



June 26, 2013

Joseph E. Bonadiman & Associates, Inc.
J.T. Stanton, P.E.
Vice President of Engineering
234 N. Arrowhead Ave.
San Bernardino, CA 92408-1721

Re: Updated Delhi Sands Flower-loving Fly Habitat Suitability Assessment the Proposed St. George Church Expansion Project Located North of Marygold Avenue, West of Grace Street, Rialto, California

Dear Mr. Stanton,

This letter report contains the findings of an updated habitat suitability assessment for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSF), a federally endangered species, for the proposed St. George Church Expansion Project (Project). The habitat suitability assessment was conducted by biologist's Travis J. McGill and Daniel Smith on June 14, 2013 and verified by Shay Lawrey on June 16, 2013.. The purpose of this assessment is to determine the quality of DSF habitat within the proposed Project boundaries.

Background Information

It has been generally acknowledged that DSF occur in Delhi sands, particularly clean dune formations composed of Aeolian sands. Conversely, soils and sands deposited by fluvial processes from the surrounding alluvial fans do not support DSF. These alluvial soils are composed of course sands, cobble and gravel (Tujunga soils) or course sands, silts and clays (Cieneba soils). In this part of San Bernardino County the separation of soil types, Delhi sand and Cieneba or Tujunga soils, has been lost due to mixing and cross contamination from years of agricultural activities and other man-made disturbances.

Depending on the extent of mixing and contamination, some area formally mapped in 1970 as Delhi Sands no longer have potential to support DSF populations. Conversely, some areas formally mapped as Tujunga/Cieneba soils may now have Delhi Sands deposited on the surface and have the potential to support DSF. Six DSF experts (Ken Osborne, Greg Ballmen, Rudy Matoni, Karen Cleary-Rose, Alison Anderson and Thomas McGill) used this criterion to develop a rating system using the relative abundance of clean Delhi sands verses the amount of Tujunga/Cienba or other alluvial soils, to assess the suitability of the habitat to support DSF (Michael Brandman Associates, 2003). Soils high in gravel and alluvial materials, or high in fine materials such as silts and clays, were rated low, while soils that appear to be high in aeolian deposited sands were rated high. This qualitative assessment of DSF habitat was further refined by considering the relative degree of soil compaction. Alluvial soils have a tendency to solidify to a hard surface pavement, while Aeolian soils are easier to penetrate and provide good substrate for DSF.

Although it has been common to attribute the presence of four common plant species buckwheat (*Eriogonum fasciculatum*), croton (*Croton californicus*), deer weed (*Acmispon scoparius*), and telegraph weed (*Heterotheca grandiflora*) as indicators of habitat suitability, for the assessment, vegetation composition was not given much weight in making this habitat evaluation. These dominant plant species, and plant species composition of habitats, may not be directly relevant to larval development

(due to likely predatory or parasitic habitat of DSF larvae) (Osborne, et al. 2003). The known immature life histories of the nine asiloid fly families, including that to which the DSF is classified, are primarily predatory and/or parasitic on other invertebrate species (mainly insects) and the presence or absence of plant species appears not to be relevant to the life history of these flies.

Areas known to contain Delhi Sands and/or to be occupied by DSF have been divided by United States Fish and Wildlife Service (USFWS) into three recovery units (Colton, Jurupa, and Ontario Recovery Units (USFWS, 1997)):

- Colton:

Eight sites have been permanently protected in the Colton recovery unit:

- Jurupa:

Approximately 21 ha (52-acres) of DSF habitat have been protected for this population along the Jurupa Hills. Approximately 12 ha (30-acres) are protected under a conservation easement within Riverside County ("I-15/Galena" Biological Opinion; FWS-WRIV-774). An additional 9 ha (22-acres) will be placed under a conservation easement and managed in San Bernardino County as a result of interagency consultation between the Service and the U. S. Army Corps of Engineers (USACE) ("Fontana Business Center" Biological Opinion; FWS-SB-1788.9), in accordance with section 7 of the Endangered Species Act.

