

# SKYPARK AT SANTA'S VILLAGE

UNINCORPORATED COMMUNITY OF SKYFOREST, SAN BERNARDINO  
COUNTY, CALIFORNIA

## Delineation of State and Federal Jurisdictional Waters Report

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The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a jurisdictional “waters of the United States” (including wetlands) and “waters of the State” determination for the above-referenced project.



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Travis J. McGill  
Biologist  
Natural Resources



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Thomas J. McGill, Ph.D.  
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January 2016

# Executive Summary

Michael Baker International (Michael Baker) has prepared this Delineation of State and Federal Jurisdictional Waters for the Skypark at Santa’s Village project (Project) located in the Unincorporated Community of Skyforest, San Bernardino County, California. The delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife Inland Deserts Region (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act, the California Porter-Cologne Water Quality Control Act, and Section 1600 *et. seq.* of the California Fish and Game Code.<sup>1</sup>

Four (4) drainage features were observed within the boundaries of the project site; Hooks Creek, and three (3) unnamed ephemeral drainage features (Drainages 1-3). Hooks Creek and Drainage 1 are tributary to Deep Creek (Relatively Permanent Water) and ultimately the Mojave River (Traditional Navigable Water). Whereas, Drainage 2 and 3 flow into City Creek which is tributary to the Santa Ana River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). As a result, Hooks Creek and Drainages 1-3 all qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and CDFW. Refer to Table ES-1 for a summary of jurisdictional areas and anticipated project impacts.

**Table ES- 1: Jurisdictional Area and Impact Summary**

Jurisdictional Feature	Corps (NRCS)/Regional Board Non-Wetland Waters				CDFW Streambed			
	On-Site Jurisdiction		Jurisdictional Impact		On-Site Jurisdiction		Jurisdictional Impact	
	Acres	Feet	Permanent	Temporary	Acres	Feet	Permanent	Temporary
Hook’s Creek	1.33	3,114	0.0	0.18	2.64	3,114	0.05	0.35
Drainage 1 (D-1)	0.06	756	0.0	0.0	0.06	756	0.0	0.0
Drainage 2 (D-2)	0.06	786	0.0	0.0	0.06	786	0.0	0.0
Drainage 3 (D-3)	0.04	614	0.0	0.0	0.04	614	0.0	0.0
<b>TOTALS</b>	<b>1.49</b>	<b>5,270</b>	<b>0.0</b>	<b>0.18</b>	<b>2.8</b>	<b>5,270</b>	<b>0.05</b>	<b>0.35</b>

<sup>1</sup> The project site was surveyed on November 20, 2014 and September 23, 2015 pursuant to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008); the Practices for Documenting Jurisdiction under Section 404 of the CWA Regional Guidance Letter (Corps 2007); and Minimum Standards for Acceptance of Preliminary Wetland Delineations (Corps 2001); the MESA Field Guide (CDFW 2014); and a Review of Stream Processes and Forms in Dryland Watersheds (CDFW 2010).

No impacts to Hooks Creek or Drainages 1-3 are anticipated from installation of the proposed trails, except within the meadow area. Construction of proposed new trails outside of the meadow, but within the project site, will avoid impacts to jurisdictional waters. The trails will generally be left in a “rough” state, unpaved and with brush cleared and overhanging vegetation trimmed. No dredging or fill material will be placed in any of the jurisdictional features outside of the meadow area on-site. Any proposed trail crossings (fallen logs) adjacent to or over the jurisdictional features will occur outside of the jurisdictional limits of Corps, Regional Board, and CDFW.

Based on a review of site conditions and preliminary design plans, the project applicant must obtain the following regulatory approvals for any impacts to Hooks Creek associated with the meadow rehabilitation project: Regional Board CWA Section 401 Water Quality Certification and CDFW Section 1602 Streambed Alteration Agreement (SAA). In agreement with between Skypark and the NRCS, the proposed project includes the restoration of Henck’s Meadow (restoration and improvement of the upstream portions of Hook Creek). Since the NRCS is restoring the meadow, a CWA Section 404 permit from the Corps will not be required for this project.

Refer to Sections 1-7 for a detailed analysis of site conditions and recommendations.

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**LIST OF ACRONYMS**

CDFW	California Department of Fish and Wildlife
Corps	United States Army Corps of Engineers
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	Facultative Vegetation
FACU	Facultative Upland Vegetation
FACW	Facultative Wetland Vegetation
Michael Baker	Michael Baker International
NRCS	Natural Resources Conservation Service
OBL	Obligate Wetland Vegetation
OHWM	Ordinary High Water Mark
Regional Board	Regional Water Quality Control Board
RPW	Relatively Permanent Waters
Skypark	Skypark at Santa's Village, LLC
SWANCC	Solid Waste Agency of Northern Cook County
TNW	Traditional Navigable Water
UPL	Obligate Upland Vegetation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

# Section 1 Introduction and Purpose

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This delineation has been prepared for the Skypark at Santa's Village, LLC (Skypark), in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Lahontan Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Section 1600 *et seq.* of the Fish and Game Code. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on November 20, 2014 and September 22, 2015.

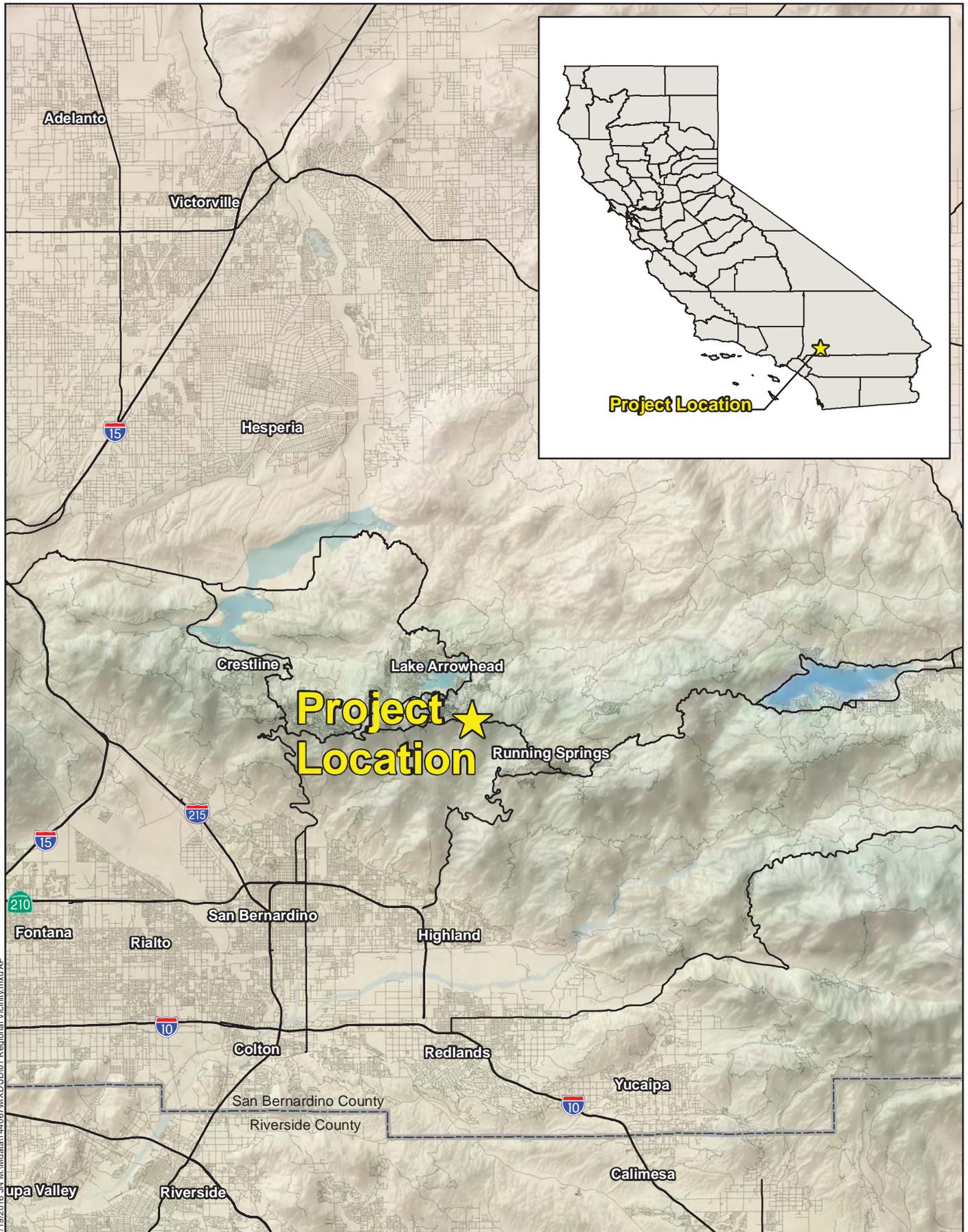
This delineation explains the methodology undertaken by Michael Baker to define the jurisdictional authority of the regulatory agencies, and documents the findings made by Michael Baker. This report presents our best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

## 1.1 PROJECT LOCATION

The project site is located north of the City of Highland and south of Lake Arrowhead in the unincorporated community of Skyforest, San Bernardino County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the Harrison Mountain quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 26 of Township 2 north, Range 3 west (Exhibit 2, *Site Vicinity*). Specifically, the project site is located north and south of State Route 18 (SR-18) and west of Sycamore Drive in the San Bernardino National Forest (Exhibit 3, *Project Site*).

## 1.2 PROJECT DESCRIPTION

The proposed project includes a General Plan Amendment to change the Official Land Use District from Lake Arrowhead/Special Development- Residential (LA/SD-RES) & Lake Arrowhead/Single Residential-14,000 Square Foot Minimum lot size (LA/RS-14M) to Lake Arrowhead/Rural Commercial (LA/CR) on 152.92 acres. The proposed project requires a Conditional Use Permit to re-establish an Outdoor Commercial Entertainment Center which includes an Amusement Park, Campground, Meadow Rehabilitation, Restaurants, Bar, Wedding & Reception Facility, Retail, Trails, Recreational Activities and other Accessory Uses on 152.92 acres.

