Appendix E
Mission Canyon Stream Habitat Restoration Project Jurisdictional Delineation Report

MISSION CANYON STREAM HABITAT RESTORATION PROJECT

SOUTHERN CALIFORNIA EDISON, SANTA BARBARA COUNTY, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by Southern California Edison (SCE) to conduct a jurisdictional delineation to determine the extent of road grading impacts to nearby regulated aquatic resources along Mission Creek in Santa Barbara County, California. The delineation was conducted to evaluate potential impacts to jurisdictional waters and riparian resources that may have resulted from the maintenance of unimproved roads. The Study Area includes areas along an existing access road for an SCE transmission line corridor, off Spyglass Ridge Road, which is also used by the City and County of Santa Barbara and as a public trail (Spyglass Ridge Road to Inspiration Point). Although not frequently used, SCE can utilize the road for access to their facilities.

Rincon conducted field visits on January 3 and March 27, 2020, within a defined Study Area, during which three rock slide areas were identified where the rock from the road grading activities had spilled over into potentially jurisdictional areas likely regulated by the County, U.S. Army Corps of Engineers (USACE), Central Coast Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). The field visits included a jurisdictional delineation conducted to determine the location and extent of aquatic resources that are potentially subject to the jurisdiction of the USACE, RWQCB, and CDFW. Impacts to these jurisdictional waters are regulated by the USACE under Section 404 of the Clean Water Act (CWA) and the RWQCB under Section 401 CWA and Porter-Cologne Water Quality Control Act, and by CDFW via Streambed Alteration Agreement pursuant to Sections 1600 et. seq. of the California Fish and Game Code (FGC). Final jurisdictional areas are approved by the state and federal authorities.

As part of ongoing efforts to document jurisdictional resources and quantify impacts within the Study Area, SCE retained Michael Baker International (MBI) to conduct further updates to the jurisdictional delineation. Michael Baker conducted field visits on October 22, 2021, and November 10, 2021, to update sections of the original jurisdictional delineation determined to be out of date based on the discovery of additional potential impact areas in 2021.

Based on the jurisdictional delineation, the deposits have resulted in impacts to approximately 0.05 acre (122.9 cubic yards) of USACE jurisdiction and 1.01 acre (1,413 cubic yards) regulated by the RWQCB and CDFW within the Study Area. At the time of the delineation, a large portion of the slide areas along Mission Creek outside of jurisdictional areas had been treated with best management practices, such as slopes being covered with jute netting on the slopes or silt fencing installed at the toe of slopes in an effort to minimize additional sediment from further impacting nearby aquatic resources.

1 Introduction

Rincon Consultants, Inc. (Rincon) and Michael Baker International (MBI) conducted a jurisdictional delineation for the Southern California Edison (SCE) Mission Canyon Stream Habitat Restoration Project along Mission Creek, located in Santa Barbara County, California. The delineation was conducted to determine the location and extent of waters and wetlands within a defined Study Area that are potentially subject to the jurisdiction of the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). Provided herein is a description of the current environmental setting, assessment of jurisdictional waters and wetlands, and a summary of impacts from the Project.

Any areas identified as jurisdictional waters and/or wetlands affected by Project activities may be subject to regulatory oversight by the USACE under Section 404 CWA, RWQCB under Section 401 of the CWA and Porter-Cologne Water Quality Control Act, the CDFW pursuant to Section 1600 et. seq. of the California Fish and Game Code (CFGC), and the. For a more complete description of regulatory definitions please refer to Appendix B.

While this jurisdictional delineation represents the best professional judgement of qualified delineators, the final extent of jurisdiction is determined by the applicable state and federal authorities.