- Ontario:

In 2000, 4 ha (10-acres) of DSF habitat near the intersection of Greystone and Milliken Avenues in the City of Ontario, San Bernardino County, were acquired for conservation and an additional 1.2 ha (3-acres) of contiguous habitat was avoided but not permanently conserved. At that time, these properties were surrounded by undeveloped land with some characteristics of DSF habitat, and the USFWS anticipated that a larger DSF reserve would be created that could sustain a robust DSF population. However, most of the surrounding property has subsequently been developed for commercial or industrial uses, and it is unlikely that the existing population can be sustained over the long term.

The proposed project site is located within the Jurupa Recovery Unit, outside the areas protected under the conservation easements.

Project Location and Description

Generally, the project site is located north of Marygold Avenue, South of San Bernardino Avenue, west of Locust Avenue, and east of Alder Avenue. The project site is depicted on the Fontana United States Geological Survey (USGS) 7.5-minute quadrangle in Section 21 of Township 1 South, Range 5 West. Specifically, the project site is located at 17895 San Bernardino Avenue, Fontana, San Bernardino County, California (refer to *Exhibits 1-3*).

The project site consists of two (2) parcels, APN 252-041-14 and APN 252-041-58. APN 252-041-14 is located on the northern half of the project site south of San Bernardino Avenue, and APN 252-041-58 is located on the southern half of the project site north of Marygold Avenue. The proposed expansion of the existing church will consist of two (2) phases. Phase 1 will be the development of the southern half (APN 252-041-14) of the project consisting of the new church building, parking, landscape, hardscape and WQMP basin, size for ultimate build out. Phase 2 of the project will consist of the new hall building, storage building parking, landscape and hardscape in the northern half (APN 252-041-58) of the project site (refer to *Exhibit 4*).

Methods

The habitat suitability assessment primarily focused on the soils found on the undeveloped areas of the project site to identify the presence or absence of Delhi Sand soils on the project site. This assessment

consisted of a visual and tactile inspection of the undeveloped areas of the project site in areas that have the potential to contain Delhi Sand soils. Areas were evaluated for the quality or purity of Delhi Sand soils, if present, and for its potential to support DSF. Areas were assigned one or more ratings ranging between 1 and 5, with 5 being the best quality and most suitable habitat:

1. Soils dominated by heavy deposits of alluvial material including coarse sands and gravels with little or no Delhi sands and evidence of soil compaction. *Unsuitable Quality*
2. Delhi Sands are present but the soil characteristics include a predominance of alluvial materials (Tujunga Soils and Hilmar loamy sand). *Very Low Quality*
3. Although not clean, sufficient Delhi sands are present to prevent soil compaction. Some sandy soils exposed on the surface due to fossorial animal activity. *Low Quality*
4. Abundant clean Delhi sands with little or no alluvial material (Tujunga soils or Hilmar loamy sand) present. Moderate abundance of exposed sands on the soil surface. Low vegetative cover. Evidence of moderate degree of fossorial animal activity by vertebrates and invertebrates. *Moderate Quality*
5. Sand dune habitat with clean Delhi Sands. High abundance of exposed sands on the soil surface. Low vegetative cover. Evidence (soil surface often gives under foot) of high degree of fossorial animal activity by vertebrates and invertebrates. *High Quality*

The above criteria were used to rate the relative abundance of clean Delhi Sands versus the amount of Cienba or other alluvial soils, to rate the suitability of the habitat to support DSF. Soils high in gravel and alluvial materials, or high in fine materials such as silts and clays, were rated low, while soils that appear to be high in aeolian deposited sands were rated high. This qualitative assessment of DSF habitat was further refined by considering the relative degree of soil compaction. Alluvial soils have a tendency to solidify to a hard surface pavement, while aeolian soils are easier to penetrate and provide good substrate for DSF.

