has been added to Policy CO 1.2:

The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with ACOE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation. This mitigation will be added to the General Plan as a Program under Goal CO 1.

28. The following program has been added to Policy CO 2.2:

The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. A component of the Overlay will maintain a database of completed Biological Opinions that will contribute to assessments of cumulative impacts from previously approved projects. Development of an update database that integrates CNDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and other sources.

29. The following program has been added to Policy CO 2.3:

The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream resources and habitats.

30. The following program has been added to Policy CO 2.4:

The County shall not permit land conversion until adequate mitigation is provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause
a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant.

31. The following program has been added to Policy CO 2.3:

The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries).

32. The following program has been added to Policy CO 2.1:

The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays.

33. The following program has been added to Policy CO 2.4

The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing.

34. The following program has been added to Policy CO 2.1:

The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents.

35. The following program has been added to Policy CO 2.1:

All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report.
The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.

36. Policy CO 2.3 has been changed to read as follows:

In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights.

The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

37. Policy CO 5.4, program 4 has been revised to read as follows:

Allow no development, which would alter the alignment, direction, or course of any blue-line stream, in designated flood plains.
APPENDIX M: MITIGATION MONITORING PROGRAM

Section 21081.6 of the California Public Resources Code (CEQA) requires a Lead Agency to: “adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.” One of the methods allowed by the Public Resources Code to implement this requirement is to: “provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other public project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.” [Section 21081.6(b), with emphasis added]

The County of San Bernardino, as Lead Agency, has elected to implement the mitigation monitoring requirements of CEQA by incorporating all mitigation measures presented in this FEIR directly into the San Bernardino General Plan, as General Plan policies. The following table presents the relationship between each Mitigation Measure identified within this FEIR, and the corresponding Policies within the proposed San Bernardino General Plan.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES-1</td>
<td>Within the Development Code, one overlay district was established relating specifically to preserving aesthetic or scenic areas within the County. These areas are designated under the “SR” or Scenic Resources Overlay District (Chapter 82.22). The intent of the Scenic Resources Overlay District is to provide development standards that will protect, preserve and enhance the aesthetic resources of the County. Design considerations can be incorporated in many instances to allow development to coexist and not substantially interfere with the preservation of unique natural resources, roadside views and scenic corridors. It is also the intent of the Scenic Resources Overlay District to implement state and federal programs and regulations regarding scenic highway routes.</td>
<td>Development Code Chapter 82.22</td>
</tr>
<tr>
<td>AES-2</td>
<td>Direct future growth to areas where infrastructure facilities and public services exist or can easily be provided or acquired and where other desired attributes of the land, such as open space, watershed areas and scenic resources, will not be adversely impacted.</td>
<td>Goal LU 9</td>
</tr>
<tr>
<td>AES-3</td>
<td>The County shall maintain and enhance the visual character of scenic routes in the County.</td>
<td>Goal OS 5</td>
</tr>
<tr>
<td>AES-4</td>
<td>To improve access to scenic vistas, the County seeks to establish off-street pullouts at designated viewpoints where appropriate along scenic highways.</td>
<td>Development Code Chapter 82.20(b)</td>
</tr>
</tbody>
</table>
| AES-5              | The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to have beauty to the County. Therefore, the County designates the following routes as scenic highways; and applies all applicable policies to development on these routes:  
  - SR-71 — All of the route in unincorporated County area;  
  - Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy, in the Mountain Region;  
  - SR-83 (Euclid Avenue/Mountain Avenue) --- 24th Street northwest to San Antonio Dam;  
  - Oak Glen Road in the Mountain Region;  
  - Sand Canyon Road;  
  - SR-2 from SR-138 southwest to the Los Angeles County line;  
  - Lone Pine Canyon Road; | Policy OS 5.3 |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AESTHETICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-330 from the San Bernardino National Forest Boundary northeast to SR-18;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Green Valley Lake Road/101 Mile Drive;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Crest Forest Drive from SR-18 west to Sawpit Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Playground Drive;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Devil’s Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sawpit Canyon Road/Sawpit Creek Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lake Gregory Drive;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• San Moritz Drive;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dart Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• North Road from Lake Gregory Drive northeast to SR-189;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lake Drive from Knapps Cutoff northeast to Dart Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Grass Valley Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Kuffel Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Park Blvd./Quail Springs Road from SR-62 southeast to Joshua Tree National Park;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Amboy Road from Bullion Mt. Road northeast to Amboy;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-127 from I-15 at Baker northwest to Inyo County line;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Kelbaker Road from I-15 southeast to I-40;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Kelso-Cima Road from Kelso northeast to Cima;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cima Road from I-15 southeast to Cima;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Essex Road from Essex northwest to Mitchell Caverns;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>AESTHETICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Black Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I-15 from the intersection with I-215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development, those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side, and all incorporated areas;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-38 within the Redlands and Yucaipa SOIs; from the Yucaipa SOI northeast to Big Bear Dam;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-138 from Crestline cutoff at SR-18 northwest to Los Angeles County line;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-173 from SR-18 northwest to Hesperia; from Hesperia west within the Hesperia SOI;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cokey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive, with some of this truck trail located on privately owned land;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rim of the World Drive from Green Valley Lake Road to SR-38;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SR-18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville SOI; from Victorville and Adelanto to the Los Angeles County line;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Baldwin Lake Road from SR-18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; continuing southeast on Rimrock Road to Pipes Canyon Road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• National Trails Highway from Oro Grande northeast to Lenwood;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I-40 from Newberry Springs northeast to Needles, excepting the Highway Commercial designation at the Hector Road Interchange and the Crucero Road Interchange;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Burns Canyon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Piper Canyon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td><strong>AES-6</strong></td>
<td>The County shall provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.</td>
<td>Goal OS 1</td>
</tr>
<tr>
<td><strong>AES-7</strong></td>
<td>Areas in new developments that are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its build-able area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.</td>
<td>Policy OS 1.9, Program 3</td>
</tr>
<tr>
<td><strong>AES-8</strong></td>
<td>Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.</td>
<td>Policy OS 2.3</td>
</tr>
<tr>
<td><strong>AES-9</strong></td>
<td>The County shall preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.</td>
<td>Goal OS 4</td>
</tr>
<tr>
<td><strong>AES-10</strong></td>
<td>The County shall protect the scenic and open space qualities of cinder cones and lava flows. Permit extractive uses of cinder resources only when the scenic values can be adequately maintained.</td>
<td>Policy OS 4.1</td>
</tr>
<tr>
<td><strong>AES-11</strong></td>
<td>Features meeting the following criteria shall be considered for designation as scenic resources: A roadway, vista point, or area that provides a vista of undisturbed natural areas; includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).</td>
<td>Policy OS 5.1</td>
</tr>
</tbody>
</table>
### Mitigation Measure

#### AESTHETICS

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES-12</td>
<td>The County shall define the Scenic Corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail or path. Development along scenic corridors shall be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.</td>
<td>Policy OS 5.2</td>
</tr>
<tr>
<td>AES-13</td>
<td>The County shall require that hillside development be compatible with natural features and the ability to develop the site in a manner which preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.</td>
<td>Policy OS 6.6</td>
</tr>
<tr>
<td>AES-14</td>
<td>The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County shall continue the review undertaken as part of this General Plan Update of the Land Use Zoning Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.</td>
<td>Policy CO 1.2</td>
</tr>
<tr>
<td>AES-15</td>
<td>The County shall design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat and the preservation of the scenic values of the County’s streams and creeks.</td>
<td>Policy S 5.8</td>
</tr>
<tr>
<td>AES-16</td>
<td>The County shall utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply and water recharge.</td>
<td>Policy S 6.2</td>
</tr>
</tbody>
</table>
| AES-17             | The following additional Development Code sections would also help to preserve County aesthetics:  
  **CHAPTER 82.23 – Sign Control (SC) Overlay District**  
  82.23.020 – Location Requirements  
  The SC overlay district shall be applied where it is determined that the location of large freestanding signs may be detrimental to the character of the neighborhood. | Development Code Chapters 82.23, 83.10, 83.12 |
## Mitigation Measure

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
</table>

### AESTHETICS

**CHAPTER 83.10 – Glare and Outdoor Lighting**

83.10.030 – Glare and Outdoor Lighting – Valley Region

(a) Light trespass prohibited. Commercial or industrial lighting shall be fully shielded to preclude light pollution or light trespass on any of the following:

1. An abutting residential land use zoning district;
2. A residential parcel; or

83.10.040 – Glare and Outdoor Lighting – Mountain and Desert Regions (Night Sky Ordinance)

(a) Residential, commercial and industrial land use zoning districts. The following standards shall apply to all structures and freestanding outdoor light fixtures in residential, commercial and industrial land use zoning districts.

**CHAPTER 83.12 – Hillside Grading Standards**

83.12.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(b) Ensure that development in the hillside areas is designed to fit the existing landform.