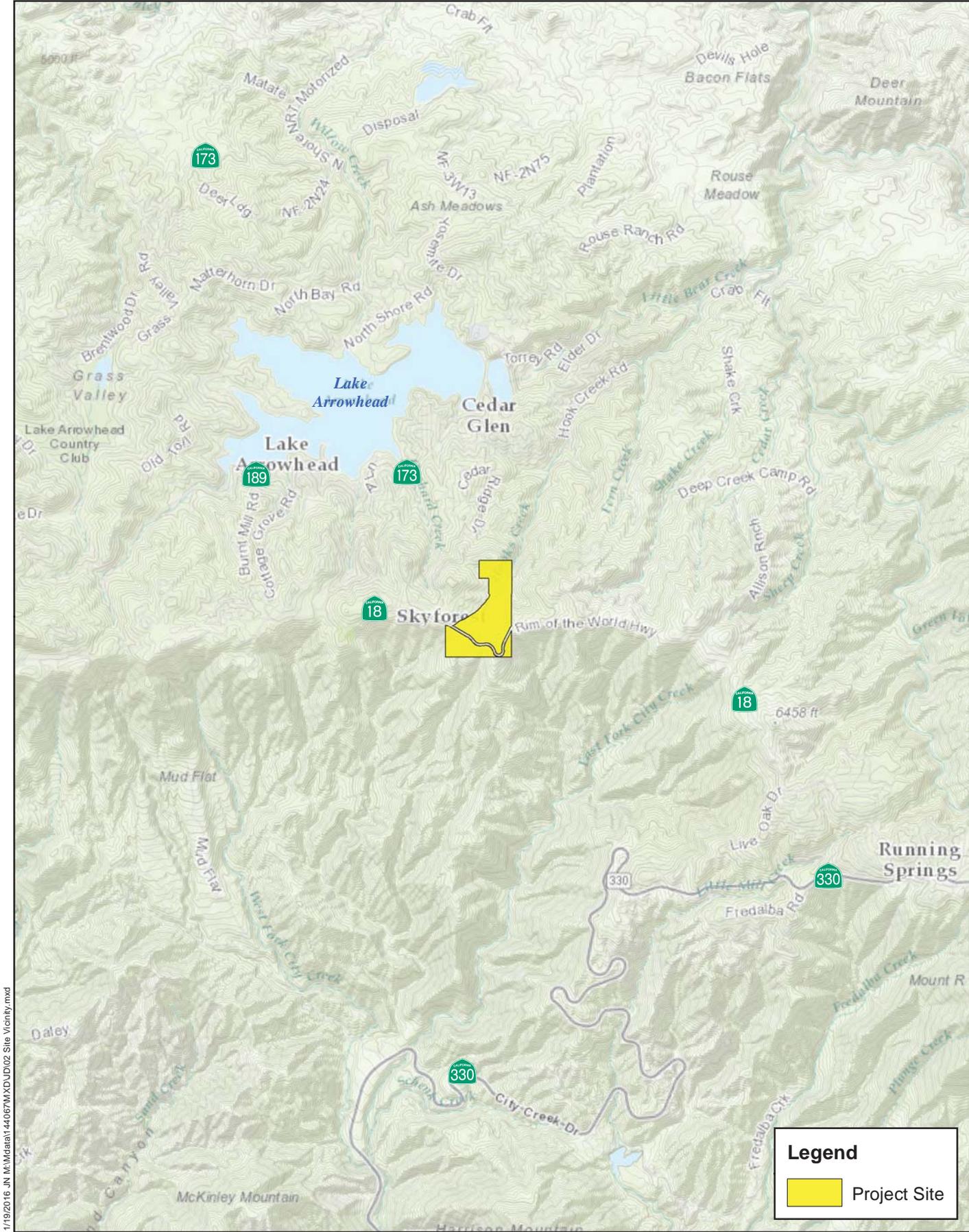


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 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS  
**Regional Vicinity**



Source: ESRI Relief Map, National Highway Planning Network



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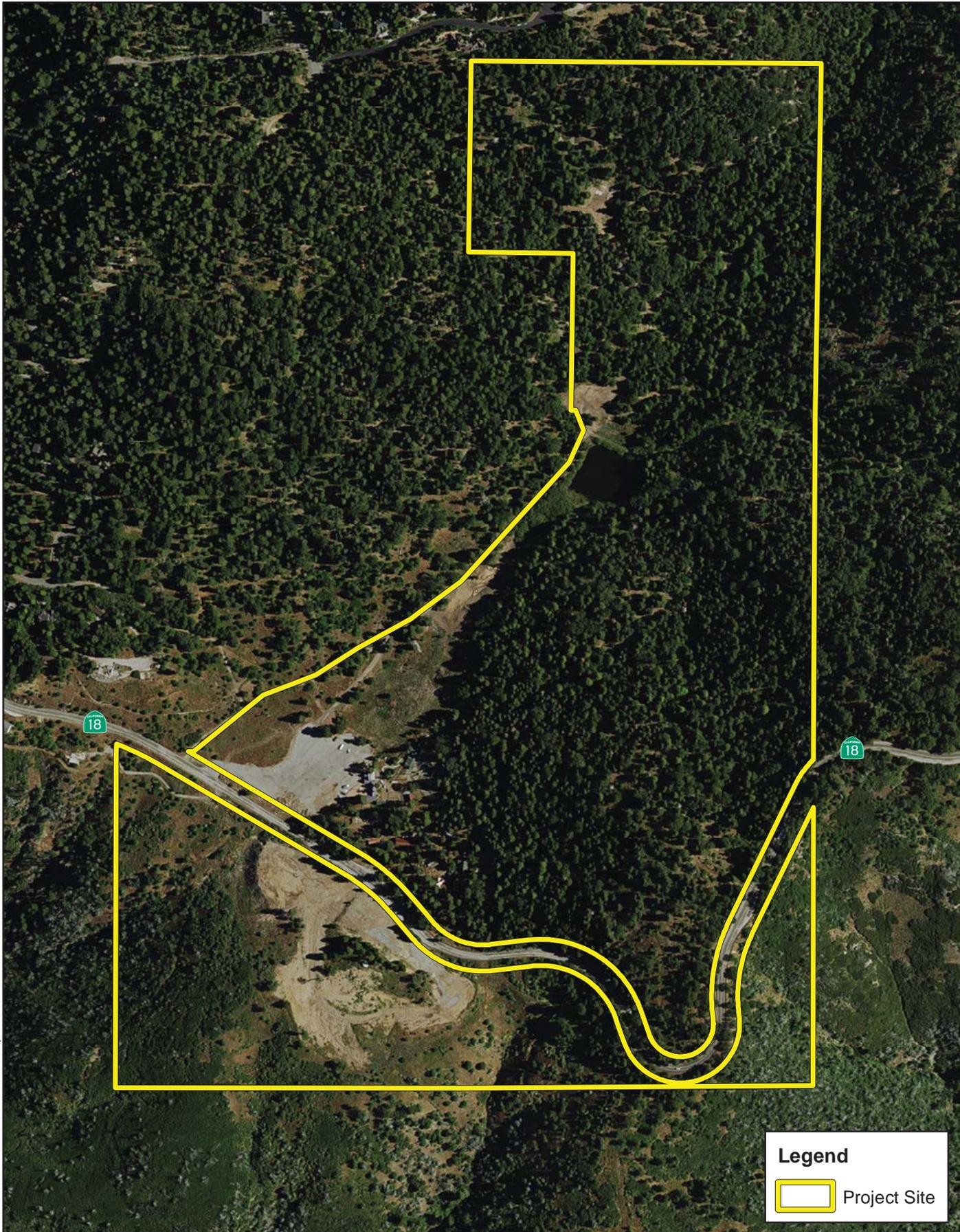
SKYPARK AT SANTA'S VILLAGE  
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Site Vicinity