Existing Site Conditions

The project site is located in an area that is primarily developed with single family and multi-family homes. Intermixed with these developed areas are vacant, undeveloped parcels that have been heavily disturbed. These disturbed parcels have been isolated by development and do not have any connectivity to undeveloped natural areas containing natural plant communities or undisturbed soils. The project site is flat with no significant areas of topographic relief at an approximate elevation of 1,140 feet above mean sea level. According to the United States Department of Agriculture Natural Resources Conservation Service Soil Survey, surface soils on an adjacent to the project site consist of Tujunga loamy sand (0 to 5 percent slopes)(see *Exhibit 5*).

Within the northern half of the project site (APN 252-041-58) are three (3) existing church buildings, a paved parking lot, and an undeveloped, disturbed ruderal field. The undeveloped, disturbed field is located on the southern end of the parcel and connects with the southern half of the project site (APN 252-041-14). This ruderal field is heavily disturbed and is composed of non-native grasses and early successional plant species. Additionally, loose gravel has been scattered throughout this field. The southern half of the project site (APN 252-041-14) is undeveloped with remnant rows of olive trees. The remnant rows of olive trees indicate that this parcel was historically used for agricultural purposes. Signs of disking/grading were observed within this parcel removing most of low growing shrubs from the open areas and clearing the ground under the olive trees. There are also signs of illegal dumping within the southern half of the project site.

Results

The project site is mapped as containing Tujunga loamy sand, but was evaluated for its potential to contain Delhi Sand soils a wind-blown and deposited soil known to occur in the general vicinity. Table 1

below provides the habitat quality/suitability rating for the undeveloped areas within the project boundaries:

TABLE 1: Habitat Quality/Suitability Rating

| Undeveloped Parcel | Suitability Rating | | |
|--------------------|--------------------|------------------|--------------|
| | Unsuitable (1/2) | Restorable (3/4) | Suitable (5) |
| 252-041-58 | 4.78-acres | - | - |
| 252-041-14 | 4.77-acres | - | - |
| TOTAL | 9.55-acres | - | - |

The undeveloped areas within the project site were rated as unsuitable with a habitat quality rating of 1 since only Tujunga loamy sands were present. There was no Delhi Sand soil, clean or mixed present onsite. There were no areas of mixed or restorable Delhi Sand soils (a habitat quality rating of 3/4) onsite, and there was no suitable habitat or clean Delhi Sand soils (a habitat quality rating of 4 or 5) that occur on the project site.

Conclusion

The undeveloped areas within the project site were determined not to have clean Delhi Sand soils and do not have the potential to provide suitable habitat for DSF. The soils on the northern half of the project site have been compacted from human activities and mixed with loose gravel. The soils on the southern half of the project site have been disturbed from historical agricultural practices and ongoing disking/grading activities. Additionally, none of the plant species typically found in association with areas that provide suitable habitat for DSF were observed on the project site.

Based on the results of the DSF suitability habitat assessment, it can be presumed that DSF do not have the potential to occur on the project site and focused surveys for DSF are not recommended. The project site is surrounded by existing development and no longer has connectivity to areas containing clean Delhi Sands soils or areas subject to Aeolian processes.

Please do not hesitate to contact me at 909-915-5900 should you have any questions or require further information.

Sincerely,



Shay Lawrey, President
Ecologist/Regulatory Specialist

Attachment:
Project Exhibits



Photograph 1- Loose gravel scattered across the undeveloped field on the northern half of the project site within APN 252-041-58.



Photograph 2- From the southeast corner of APN 252-041-58 looking north at the ruderal field.



Photograph 3- Undeveloped, ruderal field along the eastern boundary of APN 252-041-58.



Photograph 4- From the southern boundary of APN 252-041-14 looking north across the undeveloped parcel.



Photograph 5- Remnant olive tree rows on the southern half of the project site (APN 252-041-14).