(c) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(e) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., landform, scenic quality, slopes, and vegetation).
### AGRICULTURAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG-1</td>
<td>The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and nonagricultural land development.</td>
<td>Policy CO 6.1</td>
</tr>
<tr>
<td>AG-2</td>
<td>Highly alkaline soils present special problems for all plant species and should generally be avoided. Desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.</td>
<td>Policy CO 6.1</td>
</tr>
<tr>
<td>AG-3</td>
<td>The County shall allow the development of areas of prime agriculture lands, as designated in this Plan’s Land Use Policy Map supporting commercially viable and valuable agriculture to urban intensity only after the supply of non-productive areas have been exhausted.</td>
<td>Policy CO 6.2</td>
</tr>
<tr>
<td>AG-4</td>
<td>Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the Resource Overlay Maps, will be considered as an integral portion of the Conservation Element when reviewing development proposals.</td>
<td>Policy CO 6.3</td>
</tr>
<tr>
<td>AG-5</td>
<td>The County shall utilize the provisions of the Williamson Act to further the preservation of commercially viable agricultural open space and designate preserves on the Resource Overlay Maps.</td>
<td>Policy CO 6.3 Program 1</td>
</tr>
<tr>
<td>AG-6</td>
<td>The County shall support property and estate tax relief measures that assess long-term agriculture at farm-use value.</td>
<td>Policy CO 6.1 Program 2</td>
</tr>
<tr>
<td>AG-7</td>
<td>The County shall encourage agricultural use of commercially productive agricultural lands; and discourage city SOI extensions into areas containing commercially productive agricultural lands.</td>
<td>Policy CO 6.3 Program 7</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>AIR QUALITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ-1</td>
<td>Because development during construction would be subjected to wind hazards (due to increased dust, the removal of wind breaks, and other factors), the County shall require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site specific analysis of:</td>
<td>Policy CO 4.1</td>
</tr>
<tr>
<td></td>
<td>- Grading restrictions and/or controls on the basis of soil types, topography or season;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Landscaping methods, plant varieties, and scheduling to maximize successful revegetation; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Dust-control measures during grading, heavy truck travel, and other dust generating activities.</td>
<td></td>
</tr>
<tr>
<td>AQ-2</td>
<td>The County shall establish incentives and/or regulations to eliminate work trips including such actions as:</td>
<td>Policy CO 4.3 Program 1</td>
</tr>
<tr>
<td></td>
<td>- Implementing staggered, flexible and compressed work schedules in public agencies; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time; to new businesses at project approval or permit stage.</td>
<td></td>
</tr>
<tr>
<td>AQ-3</td>
<td>The County shall locate and design new development in a manner that will minimize direct and indirect emissions of air contaminants through such means as:</td>
<td>Policy CO 4.4 Program 2</td>
</tr>
<tr>
<td></td>
<td>- Promoting mixed-use development to reduce the length and frequency of vehicle trips;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Providing for increased intensity of development along existing and proposed transit corridors; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.</td>
<td></td>
</tr>
<tr>
<td>AQ-4</td>
<td>The County shall provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).</td>
<td>Policy CO 4.6</td>
</tr>
<tr>
<td>AQ-5</td>
<td>The County shall replace existing vehicles in the County fleet with the cleanest vehicles commercially available that are cost-effective and meet the vehicle use needs.</td>
<td>Policy CO 4.8</td>
</tr>
</tbody>
</table>
## Mitigation Measure

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ-6</td>
<td>The County shall manage the County’s transportation fleet fueling standards to improve the number of alternative fuel vehicles in the County fleet.</td>
<td>Policy CO 4.9</td>
</tr>
<tr>
<td>AQ-7</td>
<td>The County shall establish programs for priority or free parking on County streets or in County parking lots for alternative fuel vehicles.</td>
<td>Policy CO 4.11</td>
</tr>
<tr>
<td>AQ-8</td>
<td>The County shall require the use of building materials and coatings that minimize air pollution consistent with the requirements of the AQMD.</td>
<td>Goal CO 4</td>
</tr>
<tr>
<td>AQ-9</td>
<td>The County shall provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).</td>
<td>Policy CO 4.12</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td><strong>BIOLOGICAL RESOURCES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO-1</td>
<td>The County shall coordinate with local interest groups, state, and federal agencies, prior to the approval of land use conversion to ensure adequate protections are in place to preserve habitat for resident and migratory species that may depend on aquatic, riparian, and/or unique upland habitat within the County. This measure will be implemented by creating an updated Biological Resource Overlay as discussed in Mitigation Measures BIO-3 and BIO-13 below. The Overlay will be designed to identify the known distribution of rare, threatened and endangered species and the habitats they rely upon.</td>
<td>Policy CO 1.1 Program 1</td>
</tr>
<tr>
<td>BIO-2</td>
<td>The County shall coordinate with state and federal agencies for the identification of buffering techniques and the creation of mitigation banks for sensitive species within the Valley, Mountain, and Desert Regions. The County shall work with local governments to conserve critical habitat and minimize recreational use in sensitive areas supporting local, state, or federally protected species. As feasible, the County shall work with COE, USFWS, and CDFG to establish mitigation banks or conservation easements for unincorporated areas supporting local, state, or federally protected species as a better long-term solution to habitat fragmentation and piece-meal mitigation.</td>
<td>Policy CO 1.2 Program 1</td>
</tr>
<tr>
<td>BIO-3</td>
<td>The County shall fund the San Bernardino County Museum (Museum) to review and update the Biological Resources Overlay and Open Space Overlay to provide accurate and current spatial data based on rare, threatened, endangered species and the habitats that they rely on. The museum will provide report guidelines and format requirements to include in the Biological Resource Overlay to streamline and standardize the reporting process for use in CEQA, CESA and ESA compliance. A component of the Overlay will maintain a database of completed Biological Opinions that will contribute to assessments of cumulative impacts from previously approved projects. Development of an update database that integrates CNDDB data with other occurrence data from the Museum and other sources such as the USFWS, CDFG, USFS, BLM, National Park Service, California Native Plant Society, South Coast Wildlands Corridor Project and other sources.</td>
<td>Policy CO 2.2 Program 3</td>
</tr>
<tr>
<td>BIO-4</td>
<td>The County shall participate with Regional plans to improve water quality and habitat that are downstream but may be beyond County limits. The County shall coordinate with Regional plans to minimize degradation of water quality within the County that affects downstream</td>
<td>Policy CO 2.3 Program 4</td>
</tr>
</tbody>
</table>
## BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-5</td>
<td>The County shall not permit land conversion until adequate mitigation is provided to reduce impacts to less than significant in cases where a Mitigated Negative Declaration is used for CEQA compliance. Direct and growth inducing impacts determined to cause a significant adverse effect on rare, threatened or endangered desert species shall be mitigated by avoidance, habitat restoration or compensated by off-site mitigation and evaluated through a project level EIR. Mitigation will be required for adverse impacts to critical areas around residential land conversion when it can be shown that the indirect effects of pets, associate human activity and other encroachments into sensitive habitats will be significant.</td>
<td>Policy CO 2.4 Program 3</td>
</tr>
<tr>
<td>BIO-6</td>
<td>The County shall work with local communities to improve trash collection, recycling programs, and reduce illegal dumping in unincorporated areas. The County shall sponsor mitigation efforts that minimize landfill growth, reduce trash haul routes that spread litter and increase predator species numbers (i.e., raven or crow in the Desert Region), and reduce illegal dumping of large bulk items (e.g., furniture, appliances, tires, batteries).</td>
<td>Policy CO 2.3 Program 4</td>
</tr>
<tr>
<td>BIO-7</td>
<td>The County shall coordinate with local, state, and federal agencies to create a specific and detailed wildlife corridor map for the County of San Bernardino. The map will identify movement corridors and refuge area for large mammal, migratory species, and desert species dependent on transitory resource based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting land use conversion within County jurisdictional areas. The mapping will be included in the Open Space and Biological Resource Overlays.</td>
<td>Policy CO 2.1 Program 3</td>
</tr>
<tr>
<td>BIO-8</td>
<td>The County shall require all new roadways, roadway expansion, and utility installation within the wildlife corridors identified in the Open Space and Biological Resource Overlays to provide suitable wildlife crossings for affected wildlife. Design will include measures to reduce or prevent habitat fragmentation and provide wildlife a means of safe egress through respective foraging and breeding habitats. A qualified</td>
<td>Policy CO 2.4 Program 4</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>BIOLOGICAL RESOURCES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO-9</td>
<td>biologist will assist with the design and implementation of wildlife crossing including culverts, overcrossings, undercrossings, and fencing.</td>
<td></td>
</tr>
<tr>
<td>BIO-9</td>
<td>The County shall coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs. This coordination shall be accomplished by notification of development applications and through distributed CEQA documents.</td>
<td>Policy CO 2.1 Program 4</td>
</tr>
<tr>
<td>BIO-10</td>
<td>All County Land Use Map changes and discretionary land use proposals, for areas within the Biotic Resource Overlay or Open Space Mapping on the Resources Overlay, shall be accompanied by a report that identifies all biotic resources located on the site and those on adjacent parcels, which could be adversely affected by the proposal. The report shall outline mitigation measures designed to eliminate or reduce impacts to identified resources. An appropriate expert such as a qualified biologist, botanist, herpetologist or other professional “life scientist” shall prepare the report. The County shall require the conditions of approval of any land use application to incorporate the County’s identified mitigation measures in addition to those that may be required by state or federal agencies to protect and preserve the habitats of the identified species. This measure is implemented through the land use regulations of the County Development Code and compliance with the CEQA, CESA, ESA and related environmental laws and regulations.</td>
<td>Policy CO 2.1 Program 1 &amp; 2</td>
</tr>
<tr>
<td>BIO-11</td>
<td>In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County’s role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights.</td>
<td>Policy CO 2.3</td>
</tr>
<tr>
<td>BIO-12</td>
<td>Within the County’s Development Code, one of the overlay districts that is part of the Update program relates specifically to preserving biological resources within the County. These areas are designated “BR” or Biotic Resources Overlay District. The intent of the District is to protect and conserve beneficial, rare and endangered plants and animal resources and their habitats, which have been identified within unincorporated areas of the County.</td>
<td>Development Code Chapter 82.13</td>
</tr>
</tbody>
</table>
# BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>82.13.020 – Location Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The BR overlay district shall be applied to areas that have been identified by a county, state or federal agency as habitat for species of unique, rare, threatened or endangered plants or animals or their habitats as listed in the General Plan. The overlay applies to policy areas identified on the Open Space Overlay.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.13.030 – Application Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When a land use is proposed, or an existing land use is increased by more than 25 percent of disturbed area within a BR overlay district, the land use application shall include a biotic resources report prepared as follows, except where the Director finds that prior environmental studies approved by the County have determined that the site does not contain viable habitat. Report content. The biotic resources report shall identify all biotic resources located on the site and those on adjacent parcels that could be impacted by the proposed development, and shall also identify mitigation measures designed to reduce or eliminate impacts to the identified resources, and shall be submitted along with the application for the proposed development. Report preparation. The biotic resources report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist, or other professional &quot;life scientist&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.13.040 – Development Standards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
</table>
| BIO-13             | The County shall consider whether projects may lead to a significant environmental impact as a result of the conversion of oak woodlands consistent with new provisions added to the County Development Code Subsection 88.01.050(e)(4). Upon determination of a significant effect, the County shall employ one or more of the following measures: preservation, replacement or restoration, in-lieu mitigation fee, or other mitigation measures.  
Preservation. Preserve existing oak woodlands by recording conservation easements in favor of the County or an approved organization or agency.  
Replacement or restoration. Replace or restore former oak woodlands. The review authority may require the planting and maintenance of replacement trees, including replacing dead or diseased trees. The replacement ratio and tree sizes shall be based on the recommendation of an Oak Reforestation Plan prepared by a registered professional forester. The requirement to maintain trees in compliance with this paragraph shall terminate seven years after the trees are planted.  
In-lieu mitigation fee. Contribute in-lieu mitigation fee to the Oak Woodlands Conservation Fund, established under Fish and Game Code Section 1363 for the purpose of purchasing oak woodlands conservation easements. A project applicant who contributes funds in compliance with this Subsection shall not receive or use a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project. The in-lieu fee for replacement trees shall be calculated based upon their equivalent value as established by the International Society of Arboriculture’s (ISA) current edition of Guide to Establishing Values for Trees and Shrubs, etc.)  
Other mitigation measures. Perform other mitigation measures as may be required by the review authority (e.g., inch-for-inch off-site replacement planting; transfer of development rights, enrollment of project with offset provider for carbon credits in greenhouse gas emission registry, carbon reduction, and carbon trading system; etc.). | Development Code Chapter 88.01                           |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR 1</td>
<td>The County shall identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.</td>
<td>Policy CO 3.1</td>
</tr>
<tr>
<td>CR 2</td>
<td>The County shall require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped cultural resource overlay area.</td>
<td>Policy CO 3.1 Program 1</td>
</tr>
<tr>
<td>CR 3</td>
<td>Mitigation of impacts to important cultural resources shall follow the standards established in Section 15064.5 of the California Environmental Quality Act Guidelines, as amended to date. For historic resources this includes the Secretary of Interior Standards for the Treatment of Historic Properties with Guidelines for Previously Rehabilitating, Restoring and Reconstructing Historic Buildings according to CEQA Section 15126.4 (b)(1).</td>
<td>Policy CO 3.1 Program 2</td>
</tr>
<tr>
<td>CR 4</td>
<td>The County shall require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.</td>
<td>Policy CO 3.2 Program 1</td>
</tr>
<tr>
<td>CR 5</td>
<td>The County shall comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.</td>
<td>Policy CO 3.4</td>
</tr>
<tr>
<td>CR 6</td>
<td>Site record forms and reports of surveys, test excavations, and data recovery programs shall be filed with the Archaeological Information Center at the San Bernardino County Museum, and shall be reviewed and approved in consultation with that office. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed shall be required prior to project grading and/or building permits; and Final reports shall be submitted and approved prior to project occupancy permits.</td>
<td>Policy CO 3.4 Program 1</td>
</tr>
<tr>
<td>CR 7</td>
<td>Any artifacts collected or recovered as a result of cultural resource investigations shall be catalogued per San Bernardino County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be</td>
<td>Policy CO 3.4 Program 2</td>
</tr>
</tbody>
</table>
### CULTURAL AND PALEONTOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-8</td>
<td>When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured shall be developed and approved prior to conditional approval.</td>
<td>Policy CO 3.4 Program 3</td>
</tr>
<tr>
<td>CR-9</td>
<td>In areas of potential but unknown sensitivity, field surveys prior to grading shall be required to establish the need for paleontologic monitoring.</td>
<td>Policy CO 3.4 Program 4</td>
</tr>
<tr>
<td>CR-10</td>
<td>Projects requiring grading plans that are located in areas of known fossil occurrences or demonstrated in a field survey to have fossils present, shall have all rough grading (cuts greater than three feet) monitored by trained paleontologic crews working under the direction of a qualified professional, in order that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.</td>
<td>Policy CO 3.4 Program 5</td>
</tr>
<tr>
<td>CR-11</td>
<td>All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of the San Bernardino County Museum for their scientific information potential to be preserved.</td>
<td>Development Code Chapter 82.12</td>
</tr>
<tr>
<td>CR-12</td>
<td>A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been successfully completed. A preliminary report shall be submitted and approved prior to granting of building permits, and a final report shall be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.</td>
<td>Policy CO 3.4 Program 6</td>
</tr>
<tr>
<td>CR-13</td>
<td>Consistent with Senate Bill 18, as well as possible mitigation measures identified through the CEQA process, the County shall work and consult with local tribes to identify, protect and preserve TCPs. TCPs include man-made sites and resources, as well as natural landscapes, which contribute to the cultural significance of areas.</td>
<td>Policy CO 3.5 Program 1</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>CR-14</td>
<td>The County shall protect confidential information concerning Native American cultural resources with internal procedures, such as keeping confidential archaeological reports away from public view or discussion in public meetings. Information provided by tribes to the County shall be considered confidential or sacred.</td>
<td>Policy CO 3.5 Program 2</td>
</tr>
<tr>
<td>CR-15</td>
<td>The County shall work in good faith with the local tribes, developers/applicants, and other parties should the local affected tribe request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe's request for artifacts. Artifacts not desired by the local tribe shall be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts shall be donated to the local tribe.</td>
<td>Policy CO 3.5 Program 3</td>
</tr>
<tr>
<td>CR-16</td>
<td>The County shall work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites with the “gated community.” If a site is identified within a gated community project, and preferable preserved as open space, the development shall be conditioned by the County allow future access to Native Americans to view and/or visit that site.</td>
<td>Policy CO 3.5 Program 4</td>
</tr>
</tbody>
</table>
| CR-17              | Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions shall be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:  
  · The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders shall be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.  
  · The concerns of the Native American community shall be fully considered in the planning process.  
  · If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the | Policy CO 3.5 Program 5 |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
</table>
| CULTURAL AND PALEONTOLOGICAL RESOURCES | County Coroner shall be contacted pursuant to the state Health and Safety Code.  
• In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting U.S. Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.  
• If Native American cultural resources are discovered, the County shall contact the local Tribe. If requested by the Tribe, the County shall, in good faith, consult on the discovery and its disposition with the Tribe. | |
| CR-18 | Within the County’s Development Code, two overlay districts have been established relating specifically to preserving cultural resources within the County. These areas are designated Cultural Resources Preservation “CP” Overlay District and Paleontological Resources “PR” Overlay District. The intent of the “CP” District is to identify and preserve important archeological and historic resources. The intent of the “PR” District is to identify and preserve significant paleontological resources since they are unique and non-renewable, thus promoting County identity and conserving scientific amenities for the benefit of future generations. These Districts work as described below. | Development Code Chapters 82.12, 82.14, 82.21 |
| | 82.12.050 – Native American Monitor  
If Native American cultural resources are discovered during grading or excavation of a development site of the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered. | |
| | 82.14.020 – CP Overlay District Location Requirements  
The CP overlay district may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories: | |
# CULTURAL AND PALEONTOLOGICAL RESOURCES