Source: San Bernardino County, USGS, ESRI World Topographic Map

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**Legend**

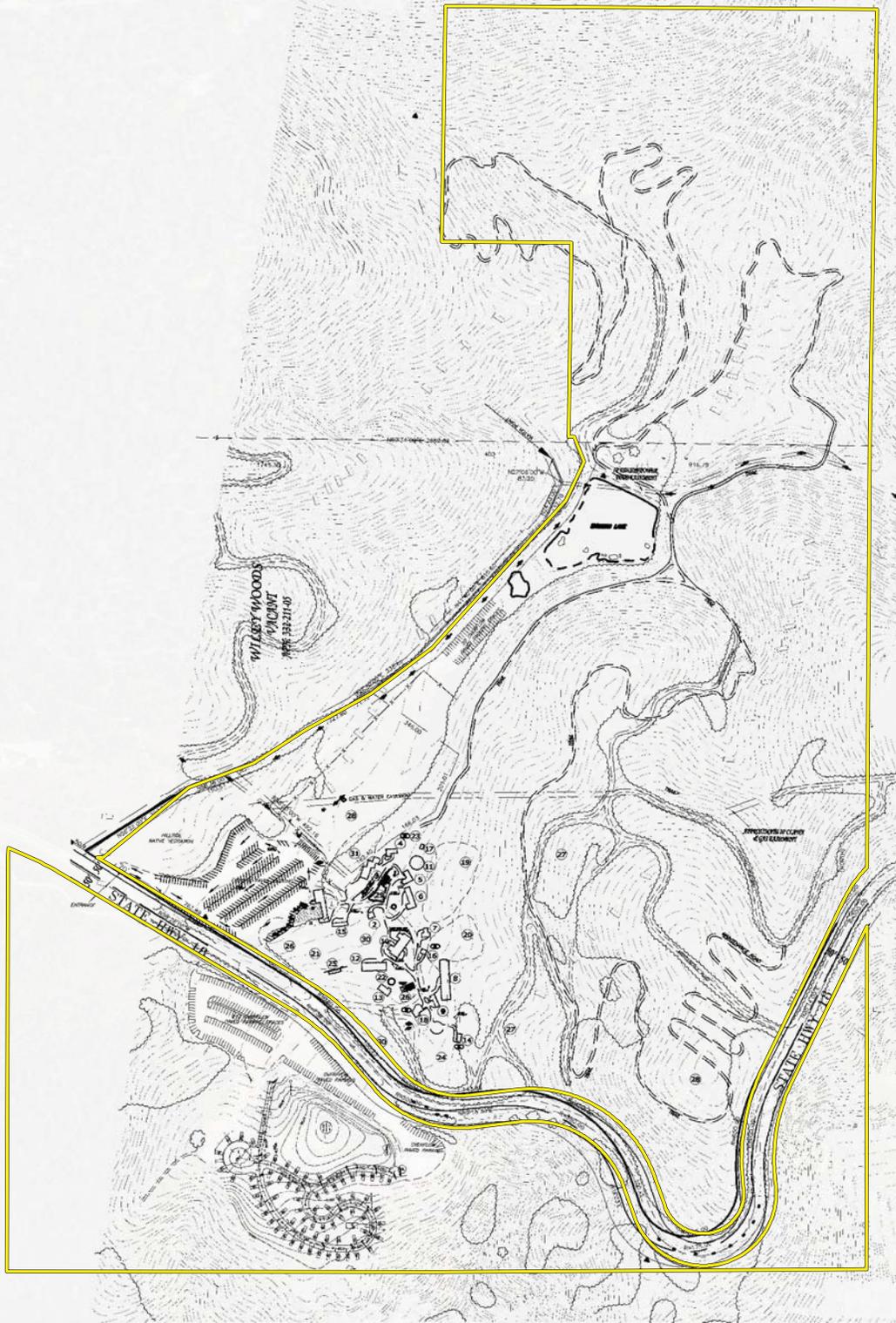
 Project Site



The proposed project includes the redevelopment and re-use of the existing Santa's Village attraction. The proposed project also includes the development of a mixed-use adventure park that would include a variety of activities and services. Nineteen original buildings exist on the project site totaling 23,389 square feet. It is intended that the exteriors of these original buildings would not be significantly altered. Rather, the exterior of the buildings will be rehabilitated (re-painted, repaired). The interiors will be redeveloped in order to fulfill a variety of uses. All existing buildings will remain. No buildings are proposed to be demolished. The existing buildings that are being rehabilitated are identified on Exhibit 4, *Depiction of Proposed Project*, and are listed in Table 1 below.

Improvements to Santa's Village attraction will also include the repair of hardscaping and landscaping. The asphalt pavement between the buildings will be replaced with concrete and rock and other hardscaping to improve on site drainage. The attraction is located within and includes native forest trees and native shrubs. The proposed improvements include only minimal landscaping which may include native and drought tolerant shrubs and annuals/flower beds commonly used in landscaping. The site currently has minimal landscaping and will continue to have minimal landscaping as the site does not have a formal irrigation system. Existing forest trees are supported by natural rainfall and snow. Existing understory landscaping is supported by natural rainfall and snow and is only supplemented by hand watering.

1/19/2016 JN1 M:\data\144067M\XDUJ04 Depiction of Proposed Project.mxd



SKYPARK AT SANTA'S VILLAGE  
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS  
**Depiction of Proposed Project**

**Table 1: Existing Buildings to be Rehabilitated**

<b>Building</b>	<b>Identification # on Exhibit</b>	<b>Square Footage</b>
Welcome House & Gift Shop	1	Retail 2,122 Office 1,531
Santa's House	2	288
Billie's Patio Restaurant	3	1,856
Pedal Pub/Tavern	4	688
K's Candy Shop	5	905
The Gathering House	6	1,328
Coffee & Tea House	7	756
SkyPark Activity Center and Security Office	8	Activity Center 2,148 Security Office 1,227
Stone's Throw Gazebo	9	756
Sky Trading Company	10	2,952
Sky Pavilion	11	1,723
Reindeer Barn/ Retail & Crafts	12	1,950
Bouldering Room	13	720
Men's & Women's Restroom	14	750
Men's & Women's Restroom	15	272
Pebble Mine	16	192
Chapel	17	272
Good Witch's Bakery/Restaurant	18	990
Maintenance Building	25	405
<b>Total</b>		<b>23,389</b>

Additional recreational and entertainment amenities will be constructed as a part of the proposed project and are outlined in Table 2 below.

**Table 2: New or Expanded Recreational and Entertainment Amenities**

<b>Amenity</b>	<b>Identification # on Exhibit</b>
Reception Site	19
Wedding Ceremony Site	20
Skating Rink	21
Bouldering & Climbing Wall	22
Spider Jump/Amusement	23
Playground 777	24
Maintenance Building	25
Monorail	26
Aerial Adventure	27
Trail System	28
Water Features – Silver Slipper Pond & Lady Bug Pond	29
Treehouse Aerial Adventure/Playscape	30
Coaster Bike Play Area	31

The proposed Project consists of the following primary components:

#### Amusement Park Zone

The Amusement Park Zone is an area within the property boundary where more concentrated amusement park use will occur. The zone is identified as the area of historic commercial use, previously impacted by the original development of Santa's Village. In order for SkyPark at Santa's Village to retain repeat visitors, to remain competitive in the Adventure and Amusement Park Industry, and to continue to promote tourism in the mountain community, replacement of attractions and/or amenities with new attractions and amenities will be necessary and will occur in the Amusement Park Zone over time. The types of new attractions and amenities in the Amusement Park Zone that are predicted at this time (but not limited to) could include implementation of the original car ride, playground amenities, climbing walls, additional zip lines, snow play activities, and small support structures, such as storage sheds or concessions or other attractions that its primary function is entertainment or recreation. The attractions or features will be similar to the proposed project components outlined below and will not require extensive grading or vegetation clearing or result in a greater generation of noise or light. These future attractions will not exceed 40 feet in height, using the existing 40-foot monorail as the baseline of existing improvements in the Amusement Park Zone. The existing 40-foot monorail does not extend higher than existing old growth forest. This height restriction will ensure the visual setting of the forest will be retained.

## Trails

Existing and proposed trails are described below and are depicted on Exhibit 5, *Existing and Proposed Trails*.

### *Fantasy Forest Trail*

The Fantasy Forest Trail is an existing trail that was used as a nature trail during the parks original years of operation. The trail cuts across the back of the park and is depicted as an existing hiking trail on the trail map. It is within the boundary of the Amusement Park Zone as it will be open during the operating hours of the park and lit as a nighttime forest walk. It would be the only trail available after sun down and is very limited in its proximity to the park and distance. The trail distance is approximately 1/4 mile and is an interactive lighting attraction at night.

Improvement to the Fantasy Forest Trail includes clearing as needed for a width of 36-48-inch wide and sections of up to 100 feet in length will be elevated on a plank walkway. Un-elevated segments of the trail will be surfaced with decomposed granite.

### *Multi-Use Trail*

This is open for bicycle, wheel chair, pedal assist, and pedestrian traffic. This trail is specifically designed to accommodate special needs. It does not include motorized vehicles with the exception of electric assist vehicles for special needs. Construction techniques may include light weight track vehicles which include small backhoe and skid steer. It will be 5 feet to 8 feet maximum width, and surfaced with decomposed granite.

### *Hiking Trails*

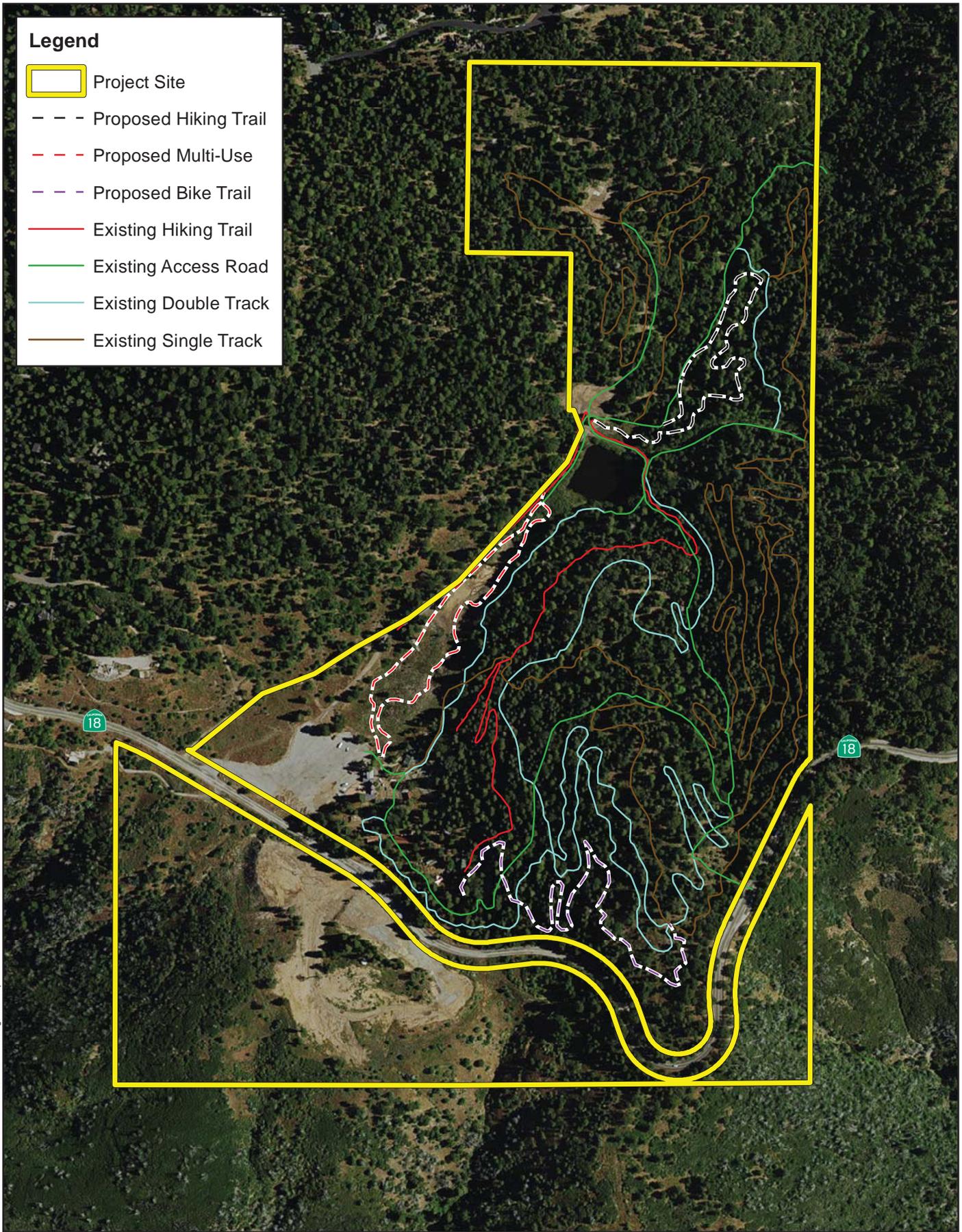
This is a special-use trail designed for hiking only. It is a single track trail not to exceed 36 inches in width. It will be used primarily for recreation; however, signage, fencing, and other forms of structures and materials will be used for educational purposes. The surface is the natural forest floor with the possible use of elevated walkways to prohibit soil disturbance in very wet conditions. Construction of these trails will be by hand tools and will McLeods, shovels, and rakes.