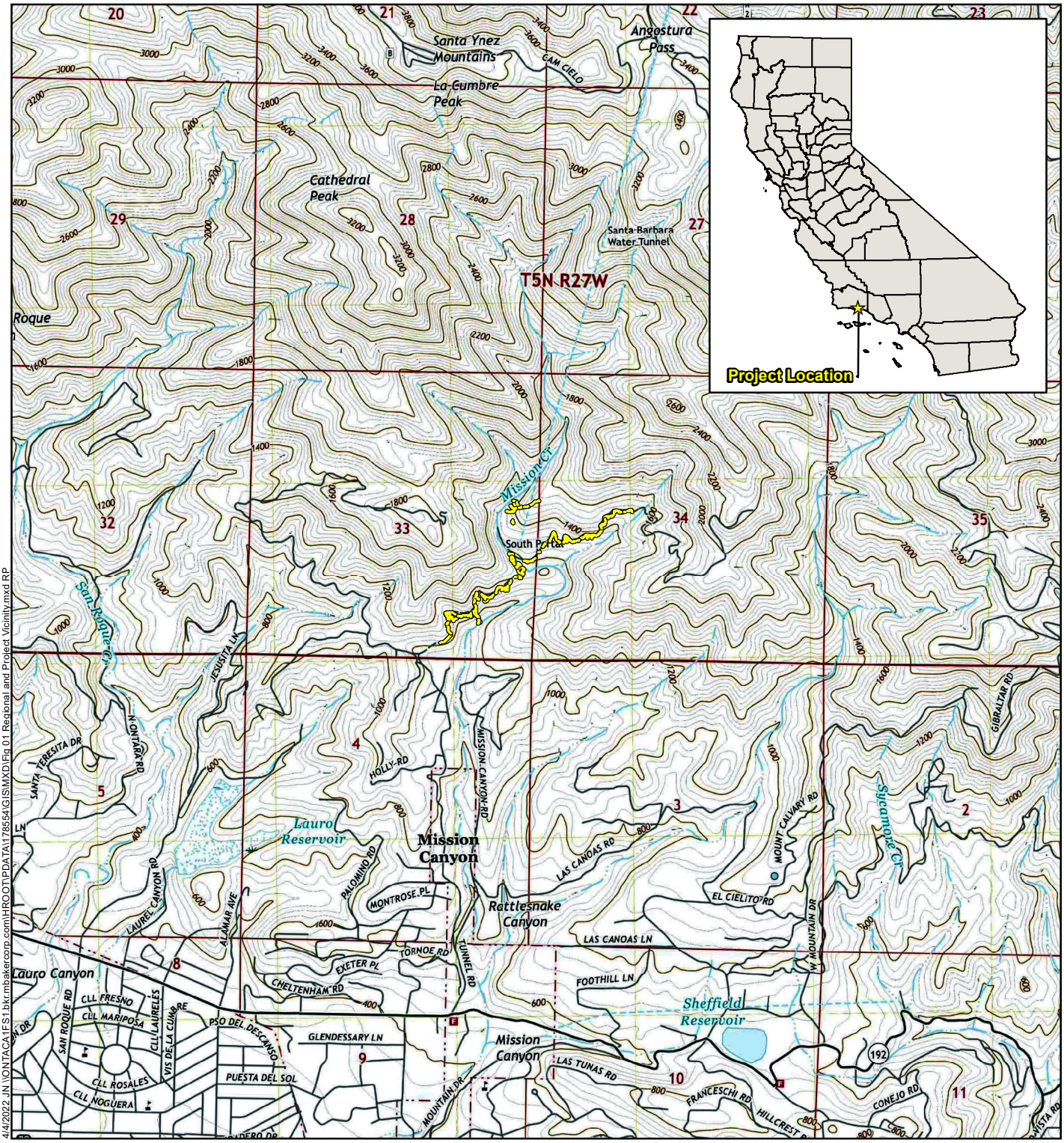
1.1 Project Location

The Proposed Project is located within the Mission Canyon area of unincorporated Santa Barbara County (County), California; refer to Exhibit 1: Regional and Project Vicinity. The Project occurs on two parcels, one of which is owned by the City of Santa Barbara (APN 153-270-009) and one that is owned by a private party (153-270-028). The Project is within Township 5 North, Range 27 West, Sections 33 and 32 of the U.S. Geological Survey (USGS) Santa Barbara 7.5-minute quadrangle map. Specifically, the Proposed Project is located along approximately 1.12 miles of Spyglass Ridge Road in road sections referred to as Road Areas Gate through 9 and approximately 0.70 miles of the Mission Canyon Catway along road sections referred to as Trail Road Areas 1 and 2. In addition, the Proposed Project is located within the streambed and associated banks at Mission Creek in areas referred to as Creek Sites 1 through 4, and two unnamed tributaries within Mission Canyon in areas referred to as Road Areas 1 and 2, respectively. The total Project area encompasses 2.88 acres of Mission Creek and adjacent upland sidecast areas and includes several locations where rock and sediment have slid into Mission Creek's bed and bank. There is an additional 0.99 acres of developed/disturbed areas that will be used for staging and storage areas and 0.50 acres of roadside berm stabilization or reconstruction. Stockpiling occurs east of Road Area 9. Regional access to the Proposed Project site is provided via State Route 192 (SR 192, also known as Foothill Road). Local access to the Proposed Project site is provided via Spyglass Ridge Road/Tunnel Road.

The Mission Creek Site is located on the main stem of Mission Creek, which is an intermittent stream that meanders through the foothills of the Santa Ynez Mountains, through the County and City of Santa Barbara, and eventually drains to the Pacific Ocean. Located within Road Areas 1 and 2 are portions of unnamed tributaries west of Mission Creek. The unnamed tributaries are ephemeral drainages that provide flow to Mission Creek.

The Proposed Project site is located within the southern slopes of the Mission Canyon area of the Santa Ynez Mountains between 900 and 1,560 feet above mean sea level (amsl). Site topography varies greatly, with slopes averaging 40 to 65 percent. Much of the canyon along the Project area is steep, with portions composed of vertical, exposed rockface escarpments. Spyglass Ridge Road, above Tunnel Road, within the Proposed Project area serves as an access road to an SCE transmission line corridor, fire department access, and is also used by the City and County of Santa Barbara. It is also a popular public trail (Spyglass Ridge Road/Jesusita Trail to Inspiration Point) used for hiking and mountain biking.

In this area, SCE uses Spyglass Ridge Road, as well as other unpaved access roads and spur roads for access to conduct necessary maintenance and repair activities on lattice towers that support three 66-kilovolt (kV) sub-transmission circuits. Within the Proposed Project area, the existing access road meanders through the foothills, crossing over Mission Creek via the Mission Creek Trail bridge, and extends along the transmission corridor. The bridge consists of an east to west single span supported by stone abutments and carries the Mission Creek Trail and Spyglass Ridge Road across Mission Creek.



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Legend

Project Site

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Regional and Project Vicinity

Michael Baker INTERNATIONAL

0 0.25 0.5 Miles

Source: USGS 7.5-Minute topographic quadrangle maps: *Santa Barbara, California (2018)*

Figure 1

1.2 Project Description

In December 2019, SCE performed maintenance operations that consisted of road grading and widening along Spyglass Ridge Road (the "December 2019 work"). The purpose of the December 2019 work was to maintain safe access to existing SCE infrastructure, including transmission towers and associated transmission lines located in the foothills along the access road. During grading activities, rock and spoils were sidecast beyond the road prism and down slope into state and federal jurisdictional areas within Mission Creek and two unnamed ephemeral tributaries to Mission Creek (Road Areas 1 and 2). The disposal caused impacts to streambed, trees, and native habitats. While smaller rocks and fine sediment material have settled on the slopes above the creek, larger rocks and additional fine material have settled in the creek and tributary bottoms, altering the natural flow of waters. Project engineers conducted surveys following the December 2019 work to quantify the material that was cast down slopes and into Mission Creek. The estimated volumes of sidecast material were calculated using post-construction LiDAR, survey data and assumptions of pre-road widening average cross-sectional data (MBI 2020). The estimated volumes were then refined by inspecting targeted deposits on foot, measuring each deposit using a combination of a standard grading rod, engineer's tape, and laser, and observing the make-up of sidecast materials using a small hand shovel (AIS 2020). A field survey was conducted in September 2021, using the same methodology, to collect sidecast volume and location data for the Sidecast 3 (SC 3) Rock Outliers location that was identified in late 2021 (Ecokai 2021). These mapped areas collectively comprise the Proposed Project area.