(a) California Archaeological Inventory;
(b) California Historic Resources Inventory;
(c) California Historical Landmarks;
(d) California Points of Historic Interest; and/or
(e) National Register of Historic Places.

### 82.14.030 – Application Requirements

The application for a project proposed within the CP overlay district shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures. The measures may include:

(a) Site recordation:
(b) Mapping and surface collection of artifacts, with appropriate analysis and curation;
(c) Excavation of sub-surface deposits when present, along with appropriate analysis and artifact curation; and/or
(d) Preservation in an open space easement and/or dedication to an appropriate institution with provision for any necessary maintenance and protection.

### 82.14.040 – Development Standards

(a) The proposed project shall incorporate all measures recommended in the report required by Section 82.14.030 (Application Requirements).
(b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.
### CULTURAL AND PALEONTOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
</tr>
</thead>
</table>
| 82.21.020 – PR Overlay District Location Requirements | The Paleontologic Resources (PR) Overlay District may be applied to those areas where paleontologic resources are known to occur or are likely to be present. Specific identification of known fossil occurrences or potential paleontologic sensitivity is indicated by listing in the locality files of one or more of the following institutions:  
(a) San Bernardino County Museum;  
(b) University of California; and  
(c) Los Angeles County Museum. |
| 82.21.030 – Development Standards | When a land use is proposed within a PR overlay district, the following criteria shall be used to evaluate the project’s compliance with the intent of the overlay.  
(a) Field survey before grading. In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.  
(b) Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence within the overlay district, or that has been demonstrated to have fossils present in a field survey, shall have all mass grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils; the latter recovered by screen washing of bulk samples.  
(c) Disposition of specimens. All recovered specimens shall be prepared to the point of identification and adequately curated into retrievable collections of an institution with appropriate staff and facilities for their scientific information potential to be preserved.  
(d) Report of findings. A report of findings with an itemized accession inventory shall be prepared as evidence that monitoring has been |
CULTURAL AND PALEONTOLOGICAL RESOURCES

- A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The adequacy of paleontologic reports shall be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.
- Mitigation financial limits. In no event shall the County require the applicant to pay more for mitigation as required by Subsections B., C., and D., above within the site of the project than the following amounts:
  1. One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;
  2. Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and
  3. If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:
     - $200 per unit for any of the next 99 units;
     - $150 per unit for any of the next 400 units; and
     - $100 per unit for units in excess of 500.

Debris flows are a type of post-wildfire event that has come to be referred to as mudflows due to the heavy sediment load that is typically carried down steep slopes in defined channels. The flows may originate from mass wasting due to landslides and accumulated soil and rock from in-channel sediment and from extensive bank erosion as the flow moves down gradient. These flows typically accumulate debris in the form of rock, boulders, logs and so on that are carried by the energy of the flow. They are part of the commonly referred to fire/flood cycle that occurs in the mountain foothills in southern California. These events are triggered by heavy rainfall during the winter months following intensive wildfires in late summer and fall that denude the hillsides of vegetation leading to rapid water runoff.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOLOGY AND SOILS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEO-1</td>
<td>The County shall protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and nonagricultural land development.</td>
<td>Policy CO 6.1</td>
</tr>
<tr>
<td>GEO-2</td>
<td>Desert playas shall not be used for habitable structures or have large quantities of waters applied to them, except for mining operations or to maintain existing wetlands.</td>
<td>Policy CO 6.1 Program 3</td>
</tr>
<tr>
<td>GEO-3</td>
<td>Highly alkaline soils present special problems for all plant species and should generally be avoided. In addition to their being unsuitable for building structures, desert playas and lakebeds are not suitable for agricultural uses that involve growing of crops and irrigation.</td>
<td>Policy CO 6.1 Program 4</td>
</tr>
<tr>
<td>GEO-4</td>
<td>Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations, as shown on the County’s Resource Overlay Maps, shall be considered as an integral portion of the Open Space Element when reviewing development proposals.</td>
<td>Policy CO 6.3</td>
</tr>
</tbody>
</table>
| GEO-5 | Within the County’s Development Code, one overlay district has been established relating specifically to protect county citizens from geological hazards. These areas are designated Geologic Hazard “GH” Overlay District which identifies areas that are subject to potential geologic problems, including active faulting, landsliding, debris flow, rockfall and liquefaction. This District operates as shown below. 82.17.040 – Development Standards Development and land uses proposed within the GH overlay district shall comply with the following standards.  
(a) A structure used for human occupancy shall be located 50 feet or farther from any active earthquake fault traces. Lesser setbacks may be applicable in certain situations as determined by an appropriate geologic investigation and approved by the County Geologist or other engineering geologist designated by the Building Official.  
(b) A structure used for critical facilities shall be located 150 feet or farther from any active earthquake fault trace as indicated by General Plan. Critical facilities shall include dams, reservoirs, fuel storage facilities, power plants, nuclear reactors, police and fire | Development Code Chapters 82.17 and 83.12 |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOLOGY AND SOILS</strong></td>
<td>stations, schools, hospitals, rest homes, nursing homes and emergency communication facilities. (c) Utility lines and streets shall not be placed within the construction setback area of a hazardous fault except for crossing which can be made perpendicular to the fault trace or as recommended by the project geologist and approved by the County Geologist or individual designated by the Building Official. (d) The use of development restricted areas as recreation and common open spaces is encouraged.</td>
<td></td>
</tr>
</tbody>
</table>

**Chapter 83.12 – Hillside Grading Standards**

83.12.010 – Purpose

This Chapter establishes regulations for development within hillside areas to:

(a) Ensure that development in the hillside areas is designed to fit the existing landform.