### *Mountain Bike Trail*

This is a special-use trail for bicycles only. This trail is a single track trail designed for "one way" directional use. No double, side-by-side axle vehicles are allowed. Construction of these trails will be by hand tools and will include McLeods, shovels, and rakes. Special features are implemented, including log crossings, water bars for slope erosion, safety rail, and riding features such as protective berms and wood features.

**Legend**

-  Project Site
-  Proposed Hiking Trail
-  Proposed Multi-Use
-  Proposed Bike Trail
-  Existing Hiking Trail
-  Existing Access Road
-  Existing Double Track
-  Existing Single Track



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**Existing and Proposed Trails**



### *Access Roads*

This is a multi-use road for the continued purpose of accessing utility easements throughout the park. The road is a double wheel, side-by-side, 4-wheel drive roadway accessible to park guest, utility companies, and emergency vehicles. Most roads are dirt with the exception of some existing paved surfaces in the park and within property boundaries.

### *Existing Double Track*

This is capable of holding a 4-wheel vehicle. Historically used for lumbering, emergency access and recreation. Existing double track trails have signage depicting their categorical use, many being multi-use trails including hiking, bicycle and emergency access use.

### *Existing Single Track*

This is a special-use trail for bicycle use only. The trail system is "one way" directional traffic only. The width of the trail is closer to 24-inch and is constructed with hand tools to include McLeods, shovels, and rakes.

All of the trails will be maintained by hand tools. Techniques established by the U.S. Department of Agriculture, Forest Service (USFS) and the International Mountain Biking Association are implemented to reduce impacts to soils erosion, noise, off trail access and responsible forest practices.

### Wilderness Adventure/Zipline and Aerial Park

This feature would include ziplines, rope courses, adventure swings, climbing walls, balance features, log crossings, and exploration trails. The Forest Zipline and tree house is estimated to be an average of 30 feet in height and approximately 1,200 feet in length; however the final designs would determine ultimate measurements. The tree house would have a zipline that is proposed to be approximately 16 feet high. A small children's zipline is proposed that would be approximately 8 feet high and 30 feet long. The tree house would be an engineered structure built among the trees. The final tree house platforms would either be constructed using a tree as the base or a standalone structure. Final design would be dependent on County approval.

### Forest Playground

This feature would include bridges and swings. The playground would also provide seating, natural playscapes, and sensory challenges such as log walks, stepping stones, and exploration.

### Skybike Monorail

The existing, electric, three-phase bumblebee ride would be converted to a pedal human powered operated bike monorail that would traverse the southern portion of the park. Existing infrastructure will be used. The bumblebee cars will be replaced with pedal operated bikes. The attraction will promote outdoor recreation and be a model for a new trend towards environmentally friendly attractions.

### Fly Fishing Lake and Stream

Fly-fishing clinics, guides and lessons, and fly-fishing instruction would be offered at the site's improved and existing reservoir/pond system. The on-site ponds and stream would be stocked with fish per the California Department of Fish & Wildlife as permitted. Historically the pond has been stocked with trout. Trout fishing would be provided for catch and keep, or release as the guest wishes.

### Hiking and Tours

Eco-tours, education, and wildlife viewing will be offered. The project will promote wildlife and habitat education. Job skills will be introduced through "Pathways," an ongoing Regional Occupational Program through local school districts. Ecotourism involving bird watching blinds, trails, and assisted programs will be implemented to educate the public and students on the importance of wildlife preservation.

### Santa's Village/Winter Attractions

Winter attractions at Santa's Village will operate during the months of November and December or as weather permits. Winter attractions will include an outdoor ice rink, snowshoeing, sledding, and snow play. It is anticipated that these attractions will attract the largest number of visitors for the year.

### Retail

A variety of related retail shops will be developed throughout the property. These uses will include gift shops, equipment rentals/purchases, and a variety of other retail uses that will be located within the existing buildings.

### Restaurants

A full service restaurant, snack bar, pub, and bakery/candy store are proposed within the existing buildings.

### Wedding Services

A wedding chapel, outdoor reception area, and full service wedding event center (including

bridal room) will be developed within the existing buildings.

### Campground Site

A campground is proposed to be located south of SR-18. Minor grading will be required to improve the existing dirt road to provide access to and create 70 RV sites and approximately 35 tent campsites within the 20-acre campground. A restroom will be constructed on the campground site and will utilize a septic system that will be sized per restroom requirements and will have a tank with a leach field in the same design standards as the existing septic systems in the Santa's Village site. The chambers that separate the solids are pumped out periodically as needed. The proposed campground restroom building will be approximately 1,450-1,500 square feet. It will include 2 laundry units, 2 urinals, 8 toilets, 6 showers (4 standard and 2 handicap), and 8 wash basins/sinks.

### Parking and Circulation

The existing paved parking lots, on the north and south side of SR-18, will continue to be used. The proposed project does not require expansion of parking lots. Parking lots will be resurfaced and re-striped for parking lots and circulation direction. There are approximately 550 spaces within the existing parking areas.

### Utilities

The northern portion of the project site would utilize existing utilities already located on-site. Currently, there are no utilities located on the southern site. An existing water and gas line on the northern portion of the site will be extended to provide utility for the southern site for the restroom and fire flow at the campground area.

### Operating Hours

Peak season for the proposed project is anticipated to be November and December (approximately 2,000 visitors per day). Low season is anticipated to be during spring and early fall. Summer is anticipated to have an average of 1,000 visitors per day. Operating hours are proposed to be 8AM to 10PM. The project is proposed to be fully operational year-round, with no planned closures.

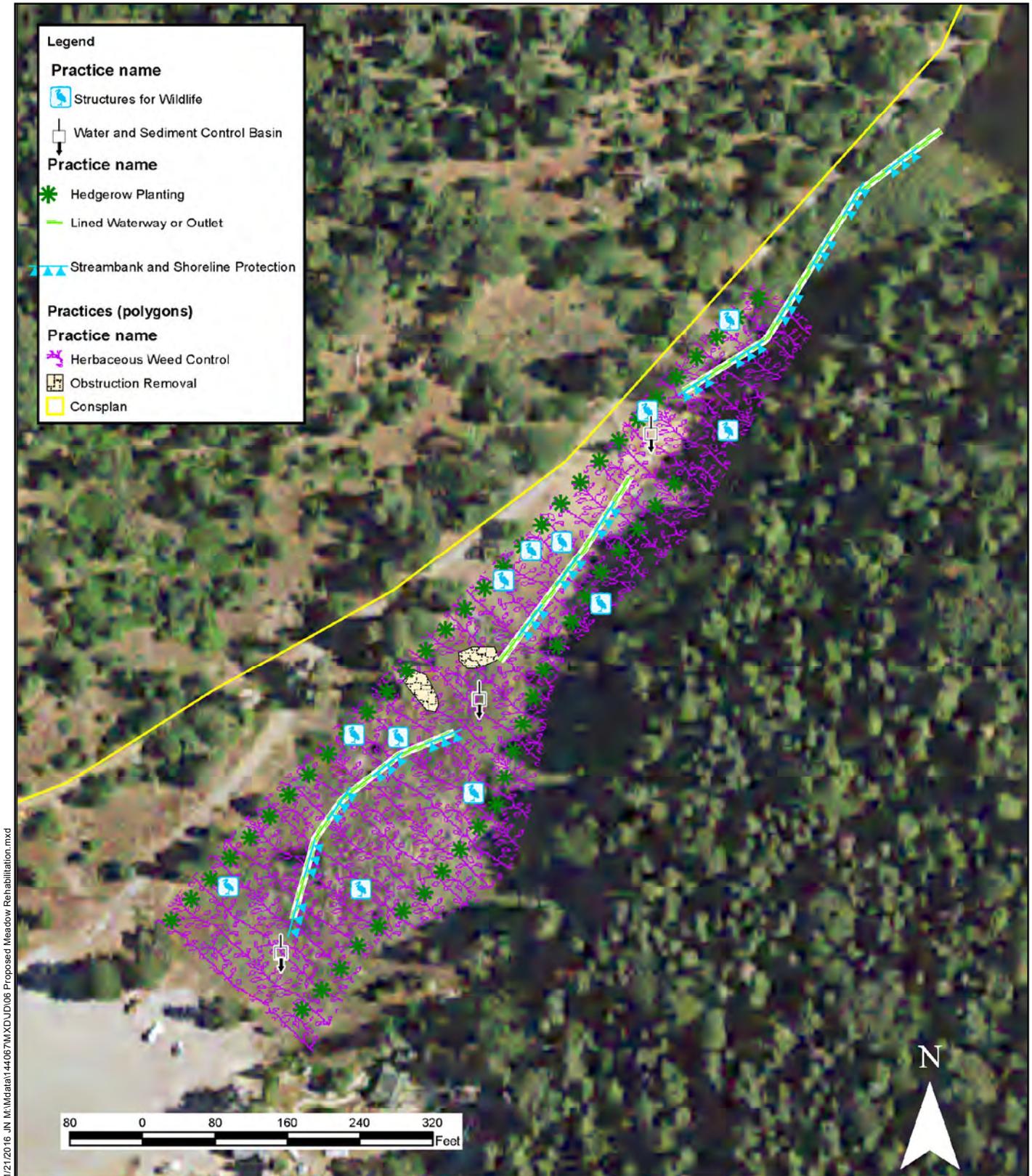
### Offsite Improvements

Offsite improvements would be included with the proposed project and would involve new dedicated left turn lanes and a signalized intersection with crosswalks on SR-18 at the revised entrance to SkyPark. SR-18 would be widened to accommodate two left-turn lanes into the driveways of the campground site and the Santa's Village site as vehicles approach from both directions of SR-18. Trees would be trimmed to provide improved vision if the trees surrounding the driveways conflict with vehicles safely exiting from the

proposed project driveways.