SCE conducted a jurisdictional delineation to determine the extent of road grading impacts to nearby regulated aquatic resources associated with Mission Creek in Santa Barbara County, California, described in this report. The delineation was conducted to evaluate potential impacts to jurisdictional waters that may have resulted from the December 2019 work, as well as potential temporary impacts resulting from the proposed sidecast removal efforts. The total area and volume of material deposited within the limits of state and federal waters is summarized in Table 1, Summary of State and Federal Jurisdictional Impacts from December 2019 Work. The total area and volume of temporary Project impacts expected to result from the removal of sidecast material are summarized in Section 5, Summary of Impacts.

Table 1. Summary of State and Federal Jurisdictional Impacts from December 2019 Work

Project Site	State and Federal Jurisdictional Waters			
	USACE (non-wetland waters)		RWQCB/CDFW	
	Square Feet	Volume (Cubic Yards)	Square Feet	Volume (Cubic Yards)
Site 1				
Road Area 1	89.4 (22.0 linear feet)	0.9	16,903.0 (211.3 linear feet)	184.9
Sidecast 3 Rock Outliers	39.2 (15.4 linear feet)	<1.0	3,174.7 (53.4 linear feet)	17
Subtotal	**128.6 (37.4 linear feet)**	**1.9**	**20,077.7 (264.7 linear feet)**	**201.9**
Site 3				
Road Area 2	0	0	4,010.1 (139.9 linear feet)	70.5
Subtotal	**0**	**0**	**4,010.1 (139.9 linear feet)**	**70.5**
Site 4				
Creek Site 1	245.5 (25.8 linear feet)	17.6	1,304.1 (47.6 linear feet)	88.6
Creek Site 2	388.2 (75.1 linear feet)	30.9	3,427.3 (155.8 linear feet)	257.2
Creek Site 3	296.0 (70.0 linear feet)	24.9	4,137.3 (97.2 linear feet)	346.6
Creek Site 4	1076.2 (91.5 linear feet)	51.7	10,267.8 (167.1 linear feet)	439.8
Subtotal	**2,005.9 (262.4 linear feet)**	**125.1**	**19,136.5 (467.7 linear feet)**	**1,132.2**
Site 5				
Creek Site 7	86.9 (21.5 linear feet)	8.4	86.9 (21.5 linear feet)	8.4
Subtotal	**86.9 (21.5 linear feet)**	**8.4**	**86.5 (21.5 linear feet)**	**8.4**
Road Areas 5-9				
Road Areas 5-9	**0**	**-**	**923.0 (170.0 linear feet)**	**-**
TOTAL	2221.4 (321.3 linear feet)	135.4	44233.8 (1063.8 linear feet)	1,413

Source: Mission Creek Habitat Restoration Plan. February 2021. Page 2-25, Table 5.

In February and March 2020, SCE implemented emergency stabilization and cleanup and safety repair work along Spyglass Ridge Road. The Road Repair Project was implemented by SCE from August through November 2020, which reduced and reconfigured roadside berms in Road Areas 1 through 4, completed rock scaling to remove loose materials from exposed rock surfaces, and installed a rock drapery over the exposed rock wall located down road from the bridge in Road Area 4 ("rock wall"). Impacted native trees in upland areas and at Road Areas 1 and 2, were remediated, and soil/rock material that had accumulated around the base of the trees was redistributed.

SCE proposes to implement the Proposed Project to satisfy its obligation pursuant to the December 4, 2020 settlement agreement to address impacts associated with the December 2019 work. The objective of the Proposed Project is to remove sidecast material and restore impacted habitat within the Project area, including Mission Creek stream habitat, such that it may support native fish use to levels that existed prior to the December 2019 work (Helix 2023). The Project includes habitat restoration of Creek Sites 1 through 4 in Mission Creek, tributaries of Mission Creek, the areas impacted by sidecast ("Sidecast Areas" or "SC") between Road Areas Gate through 9, along road section of Trail Road Areas 1 and 2 (including SC 3 Rock Outliers) and stabilization of roadside berms in Road Areas 5 through 9. Section 5, Summary of Impacts, describes the proposed temporary impacts expected to result from the sidecast removal activities.

To address the presence of outlying rocks that have fallen outside of the delineated Sidecast Areas and to allow for foot trails for crews to access sidecast piles and conduct removal operations safely, a small contingency disturbance buffer has been added to the disturbance footprint of the Sidecast Areas. The contingency disturbance areas are identified for each Proposed Project Area. Disturbance within the contingency buffer will be minimized, and sensitive resources will be flagged for impact minimization and avoidance. Following Project activities, disturbance within the contingency buffer will be mapped and restored in accordance with the Creek HRP (Helix 2023).

2 Methodology

This assessment of jurisdictional features consisted of a desktop review of regulatory databases, aerial imagery, and other publications. A field delineation was also completed by Rincon to identify, describe, and map all potential jurisdictional waters within the SCE right-of way (along Spyglass Ridge Road) and portions of Mission Creek, and unnamed tributaries. Fieldwork for this evaluation was conducted by Rincon Senior Biologist Thea Benson on January 3 and March 27, 2020. The delineation has been prepared in accordance with USACE, RWQCB and CDFW procedures, as outlined below. The field delineation completed by MBI in 2021 is described in 2.2.1, Additional Field Surveys, below.

2.1 Desktop Review

The desktop review included aerial imagery depicting the Study Area (Google Earth 2020), the Santa Barbara, California USGS 7.5-minute topographic quadrangle (USGS 2020), the Web Soil Survey (United States Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2020a), and other publications to better characterize the site and its surroundings from a hydrologic and geologic/topographical perspective.

Additionally, the National Wetlands Inventory (NWI) (United States Fish and Wildlife Service [USFWS] 2020a) and the National Hydrography Dataset (NHD) (USGS 2020) were reviewed to determine if any wetlands or other waters had been previously documented and mapped in or near the Study Area. The National Hydric Soils List by State: California (USDA, NRCS 2020b) was also reviewed to determine if any soil map units mapped in the Study Area were classified as hydric.

2.2 Field Survey

Rincon Senior Biologist Thea Benson conducted fieldwork for this evaluation on January 3 and March 27, 2020. The January 3, 2020 field survey was conducted as an initial assessment of Mission Creek and the trail/access road to Mission Creek immediately following the stop of work. An additional survey competed on March 27, 2020 included a broader Study Area that included the entire work area from the Spyglass Ridge Road trail head at the access gate and along the access road identified in Figure 2a.