Photograph 6- Concrete rubble pile on the southern half of the project site.

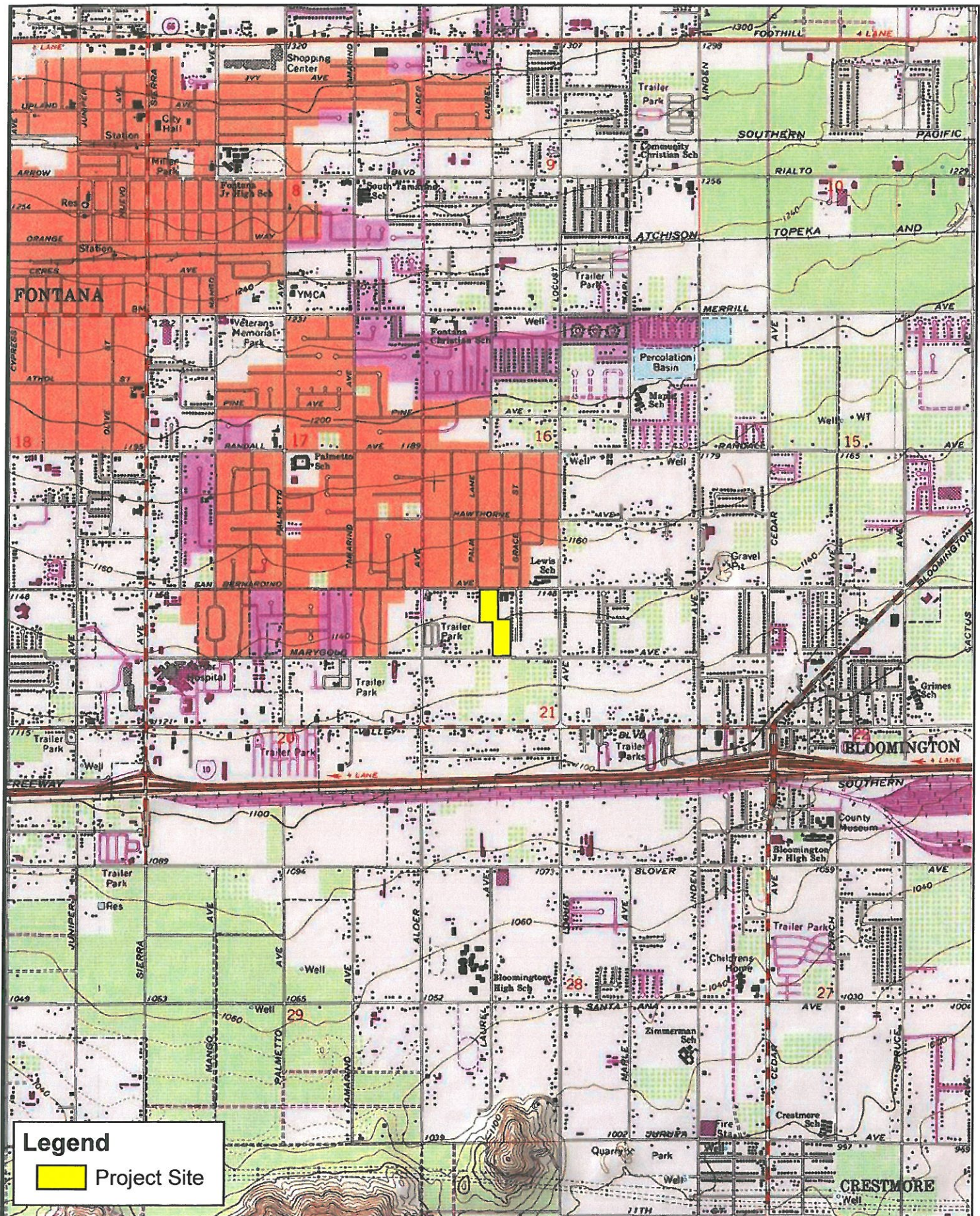
Exhibits
Joseph E. Bonadiman & Associates, Inc.
J. T. Stanton, P.E.
St. George Church Expansion Project