### Meadow Rehabilitation

The project also includes the removal of waste from the site as well as the restoration and improvement of the upstream portions of Hook Creek (Exhibit 6, Conservation Plan (Conceptual Meadow Rehabilitation)). Previously, the project site was used as a storage site for wood material infested by bark beetles, which left the site with debris, woodchips, firewood, bark, and trash. The project would include restoring the watercourse that would allow for expansion and preservation of the wetland by a water aeration system controlled daily by the use of a solar array and water pumps. Ultimately, improvements to the health, beauty, and natural resources of the project area will be guided by the NRCS and will result in a balanced ecosystem that will be created for education, recreation, and wildlife.



SKYPARK AT SANTA'S VILLAGE PROJECT  
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**Proposed Meadow Rehabilitation**

## Section 2      Regulations

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There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under the Sections 1600 *et seq.* of the Fish and Game Code.

### 2.1      U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b) and within Appendix B of this report.

### 2.2      NATURAL RESOURCES CONSERVATION SERVICE

The Highly Erodible Land Conservation and Wetland Conservation Compliance provisions (Swampbuster) were introduced in the 1985 Farm Bill, with amendments in 1990, 1996 and 2002. The purpose of the provisions is to remove certain incentives to produce agricultural commodities on converted wetlands or highly erodible land, unless the highly erodible land is protected from excessive soil erosion.

In order to determine compliance with the swampbuster provisions, the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) will determine if a producer's land has wetlands that are subject to the provisions. The agency maintains a list of the plants and combinations of soils and plants found in wetlands and uses these technical tools, along with the hydrology of the area, to conduct determinations. These determinations stay in effect as long as the land is used for agricultural purposes or until the producer requests a review.

Swampbuster helps preserve the environmental functions of wetlands, such as flood control, sediment control, groundwater recharge, water quality, wildlife habitat, recreation, and esthetics.

Grant funding is available through the Wetlands Reserve Enhancement Program administered by the USDA NRCS. The purpose of the program is to restore and protect wetland habitat through cooperative agreements with partner organizations. Nongovernmental organizations, American Indian tribes, and state and local governments are eligible to apply for grants on a competitive basis. The Wetlands Reserve Program provides financial assistance to landowners for restoring wetlands converted to agricultural production back to wetland habitat. Landowners can also sell long-term or permanent development rights to the restored wetlands to the USDA. Wetlands provide valuable wildlife habitat and help improve water quality among other conservation benefits.

### **2.3 REGIONAL WATER QUALITY CONTROL BOARD**

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste Agency of Northern Cook County v. United States Corps of Engineers*<sup>2</sup> and *Rapanos v. United States*<sup>3</sup> (Rapanos) court cases with respect to the State's authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

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<sup>2</sup> *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001)

<sup>3</sup> *Rapanos v. United States*, 547 U.S. 715 (2006)

## 2.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Section 1600 *et seq.* of the Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators.

## Section 3 Methodology

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The analysis presented in this report is supported by field surveys and verification of site conditions conducted on November 20, 2014 and September 23, 2015. Michael Baker biologists Travis J. McGill, Ryan S. Winkleman, and Thomas C. Millington conducted a site investigation to determine the jurisdictional limits of “waters of the United States” and “waters of the State” (including potential wetlands and vernal pools), located within the boundaries of the project site. While in the field, jurisdictional features were recorded on a base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. A Garmin Map62 Global Positioning System was used to record and identify specific widths/lengths of ordinary high water mark (OHWM) indicators and the locations of photograph points, soil pits, and other pertinent jurisdictional features, if present. This data were then transferred as a .shp file and added to the Project's jurisdictional exhibit. The jurisdictional exhibit was prepared using ESRI ArcInfo Version 10 software.

### 3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps' jurisdiction in non-tidal waters extend to the OHWM, which is defined as “ . . . *that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*”<sup>4</sup> Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this project location, Corps jurisdictional wetlands are

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<sup>4</sup> CWA regulations 33 CFR §328.3(e).

delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2* (Corps 2008).

## **3.2 WATERS OF THE STATE**

### **3.2.1 REGIONAL WATER QUALITY CONTROL BOARD**

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of an OHWM and utilizing the three parameter approach for wetlands.

### **3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

Section 1600 *et seq.* of the Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. Riversidean alluvial fan sage scrub, riparian, riverine), including wetlands, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (CDFW 2014) and *A Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

## **Section 4      Literature Review**

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Michael Baker conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during Michael Baker’s literature review is provided below and in Appendix C. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

### **4.1      WATERSHED REVIEW**

#### **4.1.1      MOJAVE WATERSHED**

Hooks Creek and Drainage 1 are located within the Mojave River Watershed (Hydrologic Unit Code 18090208) which encompasses approximately 4,500 square miles and is located entirely within the County of San Bernardino. The watershed is divided into five sub-basins: (1) Headwaters – tributaries above the Mojave Forks Dam; (2) Upper Basin – Mojave Forks Dam to the Lower Narrows at Victorville; (3) Middle Basin – Lower Narrows to the Waterman Fault at Barstow; (4) Lower Basin – Waterman Fault to Afton Canyon; and (5) Tailwater – Afton Canyon to Silver Dry Lake. The primary surface hydrologic feature of the watershed is the Mojave River which originates at its headwaters in the San Bernardino Mountains and flows north for approximately 120 miles until it terminates at Silver Dry Lake near the community of Baker. The Mojave River is typically dry downstream of the Mojave Forks Dam with water quickly percolating into the porous sands of the riverbed. As a result, groundwater is the primary source of water supply.

#### **4.1.2      SANTA ANA RIVER WATERSHED**

Drainages 2 and 3 are located within the Santa Ana River Watershed (HUC 18070203). The Santa Ana River watershed is located in southern California, south and east of the city of Los Angeles. The watershed includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, and a small portion of Los Angeles County. The watershed is bounded on the south by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north/west by the Mojave and San Gabriel watersheds. The watershed is approximately 2,800 square miles in area.

The Santa Ana River watershed is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of Southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the watershed occur in the San Bernardino Mountains (San Gorgonio Peak – 11,485 feet in elevation), eastern San Gabriel Mountains (Transverse Ranges Province; Mt. Baldy – 10,080 feet in elevation), and San Jacinto Mountains

(Peninsular Ranges Province, Mt. San Jacinto – 10,804 feet in elevation). Further downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the river flows into the Coastal Plain (in Orange County) and into the Pacific Ocean. Primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

This watershed is in an arid region, and therefore has little natural perennial surface water. Surface waters start in the upper erosion zone of the watershed, primarily in the San Bernardino and San Gabriel Mountains. This upper zone has the highest gradient and soils/geology that do not allow large quantities of percolation of surface water into the ground. Flows consist mainly of snowmelt and storm runoff from the lightly developed San Bernardino National Forest; this water is generally high quality at this point. In this zone, the Santa Ana River is generally confined in its lateral movement, contained by the slope in the mountainous regions. In the upper valley, flows from the Seven Oaks dam to the city of San Bernardino consist mainly of storm flows, flows from the San Timoteo Creek, and groundwater that is rising due to local geological conditions. From the City of San Bernardino to the City of Riverside, the river flows perennially, and it includes treated discharges from wastewater treatment plants. From the City of Riverside to the recharge basins below Imperial Highway, river flow consists of highly treated wastewater discharges, urban runoff, irrigation runoff, and groundwater forced to the surface by shallow/rising bedrock. Near Corona, the river cuts through the Santa Ana Mountains and the Puente-Chino Hills. The river then flows into the Orange County Coastal Plain; the channel lessens and the gradient decreases. In a natural environment, a river in this area would have a much wider channel, increased meandering, and increased sediment build-up. However, much of the Santa Ana River channel in this area has been contained in concrete-lined channels, which modifies the flow regime and sediment deposition environment. The only major tributary of the Santa Ana River in Orange County is Santiago Creek, which joins the river in the City of Santa Ana. There is only one natural freshwater lake of any size – Lake Elsinore. A variety of water storage reservoirs (Lake Perris, Lake Mathews, and Big Bear Lake) and Flood Control areas (Prado Dam area and Seven Oaks Dam area) have been created to hold surface water.

## **4.2 LOCAL CLIMATE**

San Bernardino County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained from nearby weather stations indicates the annual precipitation averages 16.4 inches per year. Almost all of the precipitation in the form of rain occurs in the months between October and April, with hardly any occurring between the months of May and September. The wettest month is February,

with a monthly average total precipitation of 3.7 inches. The average maximum and minimum temperatures for the region are 80.1 and 51.2 degrees Fahrenheit (°F) respectively with July and August (monthly average 96°F) being the hottest months and December (monthly average 41°F) being the coldest.

### **4.3 USGS TOPOGRAPHIC QUADRANGLE**

The project site is located within the Harrison Mountain quadrangle of the USGS 7.5-minute topographic map series in Sections 26 of Township 2 north, Range 3 west. Surface elevations within the project site ranges from approximately 5,660 to 5,730 feet above mean sea level and generally slopes to the northeast. The southern portion of the project site, south of SR 18, abuts the steep south-facing mountain face of the San Bernardino Mountains. According to the topographic map, the project site is comprised of multiple structure and vacant/undeveloped land within the San Bernardino National Forest. Hooks Creek is depicted as a blue-line stream and generally runs south to north. Two (2) ponds and Hencks Meadow is located on the central portion of the project site. Additionally, two (2) ephemeral drainage features are depicted within the project site, south of SR 18 (Drainage 2 and Drainage 3).