(b) Preserve significant features of the natural topography, including swales, canyons, streams, knolls, ridgelines, and rock outcrops.

(c) Provide alternative approaches to conventional grading practices by achieving development intensities that are consistent with the natural characteristics of hillside areas (e.g., landform, scenic quality, slopes, and vegetation).
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZ-1</td>
<td>The County shall promote the proper handling, storage, transportation and disposal of hazardous materials and hazardous wastes through implementing a variety of regulatory, technical oversight, emergency, and waste management services. These programs are effective mechanisms for reducing the potential impact to the public health and safety and the environment.</td>
<td>Goal S 2</td>
</tr>
<tr>
<td>HAZ-2</td>
<td>The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.</td>
<td>Policy S 2.5 Program 1</td>
</tr>
<tr>
<td>HAZ-3</td>
<td>The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.</td>
<td>Program S 2.5 Program 2</td>
</tr>
<tr>
<td>HAZ-4</td>
<td>The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.</td>
<td>Policy S 2.5 Program 3</td>
</tr>
<tr>
<td>HAZ-5</td>
<td>The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.</td>
<td>Policy S 2.5 Program 4</td>
</tr>
<tr>
<td>HAZ-6</td>
<td>The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.</td>
<td>Policy S 2.5 Program 5</td>
</tr>
<tr>
<td>HAZ-7</td>
<td>The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.</td>
<td>Policy S 2.5 Program 6</td>
</tr>
<tr>
<td>HAZ-8</td>
<td>The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.</td>
<td>Policy S 2.5 Program 7</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>HAZ-9</td>
<td>The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.</td>
<td>Policy S 2.5 Program 8</td>
</tr>
<tr>
<td>HAZ-10</td>
<td>The County shall use the County’s Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.</td>
<td>Policy S 2.5 Program 9</td>
</tr>
<tr>
<td>HAZ-11</td>
<td>The County shall ensure that environmental review is conducted for projects proposed on sites that have been identified as contaminated, in accordance with all applicable local, state and federal laws, regulations.</td>
<td>Policy S 2.3</td>
</tr>
<tr>
<td>HAZ-12</td>
<td>The County shall protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses, in accordance with all applicable local, state and federal laws, regulations and policies.</td>
<td>Policy S 2.4</td>
</tr>
<tr>
<td>HAZ-13</td>
<td>The County shall include extensive public participation in the County’s application review process for siting specified hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety, and the environment, in accordance with all applicable local, state and federal laws, regulations and policies.</td>
<td>Policy S 2.2</td>
</tr>
<tr>
<td>HAZ-14</td>
<td>The County shall require a conditional use permit/site approval and a Land Use/Zoning Amendment from applicants for specified hazardous waste facilities. The applicant shall meet all provisions of the specified hazardous waste facility overlay district as well as other General Plan and Development Code provisions.</td>
<td>Policy S 2.3 Program 1</td>
</tr>
<tr>
<td>HAZ-15</td>
<td>The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses (see Table IV-G-3), as recommended in California Air Resources Board’s (CARB) Air Quality and Land Use Handbook: A Community Health Perspective.</td>
<td>Policy CO 4.4 Program 2</td>
</tr>
<tr>
<td>HAZ-16</td>
<td>For all proposed development in the County, the County shall require the review of any and all ACLUP within proximity of the development to determine land use compatibility, thereby minimizing [mitigating] any potential hazards to airport operations, people and property.</td>
<td>Development Code Chapter 86.11</td>
</tr>
</tbody>
</table>
### Mitigation Measure

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARDS AND HAZARDOUS MATERIALS</td>
<td>Within the County's Development Code, one overlay district has been established relating specifically to siting hazardous waste facilities in areas that protect the public health, safety, welfare and the environment. This zone also buffers hazardous waste facilities so that incompatible land uses cannot be permitted in the future. The zone also identifies permitted used, within the overlay zone and outlines the applicable permit review procedures. This zone operates as outlined below.</td>
<td></td>
</tr>
<tr>
<td><strong>HAZ-17</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>82.18.020 – Location Requirements</strong></td>
<td><strong>A. The Hazardous Waste Overlay District shall be applied to areas where a Hazardous Waste Facility is being approved concurrently.</strong>&lt;br&gt;<strong>B. The Hazardous Waste Overlay District may most appropriately be located in the following land use zoning districts:</strong>&lt;br&gt;(1) Resource Conservation (RC) for land disposal and incineration facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.&lt;br&gt;(2) Regional Industrial (IR) for treatment, incineration, recycling, storage and transfer facilities. Incineration facilities shall not, however, be located in areas where emissions from the facility could directly impact food crops or livestock.&lt;br&gt;<strong>C. Siting Criteria for Hazardous Waste Facilities: Refer to policies in the Safety Element of the General Plan or to Table 5-2 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.</strong>&lt;br&gt;<strong>D. A Risk Assessment evaluating a proposal for a Hazardous Waste Facility shall determine the appropriate location for the overlay district for the facility.</strong></td>
<td><strong>Development Code</strong>&lt;br&gt;Chapter 82.18</td>
</tr>
<tr>
<td><strong>82.18.020 – Development Standards</strong></td>
<td><strong>A. Review procedures include State and County processes. The types of applications required for local evaluation of a specified hazardous waste facility proposal include both discretionary and ministerial permits. The required permits or processes include:</strong>&lt;br&gt;(1) A General Plan Amendment to apply the HW overlay district to the proposed site and respective buffer.</td>
<td></td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>HAZARDS AND HAZARDOUS MATERIALS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) A Conditional Use Permit in compliance with Chapter 88.06 (Conditional Use Permit and Minor Use Permit).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) A Special Use Permit issued by the San Bernardino County Fire Department, which shall be required as a condition of approval of the Conditional Use Permit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Ministerial Permits from the Building and Safety Division for building, grading, flood control, etc. For a complete discussion of the local application review process, refer to Section 5.3.3 and Table 5-4 of Chapter 5 of the San Bernardino County Hazardous Waste Management Plan.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Compatible land uses. The following list of use classifications may be compatible with a hazardous waste facility depending on the risk assessment and are allowed within a HW overlay district.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Contract/Construction Services.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Manufacturing Operations I &amp; II.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Open Lot Services I &amp; II.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Repair Services I, II &amp; III.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Salvage Services I and II.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Transportation Services I &amp; II.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Wholesale/Warehouse Services I &amp; II.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Prohibited land uses. The following uses are specifically prohibited from the HW Overlay District:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Agricultural uses of any type.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Residential uses of any type.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Facilities with a high concentration of people/immobile population, including schools, hospitals, auditoriums, amphitheaters, jails, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAZ-18</td>
<td>The county shall review proposed development projects within high fire hazard areas as shown on the Fire Safety Overlay Fire safety development standards as found in the County’s Development Code, Chapter 82.13, shall be strictly enforced. New development in this area</td>
<td>Development Code Chapter 82.13</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>HAZARDS AND HAZARDOUS MATERIALS</td>
<td>shall be constructed to reflect the most current fires-safe building and development techniques and standards for structures built in a high fire hazard area.</td>
<td></td>
</tr>
<tr>
<td>HAZ-19</td>
<td>Continue to monitor the state-of-the-art post-wildfire debris flow hazard evaluation and prediction methodologies being developed by the U.S. Geological Survey and other federal agencies and incorporate scientifically based mapping into the Geologic Hazard Overlay when available. Evaluate and implement feasible advance public notification methods to warn of impending hazardous conditions.</td>
<td>Policy S 1.2 Program 3</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>HWQ-1</td>
<td>The County Water Masters shall continue to monitor the County’s adjudicated groundwater basins to ensure a balanced hydrological system in terms of withdrawal and replenishment of water from groundwater basins. Since groundwater may be a significant source of potable water supplies in the County, the impacts of growth resulting in water supply impacts are presented in Section P (Utilities and Service Systems) of this EIR.</td>
<td>Policy CO 5.2</td>
</tr>
<tr>
<td>HWQ-2</td>
<td>The County shall promote conservation of water and maximize the use of existing water resources by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater.</td>
<td>Policy CO 5.3</td>
</tr>
</tbody>
</table>
| HWQ-3              | The County shall require water reclamation systems and the use of reclaimed wastewater and other non-potable water to the maximum extent feasible for:  
  · Agricultural uses;  
  · Industrial uses;  
  · Recreational uses;  
  · Landscape irrigation; and  
  · Groundwater recharge projects.  
                                                                                       | Policy CO 5.3  
                                                                                  Program 1                                       |
| HWQ-4              | The County shall apply water conservation and water reuse (reclamation) measures that are consistent with County, state and/or federal policies and regulations on wastewater.                                                                                                                                                   | Policy CO 5.3  
                                                                                  Program 2                                       |
| HWQ-5              | The County shall require new development to implement feasible water conservation measures recommended by the water agency or purveyor that supplies the development with water.                                                                                                                                  | Policy CO 5.3  
                                                                                  Program 6                                       |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HWQ-6</td>
<td>Drainage courses shall be kept in their natural condition to the greatest extent feasible to retain habitat, and allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.</td>
<td>Policy CO 5.4</td>
</tr>
<tr>
<td>HWQ-7</td>
<td>The County shall seek to retain all natural drainage courses in accordance with the Flood Control Design Policies and Standards where health and safety are not jeopardized.</td>
<td>Policy CO 5.4 Program 1</td>
</tr>
<tr>
<td>HWQ-8</td>
<td>The County shall prohibit the conversion of natural watercourses to culverts, storm drains, or other underground structures except where required to protect public health and safety.</td>
<td>Policy CO 5.4 Program 2</td>
</tr>
<tr>
<td>HWQ-9</td>
<td>The County shall allow no development, which would alter the alignment, direction, or course of any blue-line stream, in designated flood plains.</td>
<td>Policy CO 5.4 Program 4</td>
</tr>
<tr>
<td>HWQ-10</td>
<td>When development occurs, the County shall maintain the capacity of the existing natural drainage channels where feasible, and flood-proof structures to allow 100-year storm flows to be conveyed through the development without damage to structures.</td>
<td>Policy CO 5.4 Program 5</td>
</tr>
<tr>
<td>HWQ-11</td>
<td>Where technically feasible as part of its efforts to protect residents from flood hazards, the County shall require naturalistic drainage improvement where modifications to the natural drainage course are necessary. As an example, channel linings that will allow the reestablishment of vegetation within the channel may be considered over impervious linings (such as concrete). Where revegetation is anticipated, this must be addressed in the channel's hydraulic analysis and the design of downstream culverts.</td>
<td>Policy CO 5.4 Program 7</td>
</tr>
<tr>
<td>HWQ-12</td>
<td>The County shall establish an economically viable flood control system by utilizing channel designs including combinations of earthen landscaped swales, rock riprap lined channels or rock-lined concrete channels. Where adjacent to development, said drainage shall be covered by an adequate County drainage easement with appropriate building setbacks established there from.</td>
<td>Policy CO 5.4 Program 8</td>
</tr>
</tbody>
</table>
### Mitigation Measure

**HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY**

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>HWQ-13</td>
<td>The County shall not place streams in underground structures where technically feasible, except to serve another public purpose and where burial of the stream is clearly the only means available to safeguard public health and safety.</td>
<td>Policy CO 5.4 Program 9</td>
</tr>
<tr>
<td>HWQ-14</td>
<td>To mitigate potential impacts related to adverse water quality, the County shall require new high-density developments using septic tank leach field/seepage pit systems for wastewater disposal to include in their project plans, analyses of alternatives wastewater treatment and disposal methods.</td>
<td>Policy CI 12.10 and CI 12.11</td>
</tr>
<tr>
<td>HWQ-15</td>
<td>Within the County's Development Code, one overlay district has been established relating specifically to provide greater public safety, promoting public health, and minimizing public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas. The Flood Plan Safety “FP” Overly District does this and operates as described below.</td>
<td>Development Code Chapter 82.16</td>
</tr>
</tbody>
</table>

#### 82.16.020 – Location Requirements

(a) The FP1, FP2, and FP3 overlay districts described in Section 82.16.040 are applied to areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study" for the County of San Bernardino, dated 1978, which has subsequent updates with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary Maps. Subsequent report and map updates that may be published in the future shall further identify additional flood hazard areas. The most current copy of the Flood Insurance Study is on file with the Clerk of the Board.

(b) The Flood Insurance Study establishes the minimum areas to which the FP overlay districts may be applied. After studies for the areas are prepared by the Flood Control District or other governmental agencies (e.g., Corps of Engineers) additional areas may be included.

#### 82.16.050 – Development Standards

(a) Standards of construction. The following provisions shall apply in all areas of special flood hazards:
## HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Anchoring. All new construction and substantial improvements shall be anchored to the foundation to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. If a structure is elevated on fill as specified in Subsection A.2.e, and A.3.a, the anchoring requirement shall be satisfied. Other alternative anchoring techniques that are effective may be considered.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2) Construction materials and methods.

(A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. This would include but not be limited to water resistant lumber, floor coverings, adhesives, paints, masonry construction and finishes, water proof electrical systems, and mechanical footings, or other acceptable materials measures.

(B) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage. This would include but not be limited to elevating the structure, parallel alignment of the structure with the water flow, increase the structural design to withstand hydrologic and hydrographic forces, and increase depth of footings.

(C) All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(D) Adequate drainage paths shall be provided around structures on slopes to guide floodwaters around and away from proposed structures.

(E) If fill is placed to elevate pads one foot above base elevation, it must be demonstrated that fill will not settle and is protected from erosion, scour, or differential settlement, as follows.

(I) Fill shall be compacted to 95 percent per ASTM (American Society of Testing Materials) Standard D-698.

(II) Fill slopes of granular material shall be no steeper than one-half-foot horizontal to one-foot vertical ratio unless substantiating data for steeper slopes is provided, and the County approves the slopes.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY</td>
<td></td>
</tr>
<tr>
<td>(III) If flow velocities are greater than five feet per second, fill slopes shall be armored with stone or rock slope protection.</td>
<td></td>
</tr>
<tr>
<td>(3) Elevation and flood proofing.</td>
<td></td>
</tr>
<tr>
<td>(A) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated to one foot above base flood elevation in the FP1 area, and one foot above ground level in the FP2 area. Upon completion of the structure, the elevation of the lowest habitable floor, including basement, shall be certified by a registered professional engineer or licensed land surveyor, and verified by the Building Official to be properly elevated above the floodplain elevation at the time of certification. The certification or verification shall be provided to the Flood Plain Management Administrator. In instances when the base flood elevation data has not been provided on the Flood Insurance Rate Map (FIRM), the provisions of Subsection 82.1101B. of this Development Code shall apply. The administrator may further exempt proposed single-family residences from this requirement when the base flood elevation data has not been provided on the FIRM.</td>
<td></td>
</tr>
<tr>
<td>(B) New construction and substantial improvement of any residential structure shall include having the lowest habitable floor, elevated above the highest adjacent grade at least one foot higher than the depth number specified in feet on the FIRM, or at least two feet if no depth number is specified. Upon the completion of the structure, the elevation of the lowest habitable floor shall be certified by a registered professional engineer or licensed land surveyor, or verified by the Building Official to be properly elevated above the flood plain elevation as derived from the adopted FEMA map, applicable to subject area at the time of certification. Such certification or verification shall be provided to the Flood Plain Management Administrator.</td>
<td></td>
</tr>
<tr>
<td>(C) Nonresidential construction shall be elevated in compliance with Subsection A.3. of this Section or together with attendant utility and sanitary facilities and shall:</td>
<td></td>
</tr>
<tr>
<td>(I) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;</td>
<td></td>
</tr>
<tr>
<td>(II) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and</td>
<td></td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY</td>
<td></td>
</tr>
<tr>
<td>(III) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Flood Plain Management Administrator.</td>
<td></td>
</tr>
<tr>
<td>(D) All new construction and substantial improvements to existing structures, shall include fully enclosing structural areas below the lowest floor that are subject to flooding, and the areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement shall either:</td>
<td></td>
</tr>
<tr>
<td>(I) Be certified by a registered professional engineer or an architect; or</td>
<td></td>
</tr>
<tr>
<td>(II) Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters; or</td>
<td></td>
</tr>
<tr>
<td>(III) Be verified by the Flood Plain Administrator or his designee as complying with flood proofing standards approved by the Federal Insurance Administration.</td>
<td></td>
</tr>
<tr>
<td>(b) Utility standards.</td>
<td></td>
</tr>
<tr>
<td>(1) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.</td>
<td></td>
</tr>
<tr>
<td>(2) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.</td>
<td></td>
</tr>
<tr>
<td>(3) All public utilities and facilities such as electrical, telephone, cable TV, gas etc., shall utilize flood-proofing measures in their location and construction to minimize flood damage.</td>
<td></td>
</tr>
<tr>
<td>(c) Land use application review requirements.</td>
<td></td>
</tr>
<tr>
<td>(1) All preliminary proposals shall identify the flood hazard area and the elevation of the base flood.</td>
<td></td>
</tr>
<tr>
<td>(2) All final plans shall provide the elevation of proposed structures and pads above the flood plain elevation as derived from the FEMA map adopted at the time of certification. If the site is filled above the base flood, the final pad elevation shall be certified by a registered</td>
<td></td>
</tr>
</tbody>
</table>
HYDROLOGY, FLOOD HAZARDS AND WATER QUALITY

professional engineer or licensed land surveyor and shall be submitted to the Flood Plain Management Administrator. The entire site need not be elevated; only the building pads need be elevated and other means of conducting storm flows through the site shall be provided.

(3) All proposals shall be consistent with the need to minimize flood damage.

(4) All proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(5) All proposals shall provide adequate drainage to reduce exposure to flood hazards and not deflect flood flows onto other properties.

(d) Manufactured homes. All new and replacement manufactured homes and additions to manufactured homes shall comply with all applicable provisions this Section.

(1) Nonresidential construction shall be elevated in compliance with Subsection A.3.

(2) All manufactured homes shall be securely anchored to a permanent foundation system to resist flotation, collapse or lateral movement. Methods of anchoring shall include, but not be limited to, the use of over-the-top or frame ties to ground anchors.

(e) Floodway standards. Floodway areas are located within a special flood hazard area and are established as specified in Subsections 85.020305 A. and B. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles, and erosion potential, the following provisions apply.

(1) Encroachments, including fill, new construction, substantial improvements, stockpiling, and other development are prohibited unless certification by a registered professional engineer or architect is provided, demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) If Subsection A.1 is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of this Section.

HWQ-16 The County will protect natural surface waters and their sources for their biologic, hydrologic and intrinsic values.

Policy CI 132
## MINERAL RESOURCES

### MR-1
The County shall protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

### MR-2
In areas containing valuable mineral resources, the County shall establish and implement conditions, criteria and standards that are designed to protect the access to, and economic use of, these resources, provided that the mineral extraction does not result in significant adverse environmental effects and that open space uses have been considered for the area once mining operations cease.

### MR-3
The County shall incorporate the mineral classification or designation information, including the maps, when they are completed by the state Mining and Geology Board and the Division of Mines and Geology, including new and updated information in the updated County General Plan.

### MR-4
The County shall recognize and protect areas within San Bernardino County that show or have proven to have significant mineral resources and protect their access. The Infrastructure Map, one of the layers of the General Plan mapping system, will be amended to identify mine sites that have a long-term operational horizon.

### MR-5
The County shall implement the state Mineral Resource Zone designations to establish a system that identifies mineral potential and economically viable reserves. These designations are as follows:

- **MRZ-1**: Adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This designation shall be applied where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.