The Study Area included the approximate SCE right-of-way (along Spyglass Ridge Road) where work was previously completed by SCE along the road to the transmission tower, approximately 2.5 miles from the trailhead. The Study Area was surveyed on foot to investigate for potential wetlands and non-wetland aquatic resources. Due to the steep terrain and loose rock, the survey was completed entirely from the road/trail from the top of the bank. The Study Area was expanded in five areas along the road to document potential impacts from road grading activities in the channel at certain stream crossings. These seven areas have been identified as Sites 1-5 (Figure 2a). These areas are further discussed below.

34.473433
-119.711911

Site 5
(Creek Site 7)

Road Area 9

Site 6

Road Area 8

Road Area 7

Road Area 6

Site 7

Road Area 5

Site 4, Creek Sites 1-4
(Road Area 4)

Mission Creek

Spyglass Ridge Rd

Road Area 3

Site 3
(Road Area 2)

Mission Creek

Site 1
(Road Area 1)

Sidecast 3 Rock
Outliers

34.465191
-119.696466

Legend

- USACE Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- Sidecast
- Flow Direction
- Reference Point

0 175 350
Feet

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Michael Baker
INTERNATIONAL

Source: Esri (2020)

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Jurisdictional Map (Resources Documented by Rincon, 2020)

Figure 2A

The bottoms of the drainages were not accessed due to safety concerns from the loose rock and steep terrain. Current federal and state methods and guidelines were used to identify and delineate potential jurisdictional areas to the greatest extent feasible from the top of bank. Methods for delineating wetlands and waters are further described below. Datasheets are provided as Appendix A.

2.2.1 Additional Field Surveys

Michael Baker International (MBI) conducted additional jurisdictional delineation field work on October 22, 2021, and November 9, 2021, using the most recent, agency-approved methodology. The delineation was conducted to determine the jurisdictional limits of waters of the U.S. (WoUS), including potential wetlands, and waters of the State located within the boundaries of the Project site. On October 22, Michael Baker certified wetland delineator and restoration biologist Ryan Phaneuf conducted a jurisdictional delineation of the two additional areas within Mission Creek. SC 3 Outliers is an area of Mission Creek located southwest of Road Area 2, immediately south and downslope of the debris field. Previously completed mapping of jurisdictional features was also confirmed at the Creek Site 4 contingency buffer.

On November 9, 2021, Mr. Phaneuf and regulatory specialist Nelly Moreno conducted a jurisdictional delineation during which all sections of the Study Area with side cast material and proposed restoration activities were investigated, and all jurisdictional features within the project area, but not previously mapped by Rincon because they were not directly impacted by the December 2019 workwere documented. Observations and documentation of jurisdictional features and other features determined to be non-jurisdictional were limited to observations that could be accomplished directly from Spyglass Ridge Road and Mission Canyon Catway, to comply with access constraints and safety requirements for the site. Jurisdictional features and features determined to be non-jurisdictional were photographed from the trail, with photographs depicting the upstream and downstream conditions, as well as the general context surrounding each feature. The additional areas documented by MBI in 2021 are depicted on Figures 2b and 2c and further discussed below.

34.473433
-119.711911

Site 5
(Creek Site 7)

Drainage 4

Drainage 5

Drainage 3

Drainage 6

Road Area 9

Road Area 8

Mission Canyon Catway

Road Area 7

Road Area 6

Road Area 5

Site 4, Creek Site 1-4
(Road Area 4)

Mission Creek

Road Area 3

Spyglass Ridge Rd

Drainage 2

Site 3
(Road Area 2)

Drainage 1

Mission Creek

Sidecast 3
Rock Outliers

SP1

Site 1
(Road Area 1)

34.465191
-119.696466

Legend

- USACE Non-Wetland Waters (MBI, November 2021)
- Previously Mapped Jurisdictional Features (Rincon Consultants, Inc, 2020)
- Sidecast
- Flow Direction
- Soil Pit
- Reference Point

0 175 350
Feet

4/4/2022 JN \\ONTACA1FS1.bkr.mbakercorp.com\HROOT\PDATA\178554\GIS\MXD\Fig 02B USACE RWQCB Jurisdictional Map_MBI.mxd RP

Michael Baker INTERNATIONAL

Source: Esri (2020)

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

USACE Jurisdictional Map (Resources Documented by MBI, 2021)

Figure 2B

34.473433
-119.711911

Site 5
(Creek Site 7)

Drainage 4

Drainage 5

Drainage 3

Drainage 6

Road Area 9

Road Area 8

Mission Canyon Cutway

Road Area 7

Road Area 6

Road Area 5

Site 4, Creek Site 1-4
(Road Area 4)

Mission Creek

Drainage 2

Spyglass Ridge Rd

Road Area 3

Site 3
(Road Area 2)

Drainage 1

Mission Creek

Sidecast 3
Rock Outliers

SP1

Site 1
(Road Area 1)

34.465191
-119.696466

Legend

- CDFW Associated Riparian Vegetation (MBI, November 2021)
- CDFW Vegetated Streambed/RWQCB Non-wetland Waters (MBI, November 2021)
- Previously Mapped Jurisdictional Features (Rincon Consultants, Inc, 2020)
- Sidecast
- Flow Direction
- Soil Pit
- Reference Point

0 175 350
Feet

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Source: Esri (2020)

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

CDFW/RWQCB Jurisdictional Map (Resources Documented by MBI, 2021)

Figure 2c

2.2.2 Non-Wetland Waters of the United States

The lateral limits of potential USACE jurisdiction (i.e., width) for non-wetland waters or "other waters" was determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter (USACE 2005), as well as in reference to various relevant technical publications outlined above. In addition, any other sources of water with connections to downstream Relatively Permanent Waters (RPWs) and Traditionally Navigable Waters (TNWs) were also evaluated.

2.2.3 Wetland Waters of the United States

The Study Area was searched for indicators of potential wetland features by looking from the top of bank due to the safety issues accessing the channel of the stream. The presence of hydrophytic vegetation, hydric soils, and wetland hydrology were investigated to the greatest extent feasible from the top of bank, according to routine delineation procedures outlined in the Wetlands Delineation Manual (USACE 1987) and the guidance in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). During the field survey within the Study Area, no indicators of wetlands of the U.S. were observed, therefore, further assessment of wetland resources are not included in this report.