Project Exhibits



St. George Church Expansion DSF Habitat Suitability Assessment
Regional Vicinity

SOURCE: Bing Maps, 2013



St. George Church Expansion DSF Habitat Suitability Assessment
Site Vicinity

 not to scale

SOURCE: USGS Topographic Quadrangle, Fontana, California, dated 1967 (photorevised 1980)

Exhibit 2




San Bernardino Avenue

Grace Street

Marygold Avenue

Legend

 Project Site

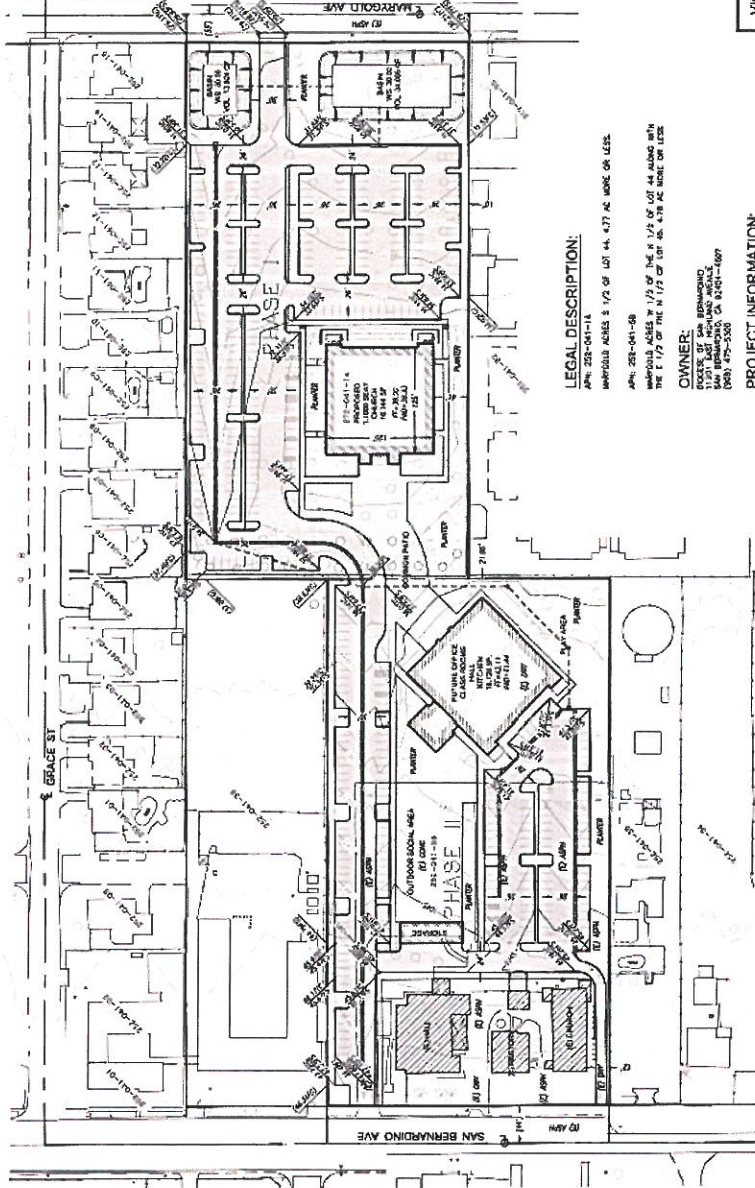
St. George Church Expansion DSF Habitat Suitability Assessment

Project Site



ST. GEORGE

PROPOSED CHURCH EXPANSION
 SAN BERNARDINO COUNTY, CALIFORNIA
 PORTIONS OF N.E. 1/4, SECTION 20 OF TOWNSHIP 1 SOUTH, RANGE 5 WEST, SAN BERNARDINO
 BASE MERIDIAN, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA



LEGAL DESCRIPTION:
 APPROXIMATELY 1/2 OF LOT 44, 4.27 AC MORE OR LESS,
 APN: 252-041-48
 1/2 OF LOT 44 OF THE N 1/2 OF SEC. 10, T. 1 S., R. 5 W., S.B.M. 2837-100
 THE E 1/2 OF THE N 1/2 OF LOT 40, 4.76 AC MORE OR LESS,
 APN: 252-041-49

OWNER:
 ST. GEORGE CHURCH
 17985 SAN BERNARDINO AVE.
 FONTANA, CA 92335
 (951) 479-2350

PROJECT DESCRIPTION:
 IS NEW RECONSTRUCTION WITH REMOVAL
 AND REPLACEMENT OF EXISTING
 MURALS AND/OR ADDITIONAL REPAIRS
 100-1710 RECONSTRUCTION 100-1710

PROJECT INFORMATION:
 PROJECT NO: 100-1710
 SHEET NO: 1 OF 1

PREPARED FOR:
 DIOCESE OF SAN BERNARDINO
 218 JONAS ST.
 FONTANA, CA 92335

DATE:
 11/19/2024

UTILITY COMPANIES:

- WATER:** SOUTHWEST CALIFORNIA GAS CO., 401 W. GARDEN ST., ANAHEIM, CA 92805 (951) 771-3010
- GAS:** SOUTHWEST CALIFORNIA GAS CO., 401 W. GARDEN ST., ANAHEIM, CA 92805 (951) 771-3010
- SEWER:** SAN BERNARDINO COUNTY, 1000 W. GARDEN ST., ANAHEIM, CA 92805 (951) 771-3010
- POWER:** SOUTHWEST CALIFORNIA GAS CO., 401 W. GARDEN ST., ANAHEIM, CA 92805 (951) 771-3010

PARCEL COVERAGE:

- SUBJECT: 419,174 S.F. MORE OR LESS
- AREA: 9.47 AC
- PERCENTAGE: 100.00%
- AREA: 419,174 S.F. MORE OR LESS
- PERCENTAGE: 100.00%

PARKING CALCUS:

- MIN. AREA: 1.00 AC
- MAX. AREA: 1.00 AC
- MIN. SPACES: 10
- MAX. SPACES: 10
- MIN. DRIVEWAY WIDTH: 10 FT
- MAX. DRIVEWAY WIDTH: 10 FT
- MIN. DRIVEWAY LENGTH: 10 FT
- MAX. DRIVEWAY LENGTH: 10 FT

- 1) THERE ARE NO UNLAWFUL USES OF THE PROPERTY APPLICABLE TO THE PROJECT SITE.
- 2) THERE ARE NO PROHIBITED OR DANGEROUS TREES WITHIN THE PROJECT SITE.
- 3) NO SIGNIFICANT IMPACTS.

VICINITY MAP:



ST. GEORGE FONTANA
 17985 SAN BERNARDINO AVE.
 FONTANA, CA 92335
 APN: 252-041-48, 49

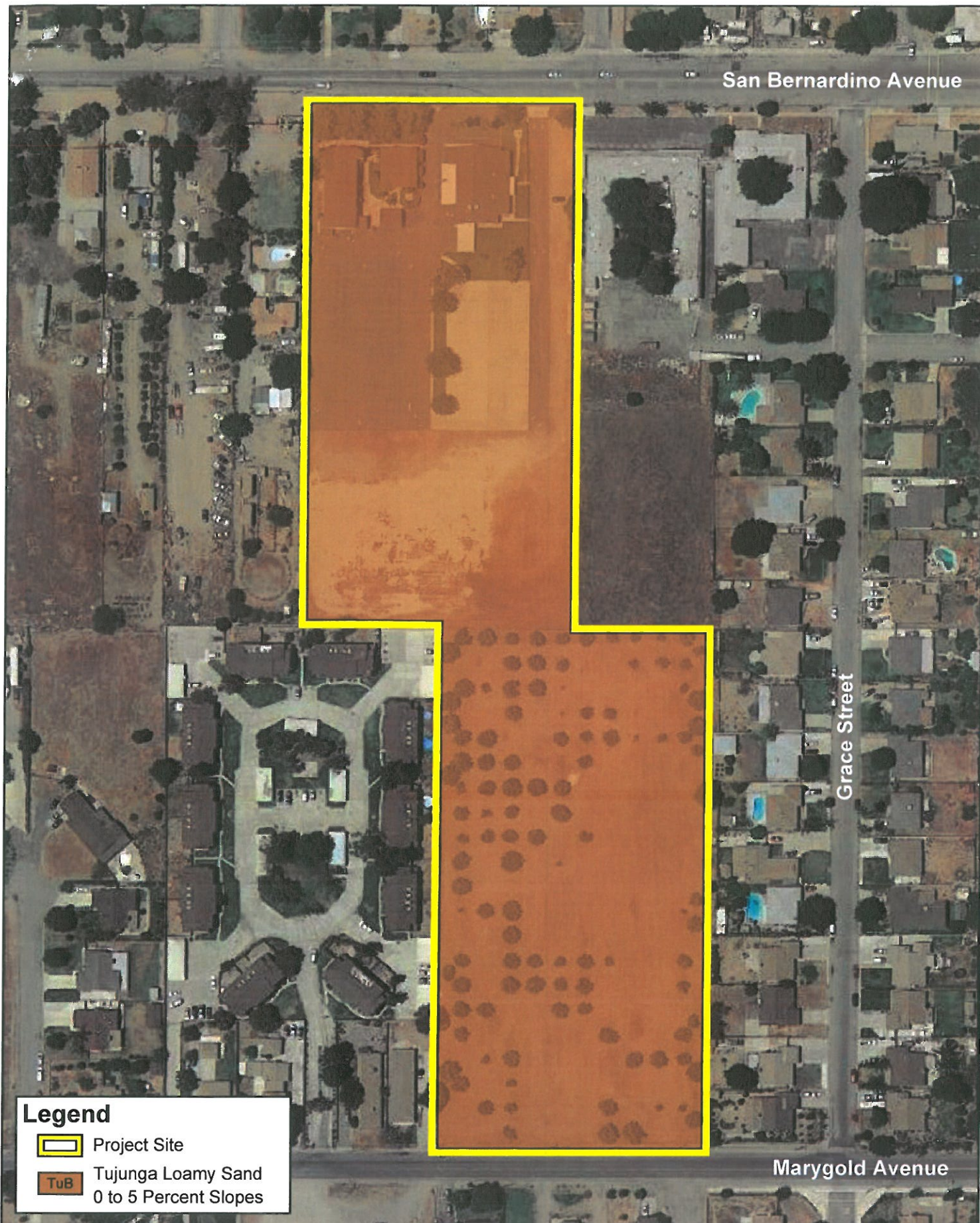
| NO. | DESCRIPTION | BY | APPROVED | DATE |
|-----|-------------|----|----------|------|
| | | | | |
| | | | | |
| | | | | |

PREPARED FOR: DIOCESE OF SAN BERNARDINO
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 SCALE: 1" = 50'
 SHEET: 1 OF 1
 C1

JOSEPH E. BONADIMIAN & ASSOCIATES INC.
 CONSULTING ENGINEERS
 224 N. ARROYO AVENUE, SAN BERNARDINO, CA 92405-1013
 PHONE: (951) 885-3808 - FAX: (951) 281-1721



St. George Church Expansion DSF Habitat Suitability Assessment
Depiction of Proposed Project
 Exhibit 4



St. George Church Expansion DSF Habitat Suitability Assessment

Soil Map