- **MRZ-2**: Adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This designation shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

- **MRZ-3**: Containing deposits whose significance cannot be evaluated from available data.

- **MRZ-4**: Available information is inadequate for assignment to any other MRZ zone.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MINERAL RESOURCES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR-6</td>
<td>SZ Areas: Containing unique or rare occurrences of rocks, minerals or fossils that are of outstanding scientific significance shall be classified in this zone. IRA: San Bernardino County or State Division of Mines and Geology Identified Resource Areas where adequate production and information indicates that significant minerals are present.</td>
<td>Policy CO 7.3</td>
</tr>
<tr>
<td>MR-7</td>
<td>The County shall protect existing mining access routes by giving them priority over proposed alterations to the land, or by accommodating the mining operations with as good or better alternate access, provided the alternate access does not adversely impact proposed open space areas or trail alignment.</td>
<td>Policy CO 7.5</td>
</tr>
<tr>
<td>MR-8</td>
<td>The County shall provide for the monitoring of mining operations for compliance with established operating guidelines, conditions of approval and the reclamation plan.</td>
<td>Policy CO 7.6</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Policy or Development Code Provision</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td><strong>NOISE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N-1</td>
<td>The County shall consider areas within San Bernardino County as &quot;noise impacted&quot; if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Table IV-K-1 (see Noise Element Policy N-1.1, and Section 87-0905(b)(1) of the County Code). Consistent with (new) Policy N-1.7, the County shall prevent incompatible land uses in such areas.</td>
<td>Policy N 1.1</td>
</tr>
</tbody>
</table>
| N-2               | Consistent with Policy N-1.2 and N-2.1, the County shall ensure that new development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the standards of Table IV-K-2. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, places of worship and libraries. For each application involving such a land use at a location where the Ldn is expected to be in excess of 60 dBA, based either on noise contours for future traffic volumes as presented in the Noise Element or on the project’s location near a freeway, arterial street, or railroad line that may reasonably be expected to generate a similar noise level, the County shall require a project specific noise analysis. As described in the Noise Element, the acoustical analysis shall:  
  • Be the responsibility of the applicant;  
  • Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;  
  • Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;  
  • Include estimated noise levels in terms of the descriptors shown in the Noise Background Report (Appendix I) for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element;  
  • Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance; and include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, acoustical information to support a statement of overriding considerations for the project must be provided. | Policy N 1.2 & Policy N 1.3 Program 1 |
### NOISE

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-3</td>
<td>When industrial, commercial or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards of Table IV-K-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance standards of Table IV-K-2 at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.</td>
<td>Policy N 1.3</td>
</tr>
<tr>
<td>N-4</td>
<td>Implementation of measures N-1 and N-2 above should avoid or reduce potential aircraft noise impacts to a level below significance. The County shall submit all projects involving land use decisions on properties within airport influence areas to the Airport Land Use Commission for review.</td>
<td>Development Code Chapter 82.09</td>
</tr>
<tr>
<td>N-5</td>
<td>The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC).</td>
<td>Policy N 1.4</td>
</tr>
<tr>
<td>N-6</td>
<td>The County shall limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.</td>
<td>Policy N 1.5</td>
</tr>
</tbody>
</table>
| N-7               | Within the County’s Development Code, one overlay district has been established to protect the public from high noise levels. The Noise Hazard “NH” Overlay District has been created to provide greater public safety by establishing land use review procedures and requirements for land uses in areas with identified high noise levels. The NH District operates as described below:  
82.20.020 – Location Requirements  
The NH overlay district may be applied to those areas where the Average Day-Night Sound Level (Ldn) is 65 decibels, 65 dBA or greater.  
82.20.030 – Development Standards  
When a land use application or development permit is proposed within the NH overlay district, the following standards shall apply with respect to residential uses:  
(a) Acoustical report required. Noise levels shall be identified. An acoustical report shall be performed to identify noise impact. Any | Development Code Chapter 82.20                        |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy or Development Code Provision</th>
</tr>
</thead>
</table>
| NOISE              | recommendation for noise attenuation or other mitigation measures shall be incorporated into the design standards or conditions of approval as applicable.  
(b) Interior noise levels. Interior noise levels in all single family and multi family residences and educational institutions shall not exceed 45 dBA Ldn emanating from sources outside of the residential building.  
(c) Exterior noise levels. Exterior noise levels in all single family residential land use areas and multi family residential land use areas should not exceed 65 dBA Ldn. Exterior noise levels shall not exceed 70 dBA Ldn for any residential use areas. Ability to mitigate exterior noises to the levels of 65 dBA Ldn and 70 dBA Ldn shall be considered by the review authority when determining the actual Ldn level with which the land uses must comply.  
(d) Noise mitigation measures. In areas where noise exceeds the noise standard, measures shall be taken to mitigate noise levels. An acoustical report identifying these mitigation measures shall be required and reviewed by the Environmental Health Services Division before issuance of any required development permits or approval of land use applications. | |
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POPULATION AND HOUSING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH-1</td>
<td>The County shall continue to utilize Planned Development density bonus and density transfer provisions as described in the County Development Code to allow creation of lot sizes less than that normally required by residential land use districts.</td>
<td>Policy H 2.1</td>
</tr>
<tr>
<td>PH-2</td>
<td>The County shall continue to allow mobile home parks in the Single Residential Land Use District at densities specified in the Development Code and in the Multiple Residential Land Use District subject to design guidelines which will ensure compatibility with the natural environment while minimizing potential adverse environmental impacts.</td>
<td>Policy H 2.8</td>
</tr>
<tr>
<td>PH-3</td>
<td>The County shall continue the Community Development Block Grant single-family homeowner rehabilitation loan program in order to rehabilitate housing and improve neighborhoods.</td>
<td>Policy H 3.3</td>
</tr>
<tr>
<td>PH-4</td>
<td>The County shall use and update the County Rehabilitation Guide for inspection of existing renter- and owner-occupied dwelling units to facilitate economical and safe rehabilitation of housing.</td>
<td>Policy H 3.6</td>
</tr>
<tr>
<td>PH-5</td>
<td>The County shall contract with for-profit and non-profit developers and assist them in acquiring and rehabilitating vacant Housing and Urban Development and VA repossessed properties. These houses will be resold at affordable prices to first-time and other homebuyer families.</td>
<td>Policy H 3.7</td>
</tr>
<tr>
<td>PH-6</td>
<td>Because the preservation of existing housing stock is important in providing housing opportunities for all income levels, housing and community rehabilitation programs shall be established and implemented through the following action programs.</td>
<td>Program 1</td>
</tr>
<tr>
<td>PH-7</td>
<td>The County shall preserve units at risk of being lost to lower income households through completion of their federal subsidies and affordability covenants or contracts by developing various kinds of incentives or other programs.</td>
<td>Policy H 4.2</td>
</tr>
<tr>
<td>PH-8</td>
<td>The County shall preserve historic structures through the use of various federal and state tax incentive and other programs.</td>
<td>Policy H 4.4</td>
</tr>
<tr>
<td>PH-9</td>
<td>The County shall continue to implement the Housing Incentives Program such that it would encourage the phasing of affordable housing in large planned developments when the density bonus incentive has been implemented.</td>
<td>Policy H 5.1</td>
</tr>
</tbody>
</table>
## POPULATION AND HOUSING

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH-10</td>
<td>The County shall identify and use surplus public land to assist in the provision of housing that is affordable to lower income groups.</td>
<td>Policy H 5.4</td>
</tr>
<tr>
<td>PH-11</td>
<td>The County shall identify sites for affordable housing in the various planning regions of the County.</td>
<td>Policy H 5.6</td>
</tr>
<tr>
<td>PH-12</td>
<td>The County shall continue to pursue opportunities to acquire and “bank” sites, as necessary, to be used for affordable housing.</td>
<td>Policy H 5.7</td>
</tr>
<tr>
<td>PH-13</td>
<td>The County shall continue to integrate all aspects of housing assistance and development planning within the Consolidated Plan, consistent with the broader County General Plan and Development Code, and Community Plans in order to identify the existing inventory as well as proposed locations for affordable housing.</td>
<td>Policy H 7.2</td>
</tr>
<tr>
<td>PH-14</td>
<td>The County shall continue to allow emergency and transitional shelters in any land use district with the appropriate permits, and concurrently develop the appropriate location and design standards for such uses.</td>
<td>Policy H 8.5</td>
</tr>
<tr>
<td>PH-15</td>
<td>Because of the various lifestyles and population characteristics of the County's residents, a variety and balance of housing types and densities shall be provided, through the General Plan Update, to require that all new planning area or specific plan studies provide housing types and densities commensurate with demonstrated lifestyles, projected needs, and population characteristics of the individual planning area.</td>
<td>Goal H 9</td>
</tr>
<tr>
<td>PH-16</td>
<td>Because it is desirable to optimize use of and limit adverse impacts on existing infrastructure and natural resources such as open space and air quality, more intensive residential development shall be encouraged in areas close to major transportation corridors where the infrastructure already exists and/or is underutilized, through the following actions - programs.</td>
<td>Goal H 11</td>
</tr>
<tr>
<td>PH-17</td>
<td>The County shall identify areas of the County where urban infill is appropriate, and encourage their development through the use of various incentives.</td>
<td>Policy H 11.3</td>
</tr>
<tr>
<td>PH-18</td>
<td>In the unincorporated areas of the County, the County shall designate residential land use districts within close proximity (three to five miles) of major transportation corridors. The more intensive residential land uses (RS and RM) shall be designated in urbanized areas, and less intensive residential land uses (RS-1, RL-2.5, etc.) in the more rural areas.</td>
<td>Policy H 11.4</td>
</tr>
</tbody>
</table>
### Mitigation Monitoring Program

#### POPULATION AND HOUSING

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Corresponding GP Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH-19</td>
<td>Policy H 11.6</td>
</tr>
</tbody>
</table>