2.2.4 CDFW Streams and Riparian Habitat

Sections 1600 et seq. of the CFGC establish a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely affect fish and wildlife resources, or when adverse impacts cannot be avoided, ensure that adequate mitigation and/or compensation is provided.

Section 1602 of the CFGC requires any person, State, or local governmental agency or public utility to notify CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;

(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake;

or

(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

This applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State, including the maintenance of existing drain culverts, outfalls, and other structures. To avoid the need for a Lake or Streambed Alteration Agreement (LSAA) from CDFW, all proposed impacts should remain outside of the top of active banks and the canopy/dripline of any associated riparian vegetation, whichever is greater.

2.2.5 Waters of the State

The limits of "waters of the State," as defined under the Porter-Cologne Water Quality Control Act, were conservatively determined to be coterminous with the CDFW jurisdictional waters described above. Procedures for defining RWQCB jurisdiction pursuant to the SWRCB's State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was approved on April 2, 2019 and was revised on April 6, 2021 (SWRCB 2019). Based on the existing conditions documented during the delineation, the waters of state identified within the Study Area are unlikely to change as a result of the new procedures.

2.3 Data Processing

Extents of potential wetland and riparian features, sample points, and photo locations were mapped using a combination of points acquired from a Trimble Geo 7X Global Positioning System (GPS) with sub-meter accuracy and by hand in the field using current aerial imagery. ArcGIS software was used to interpret field data into shapefiles, to produce maps of all potentially jurisdictional features, and calculate the approximate acreages and/or linear feet of waters. A Light Detection and Ranging (LiDAR) survey was conducted following impacts to the Study Area by MBI. This LiDAR data was processed to estimate the volume of fill deposited into the Study Area. The volumes are presented as estimates only due to the lack of LiDAR data within the Study Area prior to deposition the fill. Site photographs are provided as Appendix C.

3 Environmental Setting

A description of the vegetation, soil types, and local hydrology in the Study Area are presented below. The Study Area is not located within United States Fish and Wildlife Service (USFWS)/National Marine Fisheries Service (NMFS) designated critical habitat (USFWS 2020b).

3.1 Topography, Climate and Land Use

The Study Area is located within the western slope of the Santa Ynez Mountains, within Mission Canyon, and along the trail/access road adjacent to Mission Creek. Regional land uses in the vicinity of the Project area primarily include open space with access roads for the SCE transmission lines and City and County.

Topography within the Study Area consists of extremely steep slopes towards the lower elevation Mission Creek. Elevation ranges from approximately 1,005 feet (at the trail entrance) to 2,235 feet above mean sea level (at the end of Mission Canyon Catway).

The Santa Ynez Mountains have a Mediterranean type climate characterized by heavy summer fogs from marine influences and mild winters with an annual precipitation of 17.73 inches (Western Regional Climate Center 2016).

3.2 Vegetation

Habitat along the banks of Mission Creek and the unnamed tributaries to Mission Creek within the Study Area primarily consisted of coast live oak (*Quercus agrifolia*), and sycamore (*Platanus* sp.), with scrub habitat encroaching from the upland areas dominated by laurel sumac (*Malosma laurina*), bush mallow (*Malacothamnus* sp.), and ceanothus (*Ceanothus* sp.). Areas that were considered disturbed/ruderal within the Study Area include the existing unpaved and paved access roadways. These areas contain compacted soils and areas that are limited to the ruderal margins.

3.3 Soils

According to the NRCS Web Soil Survey of Santa Barbara County, California, South Coastal Part, one soil map unit was mapped within the Study Area, Maymen-Rock outcrop (USDA, NRCS 2020a). Maymen-Rock outcrop complex, 50 to 75 percent slopes (MbH) primarily consists of somewhat excessively drained soils derived from shale and sandstone. Maymen soils are exclusively found on mountains with slopes ranging from 5 to 100 percent at elevations 400 to 4,250 feet. A typical soil profile consists of brown gravelly sandy clay loam topsoil to approximately 10 inches. Below this, hard bedrock extends to approximately 15 inches of depth. This soil map unit is not included on the National Hydric Soils List (USDA, NRCS 2020b). No soil was collected from the site due to the access

restrictions (due to safety concerns) down into the creek channel. Soils are anticipated to be similar to those identified in the soil survey.

3.4 Hydrology

The site is located within the Mission Creek-Frontal Santa Barbara Channel watershed (Hydrologic Unit Code 180600130203), defined by Mission Creek and its tributaries. Mission Creek flows south along Spyglass Ridge Road, which eventually flows to the Ocean at Stearns Wharf.

Within the Study Area, Mission Creek is classified as both Riverine habitat (R4SBA[1]) and Freshwater Forested/Shrub Wetland (PFOC[2]) by the NWI (USFWS 2020). Two unnamed tributaries located at Areas 1 and 2, found to be jurisdictional, are classified as Riverine habitat (R4SBA).

During the field survey, there were additional ephemeral drainages occurring throughout the Study Area and these were investigated for jurisdictional waters/wetland characteristics; however, many of these drainages did not have indicators that met the definition for wetland hydrology, predominance of hydrophytic vegetation, or hydric soils. These drainages also did not provide indicators of defined stream, lacking an OHWM, presence of a bed and bank, benching, break in slope, or other characteristic stream features. Primarily, these drainages were erosional features that drain water from the steep hillsides during periods of rain and immediately following rain without developing a defined stream.

[1] R4SBA: Riverine, Intermittent, Streambed, Temporarily Flooded

[2] PFOC: Palustrine, Forested, Seasonally Flooded

4 Summary of Jurisdictional Waters and Wetlands

4.1 Water and Wetlands within Study Area

Jurisdictional waters documented within the Study Area by Rincon in March 2020 are described below and summarized in Table 2A.

4.1.1 Site 1 (Road Area 1)

Site 1 is located within an unnamed drainage west of Mission Creek. Non-wetland WoUS were observed within the Study Area, based on field observations made from the top of bank. Based on field observations, the drainage appears to be best classified as an ephemeral drainage that does provide flow during periods of rain, to the downstream Mission Creek.