### **4.4 AERIAL PHOTOGRAPHS**

Prior to the field visit, Michael Baker reviewed current and historical aerial photographs (1994-2015) of the project site as available from Google Earth Pro Imaging (Version 7.1.2.2041). Aerial photographs can be useful during the delineation process, as the photographs often indicate the presence of drainage features, ponded areas, and variations in plant communities, if any.

1994 – 2015: According to the 1996 through 2015 aerial photographs, the project site appears to consist of the Santa's Village theme park and vacant/undeveloped land within the San Bernardino National Forest. Surrounding land uses consist of single-family residential lots, roadways, and vacant/undeveloped land.

### **4.5 SOIL SURVEY**

Soils within and adjacent to the project site were researched prior to the field visit using the U.S. Department of Agriculture (USDA), Soil Conservation Service, the NRCS, and Custom Soil Resource Report for the San Bernardino National Forest Area. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. Data from soil surveys is used to create soil maps and interpretations that were originally used to provide technical assistance to farmers and ranchers; to guide other decisions about soil selection, use, and management; and to assist in planning, research, and

ultimately disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (e.g. soil characteristics, drainage, and color). According to the Custom Soil Resource Report, the project site is underlain by the following soil units: Morical-Wind River Families Complex (15 to 30 percent slopes); Morical-Wind River Families Complex (30 to 50 percent slopes); and Springdale Family-Lithic Xerorthents Association, dry (50 to 75 percent slopes). Refer to Exhibit 7, *Soils*.

#### **4.6 HYDRIC SOILS LIST OF CALIFORNIA**

Michael Baker reviewed the National Hydric Soils List for the State of California (NRCS 2015), in an effort to verify whether or not on-site soils are considered to be hydric. It should be noted that lists of hydric soils and soil survey maps provide off-site ancillary tools to assist with wetland determinations, but are not a substitute for on-site investigations. According to the hydric soils list, none of the on-site soil types have been listed as hydric in the State of California.

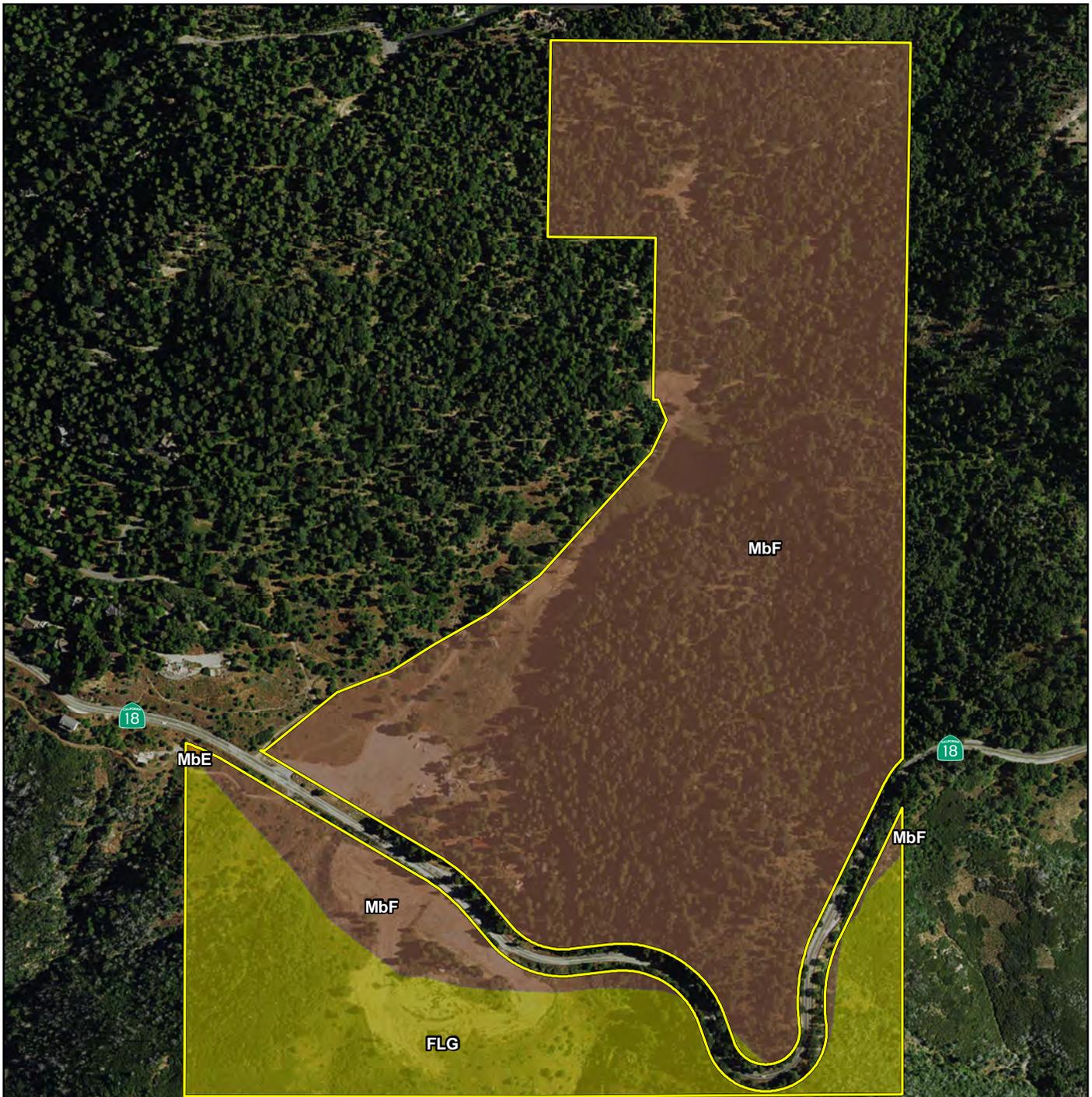
#### **4.7 NATIONAL WETLANDS INVENTORY**

Michael Baker reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. Three (3) freshwater ponds have been documented within the project site. No additional features occur. Refer to Appendix C, *Documentation*.

#### **4.8 FLOOD ZONE**

Michael Baker searched the Federal Emergency Management Agency website for flood data for the project site. Based on the Flood Insurance Rate Map No. 06071C7956H, the project site is within Zone X, or areas outside of the 1% (100-year) flood plain. Refer to Appendix C, *Documentation*.

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**Legend**

- Project Site
- MbE Morical-Wind River families complex, 15 to 30 percent slopes
- MbF Morical-Wind River families complex, 30 to 50 percent slopes
- FLG Springdale family-Lithic Xerorthents association, dry, 50 to 75 percent slopes

SKYPARK AT SANTA'S VILLAGE PROJECT  
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

**Soils**



## **Section 5      Site Conditions**

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Michael Baker biologists Thomas C. Millington and Travis J. McGill conducted a field investigation of the project site on November 20, 2014 and September 22, 2015 to verify existing site conditions and document potential jurisdictional areas. Michael Baker field staff encountered no limitations during the site visits. Refer to Appendix A for representative photographs taken throughout the project site.

The majority of the project site is undeveloped, consisting of naturally occurring habitats which will continue to remain undeveloped. Dirt fire access roads traverse the site. These existing dirt access roads are proposed to be used for various mountain biking/hiking trail activities. The developed portions of the project site include existing buildings and infrastructure associated with the Santa's Village Amusement Park that opened in 1955. The various buildings associated with the amusement park have remained intact since the park's closure in 1998. The proposed new land use will renovate these existing buildings.

After the park's closure, the parking lot on the north side of SR-18 (western portion of the project site) and the overflow parking lot south of SR-18 (southern portion of the project site) provided a storage yard and staging area for bark beetle infested lumber. The infested wood was chipped and spread out over the paved parking lots.

### **5.1      DRAINAGE FEATURES**

#### **5.1.1      HOOKS CREEK**

Hooks Creek is the primary hydrogeomorphic feature found on-site and generally flows in a southwest to northeast direction. Hooks Creek originates at SR-18 near the southwestern corner of the property and extends along the western boundary of the site before it exists near the northeastern corner of the property. From its origin at SR-18 Hooks Creek sheet flows for approximately 700 feet across the existing paved parking lot of Santa's village before flowing into the grassland (meadow) where the Hooks Creek becomes an earthen drainage feature. Hooks Creek extends through Hencks Meadow for approximately 530 feet before it continues for approximately 420 feet through the area previously disturbed when it was used as a storage yard and staging area for the bark beetle infested lumber. After the disturbed area, Hooks Creek extends through a southern willow scrub plant community for approximately 270 feet before entering into the existing pond created by the previous owner for water storage. The pond is approximately 1 acre in size. Downstream (north) of the pond, the creek runs through a mixed conifer forest and varies between being generally open and covered in vegetation for approximately 1,200 feet before exiting the property.

Following significant storm events, surface flows collected within the pond and are anticipated permeate downstream within Hooks Creek via the high water table and then continue downstream to Deep Creek.

Generally, the ordinary high water mark (OHWM) ranged from 2 to 8 feet in width and was documented through the observation of the following indicators: flow patterns; drift deposits; saturation; and substrate characteristics. Due to historic on-site land uses (timber farm), the upstream portions of Hooks Creek are heavily disturbed and covered with remnant debris from the processing and staging of timber. These areas are vegetated with isolated stands of riparian vegetation including arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), fragrant everlasting (*Pseudognaphalium beneolens*), slender leaved sedge (*Carex athrostachya*), Pacific rush (*Juncus effuses* ssp. *pacificus*), and cattail (*Typha* sp.). Further downstream, Hooks Creek becomes more densely vegetated and supports a southern willow scrub plant community. Plant species observed within this community include arroyo willow, stinging nettle (*Urtica dioica*), sticktight (*Bidens frondosa*), northern water plantain (*Alisma triviale*), horehound (*Marrubium vulgare*), and watercress (*Nasturtium officinale*).