Throughout the County, the County shall continue to encourage mixed-use development through the Planned Development process that includes dense, multiple family residential developments as well as clustered, single family residential development, and other uses which provide convenient shopping and employment opportunities close to major transportation corridors.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS-1</td>
<td>The County shall provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.</td>
<td>Goal CI 17</td>
</tr>
<tr>
<td>PS-2</td>
<td>The County shall seek and commit sufficient investigative resources for effective follow-up on criminal offenses.</td>
<td>Policy CI 17.2</td>
</tr>
<tr>
<td>PS-3</td>
<td>The County shall assess and update training and equipment needs on a routine basis when possible to ensure policing methods are effectively executed while minimizing unnecessary liability.</td>
<td>Policy CI 17.7</td>
</tr>
<tr>
<td>PS-4</td>
<td>The County shall protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.</td>
<td>Goal S 3</td>
</tr>
<tr>
<td>PS-5</td>
<td>The County shall create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery and thereby identify geographic areas that are in need of infrastructure improvements so that those areas can take the necessary steps to improve that infrastructure and eventually can adequately support the commensurate improvement in fire service delivery.</td>
<td>Policy CI 16.2</td>
</tr>
<tr>
<td>PS-6</td>
<td>The County shall encourage development in areas that have adequate infrastructure for the provision of fire service that include, but are not limited to, water system infrastructure that is capable of delivering appropriate fire flow and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.</td>
<td>Policy CI 16.3</td>
</tr>
<tr>
<td>PS-7</td>
<td>The County shall create Community Facilities District or other long-term financial instruments within proposed developments and areas available for development to provide a fair share funding mechanism to support pro-rata increases for the provision of long-term fire protection. The Community Facilities Districts should be designed to provide sustained long-term levels of staffing operations, equipment, and facilities. The Community Facilities Districts should also be designed specifically to the impacts of the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.</td>
<td>Policy CI 16.4</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Number</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>PS-8</td>
<td>The County shall ensure that adequate school, library, and day-care facilities are available and appropriately located to meet the needs of its residents.</td>
<td>Goal CI 19</td>
</tr>
<tr>
<td>PS-9</td>
<td>The County shall provide convenient access to K-12 and higher educational opportunities for all, activities for youth, and programs for residents of all ages.</td>
<td>Goal CI 20</td>
</tr>
</tbody>
</table>
## County of San Bernardino
### Mitigation Monitoring Program

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC-1</td>
<td>The County shall support the establishment of &quot;urban open space areas&quot; within urban areas, and seek to develop or retain these areas through cooperation with local cities. Where possible, these areas shall be located along or near regional trail routes.</td>
<td>Policy OS 1.4</td>
</tr>
<tr>
<td>REC-2</td>
<td>The County shall strive to achieve a standard of 14.5 acres of undeveloped lands and/or trails per 1,000 population and 2.5 acres of developed regional parkland per 1,000 populations. &quot;Undeveloped lands&quot; may include areas established to buffer regional parks from encroachment by incompatible uses.</td>
<td>Policy OS 1.5</td>
</tr>
<tr>
<td>REC-3</td>
<td>When specific projects are reviewed which exhibit natural features worthy of regional park land status, the County shall require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.</td>
<td>Policy OS 1.7</td>
</tr>
<tr>
<td>REC-4</td>
<td>The County shall ensure that the variety of recreational experiences at Regional Park sites meets the needs of the region.</td>
<td>Policy OS 1.8</td>
</tr>
<tr>
<td>REC-5</td>
<td>The County shall require new residential development to provide a park and recreation facilities at a rate of not less than 3 acres per 1,000 population. This could include the dedication of lands, payment of fees, or a combination thereof.</td>
<td>Policy OS 1.9 Program 1</td>
</tr>
<tr>
<td>REC-6</td>
<td>The County shall implement the Quimby Act (Gov. Code Section 66477) through the subdivision process in providing for local opportunities (both passive and active).</td>
<td>Policy OS 1.9 Program 2</td>
</tr>
<tr>
<td>REC-7</td>
<td>Areas in new developments that are not suitable for habitable structures shall be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands shall be considered with modifications to a site to increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights.</td>
<td>Policy OS 1.9 Program 3</td>
</tr>
<tr>
<td>REC-8</td>
<td>In addition to parkland to meet the 3 acres per 1,000 local park standard, large-scale housing projects in the Valley Region with 100 or more units shall provide on-site recreational facilities, including pools, tennis courts and turfed play areas and tot-lots.</td>
<td>Policy OS 1.9 Program 4</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Number</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
</tbody>
</table>
| **REC-9**          | The County shall classify local parks in three categories: Local, Neighborhood and Community Parks, and establish size and location standards as follows:  
|                    | • Local Park: A small walk-in park, up to five acres, serving a concentrated or limited population, particularly children, within a quarter mile radius.  
|                    | • Neighborhood Park: A walk-in park, up to 10 acres, with a service radius of a half-mile. Serves a neighborhood and provides a passive recreation location for all age groups.  
|                    | • Community Park: A walk-in, drive to park, up to 40 acres, which includes areas for intense recreational facilities and serves a combination of neighborhoods within a 1-2 mile radius. | Policy OS 1.9  
|                    | Program 5                                                                                                      |                         |
| **REC-10**         | The County shall expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems. | Goal OS 2               |
| **REC-11**         | The County shall provide a regional trail system, plus rest areas, to provide continuous interconnecting trails that serve major populated areas of the County and existing and proposed recreation facilities through the regional trail system. The purpose of the County regional trails system shall be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system. | Policy OS 2.1           |
| **REC-12**         | The County shall provide equestrian, bicycling, and pedestrian staging areas consistent with the master plan of Regional Trails and the trail route and use descriptions shown in Figures 2-11A through 2-11C of the Circulation Background Report. | Policy OS 2.1  
|                    | Program 1                                                                                                      |                         |
| **REC-13**         | The County shall work with local, state and federal agencies, interest groups and private landowners in an effort to promote an interconnecting regional trail system, and to secure trail access through purchase, easements or by other means. | Policy OS 2.1  
|                    | Program 2                                                                                                      |                         |
| **REC-14**         | The County shall utilize public funding mechanisms whenever possible to protect and acquire lands for open space uses. | Policy OS 2.2           |
| **REC-15**         | The County shall actively seek state, federal, and private grants for the purpose of financing open space and trail acquisition, construction and operation. | Policy OS 2.2  
<p>|                    | Program 1                                                                                                      |                         |</p>
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECREATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REC-16</td>
<td>The County shall use general funds, user fees, proceeds from concession operations, and other sources that may be available to finance open space and trail acquisition, construction and operation.</td>
<td>Policy OS 2.2 Program 2</td>
</tr>
<tr>
<td>REC-17</td>
<td>The County shall include open space and trail acquisition and development in its Capital Improvement Programs.</td>
<td>Policy OS 2.2 Program 3</td>
</tr>
<tr>
<td>REC-18</td>
<td>The County shall locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural and historic features.</td>
<td>Policy OS 2.3</td>
</tr>
<tr>
<td>REC-19</td>
<td>The County shall use lands already in public ownership or proposed for public acquisition, such as right-of-way for flood control channels, abandoned railroad lines and fire control roads for trails wherever possible, in preference to private property.</td>
<td>Policy OS 2.4</td>
</tr>
<tr>
<td>REC-20</td>
<td>The County shall encourage the dedication or offers of dedication of trail easements where appropriate for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.</td>
<td>Policy OS 2.5</td>
</tr>
<tr>
<td>REC-21</td>
<td>The County shall monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Resources Overlay. Existing trail easements or alignments shall be mapped in their correct positions; proposed alignments shall be mapped in general locations. The Resources Overlay shall be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.</td>
<td>Policy OS 2.7</td>
</tr>
<tr>
<td>REC-22</td>
<td>The County shall use active and abandoned road, utility, and railroad rights-of-way for nonvehicular circulation in all new development when found feasible.</td>
<td>Policy OS 2.9</td>
</tr>
<tr>
<td>REC-23</td>
<td>The County shall require proposed development adjacent to trail systems to dedicate land for trailhead access points. Existing right-of-way and surplus public properties should be utilized for these staging areas whenever possible.</td>
<td>Policy OS 2.10</td>
</tr>
<tr>
<td>REC-24</td>
<td>The County shall begin acquisition of trail easements or rights-of-way after a trail route plan has been adopted, unless a trail segment is to be acquired through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.</td>
<td>Policy OS 2.11</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
<td>Corresponding GP Number</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>RECREATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REC-25</td>
<td>The County shall develop multipurpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and BLM areas.</td>
<td>Goal OS 3</td>
</tr>
<tr>
<td>REC-26</td>
<td>To preserve and protect recreational facilities in the County, the County shall utilize public funding mechanisms wherever possible to protect and acquire regional parklands.</td>
<td>Policy OS 4.4</td>
</tr>
<tr>
<td>REC-27</td>
<td>To expand recreational opportunities in the County, the County shall utilize small parcels adjacent to flood control facilities for equestrian, pedestrian and biking staging areas. The County Department of Public Works shall contact the Regional Parks Department or other County open space agency prior to disposing of any surplus lands.</td>
<td>Policy OS 2.14</td>
</tr>
</tbody>
</table>
### Transportation/Traffic

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR-1</td>
<td>The County shall provide a transportation system, including public transit, that is safe, functional and convenient, that meets the public’s needs and enhances the lifestyles of County residents.</td>
<td>Goal CI 1</td>
</tr>
<tr>
<td>TR-2</td>
<td>The County shall strive to achieve Level of Service “D” on all County roadways in the Valley and Mountain Regions and LOS “C” on all County roadways in the Desert region. Through the review of new development proposals, traffic impacts, including cumulative impacts, will be properly addressed and mitigated to maintain these Level of Service standards on the County’s circulation system.</td>
<td>Goal CI 2</td>
</tr>
<tr>
<td>TR-3</td>
<td>In the Valley and Mountain Regions, the County shall approve development proposals only when they are consistent with the County’s objective of achieving Level of Service “D” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “D” objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “D” objective. In the Desert Region, the County shall approve development proposals only when they are consistent with the County’s objective of achieving Level of Service “C” on County roadways segments and intersections affected by the development. Development proposals will strive to achieve the LOS “C” objective through incorporating design measures and roadway improvements in the proposed development and/or mitigation fees to the County to offset capital improvements to achieve the LOS “C” objective.</td>
<td>Policy D/CI 1.1, V/CI 1.1</td>
</tr>
<tr>
<td>TR-4</td>
<td>The County shall work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate right-of-way and roadway capacity across jurisdictional boundaries.</td>
<td>Policy CI 2.1</td>
</tr>
<tr>
<td>TR-5</td>
<td>The County shall work with Caltrans and SANBAG on appropriate fair share mitigation for impacts of development on state highways.</td>
<td>Policy CI 2.4</td>
</tr>
<tr>
<td>TR-6</td>
<td>The County shall have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternate modes of transportation, in order to minimize the adverse impacts of automobile use on the environment.</td>
<td>Goal CI 3</td>
</tr>
</tbody>
</table>
### County of San Bernardino
### Mitigation Monitoring Program