Some indicators of hydrology, including a defined streambed with unconsolidated sediments and drift deposits (e.g., OHWM) features were observed, however, specific measurements are approximate because the area could not be delineated on the ground due to safety considerations (e.g., loose soils/fill, steep banks and height from the top of the canyon (approximately 75 feet or greater). The width of the OHWM was determined using aerial imagery and average width of upstream portions of the channel, north of the bridge crossing Mission Creek.

It is likely that south of the Study Area the drainage feature conveys flows to the main stem of Mission Creek. Vegetation along the banks associated with the riparian corridor included coast live oak, and shrub species such as laurel sumac, bush mallow, and ceanothus.

RWQCB and CDFW jurisdictional boundaries within this portion of the Study Area were identified by the limits of top of bank and/or tree/shrub canopy.

No wetland features were observed within this drainage. Jurisdictional waters documented by Rincon in March 2020 at Site 1 are depicted on Figure 2a.

4.1.2 Sites 4, 5, 6 and 7 Mission Creek and Main Tributaries

The main drainage, Mission Creek (Sites 2, 4, and 5), is an intermittent stream that meanders through the foothills of the Santa Ynez Mountains and through the City of Santa Barbara and eventually drains to the Pacific Ocean. Tributaries to Mission Creek, identified at Sites 6 and 7, are also intermittent streams and displayed similar conditions to Mission Creek. USACE jurisdictional boundaries were identified by the limits of the OHWM observed in Mission Creek, through observations of running water in the upstream portions of the Study Area and observations of sediment deposits, drainage patterns, and topography. RWQCB and CDFW jurisdictional boundaries of the Mission Creek portion of the Study Area were identified by the limits of top of bank which generally coincide with the edge of the access road.

During the field surveys, portions of the Mission Creek drainage at Site 4 were observed to be filled with large rock and boulders from the debris spills generated by grading activities. Rock debris was also identified with drone imagery provided by Michael Baker International at Sites 2 and 5. In portions of the drainages that were not disturbed by excess debris, the drainages were generally unvegetated, with soil textures such as cobbles and boulders observed in the bed of the channel and rocky banks. The banks of the drainage were approximately 20 feet in height, and vegetation associated with the riparian corridor along the banks included mature trees species such as coast live oak (*Quercus agrifolia*), willow (*Salix* sp.), and California sycamore (*Platanus racemosa*). Shrub habitat outside the limits of jurisdictional areas was dominated by laurel sumac, bush mallow, and ceanothus. Similar conditions were observed at Sites 6 and 7, but no impacts occurred at these areas.

Within the Mission Creek portion of the Study Area, no wetlands were observed. Jurisdictional waters documented by Rincon in March 2020 at Sites 4, 5, 6, and 7 are depicted on Figure 2a.

4.1.3 Site 3 (Road Area 2)

Site 3 is located within an unnamed drainage west of Mission Creek. From observations on the top of bank only, no OHWM was observed, and this drainage appears to be best classified as an ephemeral drainage that provides flow only during periods of during and immediately after rain events, draining to the downstream Mission Creek.

No indicators such as bed, bank, flowing water, drift deposits, or other OHWM features were observed at the time of the delineation within the Study Area, from the top of the bank. The banks of the drainage were steep, approximately 50 feet in height, or more. Vegetation along the banks associated with the riparian corridor included coast live oak, and shrub species such as laurel sumac, bush mallow, and ceanothus.

RWQCB and CDFW jurisdictional boundaries in this portion of the Study Area were identified by the limits of the top of the bank, which generally coincided with the edge of the access road along the SCE right-of-way.

Within the Study Area, no wetland features were observed within the unnamed drainage west of Mission Creek. Jurisdictional waters documented by Rincon in March 2020 at Site 3 are depicted on Figure 2a.

4.1.4 Additional Jurisdictional Areas

Jurisdictional waters documented within the Study Area by Michael Baker International in October and November 2021 are described below and summarized in Table 2B.

Drainage 1 and Drainage 2

Drainages 1 and 2 are located in the southwestern portion of the Project site along Spyglass Ridge Road, west of the junction with Mission Canyon Catway. Drainage 1 is located northwest of Road Area

1 and Drainage 2 is located northwest of Road Area 2. Due to a topographical high point to the north and west, the drainages convey flows southeast toward Mission Creek. The drainage features are comprised of an earthen substrate consisting primarily of loamy sand and large cobbles, and no surface water was present during the November 9, 2021 site visit. These active channels exhibited clear evidence of significant hydrology and evidence of an OHWM included presence of bed and bank, break in bank slope, presence of litter and debris, and a change in vegetation composition from channel bed to channel bank. The top of bank was estimated to coincide with the limits of the OHWM in Drainages 1 and 2, so that the limits of CDFW streambed were determined to be coterminous with non-wetland waters. Constructed features designed to manage and direct flows away from the road surface were observed associated with both drainages, including corrugated metal pipes and culverts with metal grate covers. Flows from Drainages 1 and 2 enter these constructed features and are assumed to flow under the trail where they meet previously mapped jurisdictional features immediately south or downstream of the trail alignment. Dominant vegetation observed in association with these drainages included ceanothus (*Ceanothus* sp., UPL) giant wild rye (*Elymus condensatus*, FACU), and laurel sumac (*Malosma laurina*, UPL). Drainage 1 was the only drainage surveyed to have associated riparian vegetation growing along the bank and overhanging the channel, consisting of several mature coast live oak trees (*Quercus agrifolia*, UPL). No wetland WoUS were observed in association with Drainages 1 and 2. No soil pits or OHWM datasheets were performed due to the access constraints associated with the Project. Jurisdictional areas and lengths of Drainages 1 and 2 estimated from the road are listed in Table 2B. The locations of Drainages 1 and 2 are depicted on Figures 2b and 2c.