Hooks Creek is tributary to Deep Creek (Relatively Permanent Water) and ultimately the Mojave River (Traditional Navigable Water) and falls under the regulatory authority of the Corps, Regional Board, and CDFW. The southern (upper) portion of Hooks Creek will be impacted from the meadow restoration activities. These impacts are further described in Section 6 below.

### **5.1.2 DRAINAGE 1 (D-1)**

Drainage 1 is an earthen drainage feature that generally flows from southeast to northwest from the project's northeastern boundary for approximately 450 feet before converging into Hooks Creek. The OHWM ranged from 2 to 6 feet in width and was documented through the observation of the following indicators: flow patterns; drift deposits; saturation; and substrate characteristics. Drainage 1 flows through the mixed conifer forest and varies between being generally open and covered in vegetation. No impacts to Drainage 1 will occur as a result of installation of the proposed trials.

### **5.1.3 DRAINAGE 2 (D-2)**

Drainage 2 is an earthen drainage feature located on the northwest portion of the property south of SR-18 west of the proposed campground. Drainage 2 generally flows in a northeast to southwest direction from SR-18 for approximately 850 feet down the south-facing slope of the San Bernardino Mountains via topography and is depicted as a blue line stream on USGS topographic maps. The OHWM ranged from 1 to 4 feet in width and was documented

through the observation of the following indicators: flow patterns; drift deposits; saturation; and substrate characteristics. Drainage 2 flows through the chaparral plant community.

Drainage 2 flows south into City Creek which is tributary to the Santa Ana River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water) and falls under the regulatory authority of the Corps, Regional Board, and CDFW. No impacts to Drainage 2 will occur as a result of installation of the proposed campground south of SR-18.

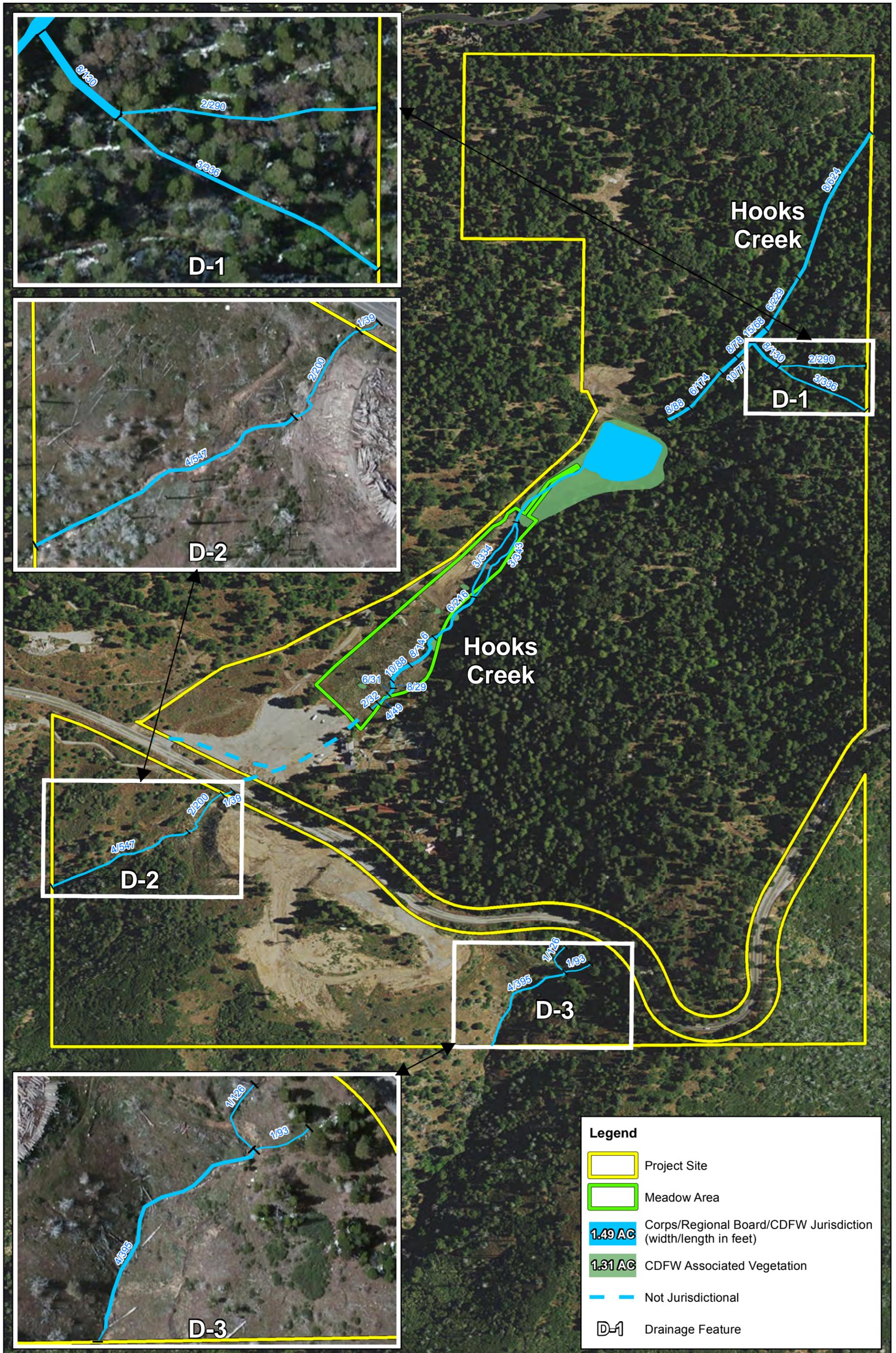
#### **5.1.4 DRAINAGE 3 (D-3)**

Drainage 3 is an earthen drainage feature located on the southeast portion of the property south of SR-18 east of the proposed campground. Drainage 3 generally flows in a north to south direction from SR-18 for approximately 500 feet down the south-facing slope of the San Bernardino Mountains via topography and is depicted as a blue line stream on USGS topographic maps. The OHWM ranged from 1 to 4 feet in width and was documented through the observation of the following indicators: flow patterns; drift deposits; saturation; and substrate characteristics. Drainage 2 flows through the chaparral plant community.

Drainage 3 flows south into City Creek which is tributary to the Santa Ana River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water) and falls under the regulatory authority of the Corps, Regional Board, and CDFW. No impacts to Drainage 3 will occur as a result of installation of the proposed campground.

## **5.2 WETLAND FEATURES**

In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of the three wetland parameters described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). Based on the results of the field investigation, no areas or portions of the on-site drainage features met all three wetland parameters. Therefore, no wetland features occur on the project site.



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## **Section 6 Findings**

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This delineation has been prepared for the District in order to document the jurisdictional authority of the Corps, Regional Board, and CDFW within the boundaries of the project site. This report presents Michael Baker's best effort at determining the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

### **6.1 U.S. ARMY CORPS OF ENGINEERS**

Hooks Creek and Drainage 1 are tributary to Deep Creek (Relatively Permanent Water) and ultimately the Mojave River (Traditional Navigable Water). Whereas, Drainage 2 and 3 flow into City Creek which is tributary to the Santa Ana River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). As a result, Hooks Creek and Drainages 1-3 all qualify as waters of the United States and fall under the regulatory authority of the Corps. Approximately 1.49 acres (5,270 linear feet) of Corps jurisdiction (non-wetland waters) is located within the boundaries of the project site. Refer to Exhibit 8, *Jurisdictional Areas*, for an illustration of Corps jurisdictional areas.

In agreement with between Skypark and the NRCS, the proposed project includes the restoration of Henck's Meadow (restoration and improvement of the upstream portions of Hook Creek). Since the NRCS is restoring the meadow, a CWA Section 404 permit from the Corps will not be required for this project.

### **6.2 REGIONAL WATER QUALITY CONTROL BOARD**

No isolated or Rapanos conditions were observed within the boundaries of the project site. The Regional Board jurisdictional limit follows that of the Corps and totals approximately 1.49 acres (5,270 linear feet). Refer to Exhibit 6, *Corps/Regional Board Jurisdiction*.