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRANSPORTATION/ TRAFFIC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR-7</td>
<td>The County shall promote and encourage land use patterns, such as the development of local retail uses near residential uses, consistent with Smart Growth and New Urbanism Concepts in new development that will reduce the number of automobile trips by providing neighborhood shopping facilities and connectivity through pedestrian and bicycle paths.</td>
<td>Policy CI 3.1, Program 2</td>
</tr>
<tr>
<td>TR-8</td>
<td>The County shall promote and encourage the design and implementation of land uses, development standards and capital improvement programs that maximize the use of public transit facilities and programs, and the availability of local retail uses accessible to local residents by walking or biking to reduce dependence on the automobile.</td>
<td>Policy CI 3.1, Program 3</td>
</tr>
<tr>
<td>TR-9</td>
<td>The County shall work with regional agencies (i.e., SCAG, Caltrans, SANBAG) to develop ridesharing programs, facilities and various modes of public transit (i.e., local and rapid bus, Metrolink and high-speed trains).</td>
<td>Policy CI 3.1, Program 4</td>
</tr>
<tr>
<td>TR-10</td>
<td>The County shall work with the cities, Omnitrans and other transit agencies to integrate local transit service routes and schedules into a linked and well-coordinated (through schedules) Valley-wide system throughout the Valley area.</td>
<td>Policy V/CI 1.3</td>
</tr>
<tr>
<td>TR-11</td>
<td>The County shall extend public transit between residential areas and industrial/urban employment centers, continue and expand transportation services and public transit between Ontario Airport; Orange County Airport; and Los Angeles International Airport; and consider promotion of future high-speed train and Maglev systems for better long-range airport connectivity.</td>
<td>Policy CI 3.4</td>
</tr>
<tr>
<td>TR-12</td>
<td>The County's comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multimodal (i.e., non-motorized, highway, and transit) system to accommodate the County's mobility needs and provides the County's objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County.</td>
<td>Policy CI 1.1</td>
</tr>
<tr>
<td>TR-13</td>
<td>The County’s comprehensive transportation system shall operate at regional, countywide, community and neighborhood scales providing connectors between communities, and mobility between jobs, residences and recreational opportunities.</td>
<td>Goal CI 2</td>
</tr>
<tr>
<td>TR-14</td>
<td>The County shall ensure that applicants, subdividers, and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off site mitigation.</td>
<td>Policy CI 4.6</td>
</tr>
</tbody>
</table>
## Mitigation Measure

### TRANSPORTATION/ TRAFFIC

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Corresponding GP Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TR-15</strong> The County shall use current innovative traffic engineering practices to increase roadway capacity and safety such as:</td>
<td>Policy CI 5.2 Program 1</td>
</tr>
<tr>
<td>• A raised median on Major Arterial highways in urban areas;</td>
<td></td>
</tr>
<tr>
<td>• Limiting access to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors from intersecting streets; direct access from abutting properties shall be allowed only where no reasonable alternatives exist;</td>
<td></td>
</tr>
<tr>
<td>• Obtaining additional right-of-way to accommodate right and left turn lanes at major intersections;</td>
<td></td>
</tr>
<tr>
<td>• Developing special urban interchanges utilizing flyovers in areas requiring high-flow arterial highways;</td>
<td></td>
</tr>
<tr>
<td>• Providing signal synchronization;</td>
<td></td>
</tr>
<tr>
<td>• Maximizing the use of Intelligent Transportation Systems;</td>
<td></td>
</tr>
<tr>
<td>• Coordination with SANBAG and local cities the development of traffic management centers (TMC) and traffic operation centers (TOCs);</td>
<td></td>
</tr>
<tr>
<td>• Establishing of no-parking zones;</td>
<td></td>
</tr>
<tr>
<td>• Limiting peak hour turning movements;</td>
<td></td>
</tr>
<tr>
<td>• Blocking or dead-ending of existing access roads to main highways;</td>
<td></td>
</tr>
<tr>
<td>• Establishing of one way streets;</td>
<td></td>
</tr>
<tr>
<td>• Limiting truck traffic on certain roads and at specified hours;</td>
<td></td>
</tr>
<tr>
<td>• Requiring all residential development proposals adjacent to all categories of Major and Secondary Highways and Controlled/Limited Access Collectors to be designed so that direct access from the private property to the roadway will not be needed;</td>
<td></td>
</tr>
<tr>
<td>• Controlling lot size frontage to limit access;</td>
<td></td>
</tr>
<tr>
<td>• Developing minimum separation distances between access points;</td>
<td></td>
</tr>
<tr>
<td>• Accommodating exclusive transit facilities within new roads or those planned for improvement; and</td>
<td></td>
</tr>
<tr>
<td>• Developing design standards that will establish a minimum distance from intersections to any curb cut.</td>
<td></td>
</tr>
<tr>
<td><strong>TR-16</strong> The County shall limit, where feasible, access along all roads intersecting Major and Secondary Highways for a distance of 600 feet from the centerline of said Highways to the maximum extent possible.</td>
<td>Policy CI 5.3</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TR-17</td>
<td>The County shall require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Bicycle lanes and sidewalks shall be installed on existing and future roadways, where appropriate and as funding is available.</td>
</tr>
<tr>
<td>TR-18</td>
<td>The County shall ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.</td>
</tr>
<tr>
<td>TR-19</td>
<td>The County shall adopt a fee program consistent with the requirements of SANBAG’s Nexus Study and Measure I. The County shall work with SANBAG to allocate Measure I funds to projects in the County on the Nexus Study project list and the Measure I expenditure plan.</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UT-1</td>
<td>The County shall ensure the quality of life by pacing future growth with the availability of public infrastructure.</td>
</tr>
<tr>
<td>UT-2</td>
<td>The County shall ensure that new development pay a proportional fair share of the costs to provide infrastructure facilities required to serve such development. If an applicant is required to pay more than a proportional share, reimbursement agreements may be used.</td>
</tr>
<tr>
<td>UT-3</td>
<td>The County shall utilize Fiscal Impact Analysis to determine the County's ability to provide adequate services and facilities through the imposition of conditions of approval, fees, special taxes, financing mechanisms, etc., on new development. The Fiscal Impact Analysis will provide guidance to County staff and County decision-makers on the project-specific requirements that may be placed on that individual development project.</td>
</tr>
<tr>
<td>UT-4</td>
<td>The County shall ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of existing and future County residents.</td>
</tr>
<tr>
<td>UT-5</td>
<td>The County shall ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.</td>
</tr>
<tr>
<td>UT-6</td>
<td>The County shall equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.</td>
</tr>
<tr>
<td>UT-7</td>
<td>The County shall coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and groundwater pollution.</td>
</tr>
<tr>
<td>UT-8</td>
<td>The County shall apply federal and state water quality standards and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project, for surface and groundwater to safeguard public health.</td>
</tr>
<tr>
<td>UT-9</td>
<td>The County shall assist in the development of additional conveyance facilities and use of groundwater basins to store surplus of imported water.</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UT-10</td>
<td>County approval of new development will be contingent on the availability of adequate and reliable water supplies and conveyance systems, consistent with coordination between land use planning and water system planning.</td>
</tr>
<tr>
<td>UT-11</td>
<td>The County shall monitor future development to ensure that sufficient local water supply or alternative imported water supplies can be provided.</td>
</tr>
<tr>
<td>UT-12</td>
<td>The County shall ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.</td>
</tr>
<tr>
<td>UT-13</td>
<td>The County shall support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate RWQCB and County Department of Environmental Health and Safety.</td>
</tr>
<tr>
<td>UT-14</td>
<td>In the Inland Valley Development Agency Redevelopment Area, the County shall permit the construction of a new water treatment plans or connection to existing and/or proposed wastewater collection and treatment facilities rather than connection to nearby city wastewater collection and treatment facilities.</td>
</tr>
<tr>
<td>UT-15</td>
<td>Because public health and safety are endangered through the establishment of urban uses without adequate sewer service, the County shall seek to direct urban development in areas that are served by domestic sewer systems and away from areas in which soils cannot adequately support septic tank/leach field systems.</td>
</tr>
<tr>
<td>UT-16</td>
<td>The County shall ensure a safe, efficient, economical and integrated solid waste management system that considers all waste generated within the County, including, agriculture, residential, commercial and industrial wastes, while recognizing the relationship between disposal issues and the conservation of natural resources.</td>
</tr>
<tr>
<td>UT-17</td>
<td>The County shall utilize a variety of feasible processes, including source reduction, transfer, recycling, landfilling, composting, and resource recovery to achieve an integrated and balanced approach to solid waste management.</td>
</tr>
<tr>
<td>UT-18</td>
<td>The County shall seek federal and state funds for projects utilizing resource and material recovery processes.</td>
</tr>
<tr>
<td>Mitigation Measure</td>
<td>Mitigation Measure</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UT-19</td>
<td>The County shall continue recycling operations at County landfills; expand recycling operations to other landfills or resource recovery facilities.</td>
</tr>
<tr>
<td>UT-20</td>
<td>Where feasible, the County shall explore the feasibility and environmental impacts of reopening inactive landfills where there is useful capability remaining.</td>
</tr>
<tr>
<td>UT-21</td>
<td>The County shall assist the private sector wherever possible in developing methods for the reuse of inert materials (concrete, asphalt and other building wastes) that currently use valuable landfill space.</td>
</tr>
<tr>
<td>UT-22</td>
<td>The County shall continue to map the precise location of all waste sites (existing, inactive and closed) on the County’s automated mapping system and create a database with information on air, soil and water contamination and the type of wastes disposed of at each site.</td>
</tr>
<tr>
<td>UT-23</td>
<td>The County shall carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County, and protect the viability of waste disposal sites from encroaching on incompatible land uses.</td>
</tr>
<tr>
<td>UT-24</td>
<td>The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.</td>
</tr>
<tr>
<td>UT-25</td>
<td>The County shall provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas.</td>
</tr>
<tr>
<td>UT-26</td>
<td>The County shall improve its telecommunications infrastructure and expand access to communications technology and network resources to improve personal convenience, reduce dependency on non-renewable resources, take advantage of the ecological and financial efficiencies of new technologies, maintain the County’s economic competitiveness, and develop a better-informed citizenry.</td>
</tr>
<tr>
<td>UT-27</td>
<td>The County shall work with telecommunications industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.</td>
</tr>
</tbody>
</table>