Mission Creek (Sidecast 3 Rock Outliers)

A section of Mission Creek was investigated as part of the documentation of the SC 3 Rock Outliers. No flowing water was present at the time of the site visit. Mission Creek conveys flows generally west in this location, with evidence of hydrology consisting of presence of litter and debris, and a visible change in vegetation composition and cover from channel bed to channel bank. Large cobbles were observed deposited throughout the channel bed, with finer grained sediments deposited among the larger substrate constituents. Wrack and debris were noted deposited along the boulders and larger vegetation just above the channel bed, coinciding with a clear break in the bank slope and defined impression in the bank. USACE and RWQCB jurisdictional boundaries in this area were identified by the limits of the OHWM, determined by clear evidence of significant hydrology. On the southern bank of the stream, the top of bank was observed along the limits of the OHWM. On the northern bank, the top of bank was noted extending beyond the OHWM, along the upper edge of an elevated stream terrace that lacked evidence of significant hydrology and consistent flows characteristic of the OHWM. Associated riparian vegetation was also observed adjacent to the stream, consisting of mature coast live oak, white alder (*Alnus rhombifolia*, FACW), and western sycamore (*Platanus racemosa*, FAC) overhanging the stream bed and banks, with roots likely to directly obtain water from the streambed area. One soil pit (SP1) was performed where evidence of hydrology (drift deposits, drainage patterns, and water marks) was observed. SP1 was dug to a depth of 13 inches. SP1 consisted of a single layer and exhibited a texture of loamy sand and displayed a matrix color of 10YR 3/4 when moist (Munsell 2012). No redoximorphic features were identified. Vegetation surrounding SP1 consisted of white

alder, California bay laurel (*Umbellularia californica*, FAC), coast live oak, mugwort (*Artemisia douglasiana*, FAC), and sticky snakeroot (*Ageratina Adenophora*, FACU). Based on the results of the field delineation, it was determined that SP1 met only two parameters (wetland hydrology and hydrophytic vegetation) of the required three parameters and thus did not qualify as a USACE wetland WoUS or a wetland water of the State. The completed Wetland Determination Form for SP1 is provided in Appendix A, Datasheets. Due to the intermittent nature of the described reach of Mission Creek, three Arid West Ephemeral and Intermittent Streams OHWM Datasheets were performed to document hydrogeomorphic features of the channel and identify the location of the OHWM. The completed OHWM datasheets are provided in Appendix A. The section of Mission Creek associated with the SC 3 Rock Outliers is depicted on Figure 4b.

Drainage 3, Drainage 4, Drainage 5, and Drainage 6

Drainages 3 through 6 are located in the northeastern portion of the Project site along Mission Canyon Catway, east of the junction with Spyglass Ridge Road. Drainage 3 is located northeast and across the road from Road Areas 5 and 6. Drainage 4 is located north of and across the road from Road Area 6. Drainage 5 is located northeast of and across the road from Road Area 7. Drainage 6 is located northeast of and across the road from Road Area 9. Due to a topographical high point to the north and west, the drainages convey flows south or southeast toward a tributary of Mission Creek. The drainage features are comprised of an earthen substrate consisting primarily of loamy sand and large cobbles, and no surface water was present during the November 9, 2021 site visit. These active channels exhibited clear evidence of significant hydrology and evidence of an OHWM included presence of bed and bank, break in bank slope, presence of litter and debris, and a change in vegetation composition or cover from channel bed to channel bank. The top of bank was estimated to coincide with the limits of the OHWM in Drainages 3 through 6, so that the limits of CDFW streambed were determined to be coterminous with non-wetland waters. Evidence of features designed to managed and direct flows included sandbags and boulders placed along the hillsides parallel to the trail alignment. Flows from drainages 3 through 6 are conveyed across the trail as sheet flow, where they meet previously mapped jurisdictional features south or immediately downstream of the trail alignment. Dominant vegetation observed in association with these drainages included big pod ceanothus (*Ceanothus megacarpus*, UPL), greenbark ceanothus (*Ceanothus spinosus*, UPL), holly leaf cherry (*Prunus ilicifolia*, UPL), and laurel sumac. No wetland WoUS were observed in association with Drainages 3 through 6. No soil pits or OHWM datasheets were performed due to the access constraints associated with the Project. Jurisdictional areas and lengths of Drainages 3 through 6 estimated from the trail are listed in Table 2B. The locations of Drainages 3 through 6 are depicted on Figures 2b and 2c.

4.2 Jurisdictional Limits within Study Area

Based upon the analysis of Rincon's jurisdictional delineation, and updates to the delineation by Michael Baker International, Mission Creek and several mapped tributaries are subject to USACE and RWQCB/CDFW jurisdictions in the Study Area. Potentially jurisdictional areas within the Study Area are summarized below in Tables 2A and 2B and Figures 2a-c.

Table 2A. USACE, RWQCB, and CDFW Jurisdictional Waters within Study Area (Documented by Rincon Consultants, Inc., 2020)

Site Location	USACE (Non-wetland Waters)		USACE (Wetland Waters)		CDFW Vegetated Streambed / RWQCB Non-wetland Waters	
	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)
Site 1 (Road Area 1)	0.019 ac/ 844 ft^2	166	-	-	0.675 ac/ 29,394 ft^2	215
Site 2 (Mission Creek)	0.018 ac/ 791 ft^2	45	-	-	0.087 ac/ 3,772 ft^2	45
Site 3 (Road Area 2)	-	-	-	-	0.221 ac/ 9,633 ft^2	134
Site 4 (Creek Sites 1-4)	0.184 ac/ 8,031 ft^2	607	-	-	1.293 ac/ 56,330 ft^2	637
Site 5 (Creek Site 7)	0.180 ac/ 7,819 ft^2	463	-	-	0.180 ac/ 7,819 ft^2	463
Site 6 (Tributary to Mission Creek)	0.078 ac/ 3,390 ft^2	226	-	-	0.344 ac/ 14,964 ft^2	226
Site 7 (Tributary to Mission Creek)	0.101 ac/ 4,401 ft^2	388	-	-	0.626 ac/ 27250. ft^2	215
Road Areas 5 through 9	0.147 ac/ 6,420 ft^2	600	-	-	3.410 ac/148,530 ft^2	1865

Notes: USACE (U.S. Army Corps of Engineers; SWRCB; RWQCB (Regional Water Quality Control Board); CDFW (California Department of Fish and Wildlife).