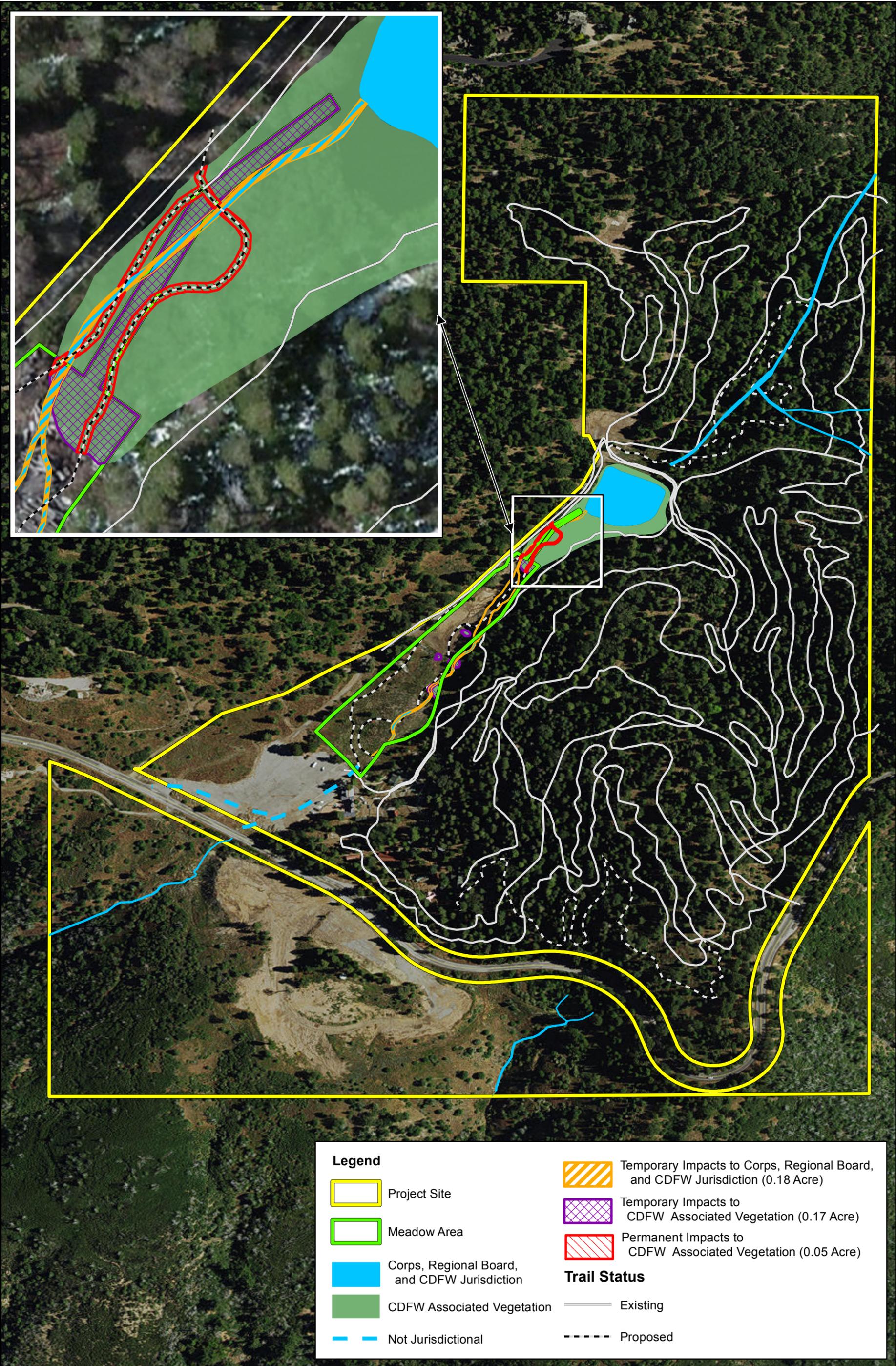
Based on a review of preliminary design plans, 0.18 acre of temporary impacts to waters of the United States under the jurisdictional authority of the Regional Board, within Hooks Creek, are expected to occur from restoration of Henck's Meadow. The other drainage features within the boundaries of the project site will not be impacted. Refer to Exhibit 9, *Jurisdictional Impacts*.

### **6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

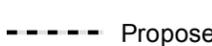
Hooks Creek and Drainages 1-3 exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Approximately 2.8 acres (5,270 linear feet) of

CDFW jurisdiction is located within boundaries of the project site. Refer to Exhibit 8, *Jurisdictional Areas*, for an illustration of CDFW jurisdictional areas.

Based on a review of preliminary design plans, 0.05 acre of permanent and 0.35 acre of temporary impacts to CDFW jurisdiction are expected to occur from restoration of Henck's Meadow. The other drainage features within the boundaries of the project site will not be impacted. Refer to Exhibit 9, *Jurisdictional Impacts*.



**Legend**

 Project Site	 Temporary Impacts to Corps, Regional Board, and CDFW Jurisdiction (0.18 Acre)
 Meadow Area	 Temporary Impacts to CDFW Associated Vegetation (0.17 Acre)
 Corps, Regional Board, and CDFW Jurisdiction	 Permanent Impacts to CDFW Associated Vegetation (0.05 Acre)
 CDFW Associated Vegetation	<b>Trail Status</b>
 Not Jurisdictional	 Existing
	 Proposed

SKYPARK AT SANTA'S VILLAGE PROJECT  
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS  
**Jurisdictional Impacts**

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## **Section 7            Regulatory Approval Process**

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The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas.

### **7.1        UNITED STATES ARMY CORPS OF ENGINEERS**

In agreement with between Skypark and the NRCS, the proposed project includes the restoration of Henck's Meadow (restoration and improvement of the upstream portions of Hook Creek). Since the NRCS is restoring the meadow, a CWA Section 404 permit from the Corps will not be required for this project.

### **7.2        NATURAL RESOURCES CONSERVATION SERVICE**

Specific Nationwide Permits do not require a pre-construction notification to the Corps if one of the following situations applies:

- a) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement between the landowner and the USFWS, NRCS, FSA, NMFS, NOS, USFS or their designated state cooperating agencies.
- b) Voluntary stream or wetland restoration or enhancement action, or wetland establishment action, documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards.

Therefore, since there is an established agreement between Skypak and the NRCS, and the meadow restoration is planned with the NRCS, a Nationwide Permit is not required from the Corps.

### **7.3        REGIONAL WATER QUALITY CONTROL BOARD**

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Since the NRCS is taking the federal lead on the project, the Regional Board will not be required to consult with the Corps, however, the will be required to consult with the NRCS and EPA. Therefore, it will be necessary for Skypark to acquire CWA Section 401 Water Quality Certification prior to impacts occurring within Regional Board jurisdictional areas.

## **7.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

Pursuant to Section 1602 of the Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Therefore, it will be necessary for Skypark to acquire a Section 1602 Streambed Alteration Agreement prior to impacts occurring within CDFW jurisdictional areas.

## **7.5 RECOMMENDATIONS**

It is recommended that this delineation be forwarded to the regulatory agencies listed in this report for their concurrence. The concurrence/receipt would be valid up to five years and would solidify findings noted within this report.

## Section 8      References

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## **Appendix A**    Site Photographs

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**Photograph 1:** Looking southwest at Hooks Creek on the central portion of the project site.



**Photograph 2:** Looking northeast at Hooks Creek on the central portion of the project site.



**Photograph 3:** View of stands of arroyo willow (*Salix lasiolepis*) associated with upstream portions of Hooks Creek.



**Photograph 4:** View of meadow adjacent to the headwaters of Hooks Creek on the southern portion of the project site.



**Photograph 5:** Looking northeast at existing detention basin on the northern portion of the project site.



**Photograph 6:** View of meadow and disturbances associated with the on-site staging and processing of timber resources.



**Photograph 7:** View of meadow and disturbances associated with the on-site staging and processing of timber resources.

## **Appendix B**      Methodology

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## WATERS OF THE UNITED STATES

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of “waters of the U.S.,” including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The term “*waters of the United States*” is defined as follows:

- (i) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- (ii) All interstate waters, including interstate wetlands<sup>5</sup>.
- (iii) The territorial seas.
- (iv) All impoundments of waters otherwise defined as waters of the United States under the definition.
- (v) All tributaries<sup>6</sup> of waters identified in paragraphs (i) through (iii) mentioned above.
- (vi) All waters adjacent<sup>7</sup> to a water identified in paragraphs (i) through (v) mentioned above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.
- (vii) All prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernal pools, Texas coastal prairie wetlands, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (i) through (iii) mentioned above.
- (viii) All waters located within the 100-year floodplain of a water identified in paragraphs (i) through (iii) mentioned above and all waters located within 4,000 feet of the high

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<sup>5</sup> The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

<sup>6</sup> The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (iv) mentioned above), to a water identified in paragraphs (i) through (iii) mentioned above, that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark.

<sup>7</sup> The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (i) through (v) mentioned above, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like.

tide line or ordinary high water mark of a water identified in paragraphs (i) through (v) mentioned above, where they are determined on a case-specific basis to have a significant nexus to a waters identified in paragraphs (i) through (iii) mentioned above.

The following features are not defined as “waters of the United States” even when they meet the terms of paragraphs (iv) through (viii) mentioned above:

- (i) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act.
- (ii) Prior converted cropland.
- (iii) The following ditches:
  - (A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
  - (B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
  - (C) Ditches that do not flow, either directly or through another water, into a water of the United States as identified in paragraphs (i) through (iii) of the previous section.
- (iv) The following features:
  - (A) Artificially irrigated areas that would revert to dry land should application of water that area cease;
  - (B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
  - (C) Artificial reflecting pools or swimming pools created in dry land;
  - (D) Small ornamental waters created in dry land;
  - (E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
  - (F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of a tributary, non-wetland swales, and lawfully constructed grassed waterways; and
  - (G) Puddles.
- (v) Groundwater, including groundwater drained through subsurface drainage systems.
- (vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.
- (vii) Wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

## WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps, 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology have been examined using the methodology listed below and documented on Corps' wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

### Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- ◆ *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- ◆ *Sapling/shrub stratum:* Consists of woody plants less than 3 inches DBH, regardless of height;
- ◆ *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- ◆ *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.<sup>8</sup> Hydrophytic vegetation is present if any of the indicators are satisfied.

### Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the “50/20 rule”) of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- ◆ *Obligate Wetland (OBL)*: Plants that almost always occur in wetlands;
- ◆ *Facultative Wetland (FACW)*: Plants that usually occur in wetlands, but may occur in non-wetlands;
- ◆ *Facultative (FAC)*: Plants that occur in wetlands and non-wetlands;
- ◆ *Facultative Upland (FACU)*: Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- ◆ *Obligate Upland (UPL)*: Plants that almost never occur in wetlands.

### **Hydrology**

Wetland hydrology indicators are presented in four (4) groups, which include:

#### Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

#### Group B – Evidence of Recent Inundation

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<sup>8</sup> Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

#### Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

#### Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

### **Soils**

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.<sup>9</sup> The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining

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<sup>9</sup> According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

#### All Soils

“All soils” refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

#### Sandy Soils

“Sandy soils” refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

#### Loamy and Clayey Soils

“Loamy and clayey soils” refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

### **SWANCC WATERS**

The term “isolated waters” is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.

### **RAPANOS WATERS**

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands have a significant nexus to a TNW. The flow characteristics and functions of the tributary itself, in combination with the functions performed by any wetlands adjacent to the tributary, determine if these waters/wetlands significantly affect the chemical, physical, and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

- (1) The consideration of hydrologic factors including, but not limited to, the following:
  - volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
  - proximity to the TNW
  - size of the watershed average annual rainfall
  - average annual winter snow pack
  
- (2) The consideration of ecologic factors including, but not limited to, the following:
  - the ability for tributaries to carry pollutants and flood waters to TNWs
  - the ability of a tributary to provide aquatic habitat that supports a TNW
  - the ability of wetlands to trap and filter pollutants or store flood waters
  - maintenance of water quality

## **Appendix C**    Documentation

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