Table 2B. USACE, RWQCB, and CDFW Jurisdictional Waters within Study Area (Documented by Michael Baker International, 2021)

Drainage (Site Location)	USACE (Non-Wetland Waters)		USACE (Wetland Waters)		RWQCB Non-wetland Waters /CDFW Vegetated Streambed		CDFW Associated Riparian Vegetation	
	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)	Acres (ac) / Square Feet (ft ^{2})	Linear Feet (ft)	Acres (ac) / Square Feet (ft$^{2)}$	Linear Feet (ft)
Drainage 1 (Upstream of Road Area 1)	0.013 ac/ 564 ft^2	60	-	-	0.013 ac/ 564 ft^2	60	0.014 ac/ 630 ft^2	62
Mission Creek (Sidecast 3 Rock Outliers)	0.083 ac/ 477 ft^2	215	-	-	0.120 ac/ 506 ft^2	215	0.376 ac/ 16,375 ft^2	481
Drainage 2 (Upstream of Road Area 2)	0.008 ac/ 340 ft^2	56	-	-	0.008 ac/ 340 ft^2	56	-	-
Drainage 3 (Upstream of Road Areas 5,6)	0.004 ac/ 157 ft^2	53	-	-	0.004 ac/ 157 ft^2	53	-	-
Drainage 4 (Upstream of Road Area 6)	0.004 ac/ 162 ft^2	53	-	-	0.004 ac/ 162 ft^2	53	-	-
Drainage 5 (Upstream of Road Area 7)	0.005 ac/ 222 ft^2	55	-	-	0.005 ac/ 222 ft^2	55	-	-
Drainage 6 (Upstream of Road Area 9)	0.006 ac/ 246 ft^2	80	-	-	0.006 ac/ 246 ft^2	80	-	-

Notes: USACE (U.S. Army Corps of Engineers; SWRCB; RWQCB (Regional Water Quality Control Board); CDFW (California Department of Fish and Wildlife).

4.3 Clean Water Act Jurisdiction

Mission Creek in the Study Area is likely a jurisdictional water of the U.S. regulated under CWA Sections 404 and 401 as administered by the USACE and RWQCB, respectively. OHWM indicators documented from the top of bank include a break in slope, change in vegetation cover, shelving, and

the presence of a bed and bank. Mission Creek is the primary drainage along the Spyglass Ridge Road in Mission Canyon which eventually flows to the Pacific Ocean outside the Study Area. Please refer to Tables 1A and 1B above for a total of non-wetland WoUS observed within the Study Area.

Smaller erosional features located within the Study Areas are likely not jurisdictional WoUS. These small drainages that cross the road (within the Study Area) do not meet the definition of WoUS under 33 CFR 328.3 because they do not exhibit an OHWM or other wetland features. These non-jurisdictional features were investigated and mapped during the field survey, and photographs of these features are provided in Appendix C, Site Photographs.

4.4 Porter-Cologne Act Jurisdiction

Mission Creek and few of its tributaries are a water of the State under the Porter-Cologne Water Quality Control Act and subject to the permitting authority of the RWQCB. Please refer to Tables 2A and 2B above for a total of potential waters of the State that are present in Mission Creek within the Study Area. The limits of the creek were conservatively assumed to be equivalent to the jurisdictional stream and riparian habitat boundaries discussed below.

4.5 CFGC Section 1600 Jurisdiction

Both Mission Creek and the unnamed drainages, within the Study Area, were defined by the top of bank of the drainage features and the associated riparian habitat, and therefore were delineated as CDFW jurisdiction. The riparian habitat along the banks of the Study Area primarily consisted of coast live oak, willows, and sycamore, with mixed chaparral habitat dominated by laurel sumac, bush mallow, and ceanothus.

5 Summary of Impacts

Within the Study Area, there were distinct areas identified (slide areas) where excess soil/rock sidecast beyond the road prism (see Figure 3) and into the nearby jurisdictional features and where sidecast removals are proposed to take place (see Figures 4a-4f).

The majority of these impact areas were identified along Mission Creek (Sites 4 and 5) and are identified in Figure 4d and Figure 4e. Additional slide areas were identified along two of the unnamed drainages west of Mission Creek (Sites 1 and 3; Figures 4a and 4c), and along multiple unnamed drainages documented in Road areas 5 through 9 (Figure 4f). The SC 3 Rock Outliers area was identified partially within jurisdictional areas of Mission Creek (Figure 4b). Table 3A provides a summary of the proposed temporary impact areas where mechanical and by hand removals of sidecast material are proposed. Table 3B provides a summary of the proposed temporary impact areas resulting from the contingency disturbance buffers. These removal and contingency disturbance buffer areas are further discussed below. Please note that these impact calculations are approximate based on most currently available LiDAR and drone imagery provided by Michael Baker International and visual documentation during field visits.

Jurisdictional areas were documented by Rincon and MBI along the road in Road Areas 5-9. Sidecast in Road Areas 5-9 is proposed to be removed by hand with hand tools where necessary within jurisdictional areas. Sidecast will also be removed by hand in one small section of Road Area 1 and a small area of Site 5 (Creek Site 7), Jurisdictional areas documented at Site 5 are depicted on Figure 4e. Jurisdictional areas documented adjacent to or within Road Areas 5-9 are depicted on Figure 4f.

34.473433
-119.711911

Site 5
(Creek Site 7)

Road Area 9

Road Area 8

Road Area 7

Road Area 6

Road Area 5

Site 4, Creek Sites 1-4
(Road Area 4)

Mission Creek

Road Area 3

Site 3
(Road Area 2)

Spyglass Ridge Rd

Mission Creek

Site 1
(Road Area 1)

Sidecast 3 Rock
Outliers

34.465191
-119.696466

Legend

- Contingency Buffer
- Parking/Staging Area
- Storage/Staging Area
- Earthen Berms

Restoration Area
(Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Reference Point

0 175 350
Feet

4/4/2022 JN \\ONTAGA1FS1\bkr mbakercorp.com\HROOT\PDATA1\72654\GIS\MXD\Total Impact Areas.mxd RP

Michael Baker
INTERNATIONAL

Source: Esri (2020)

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Total Impact Areas

Figure 3

Table 3A . Summary of Proposed Temporary Jurisdictional Impacts within the Study Area

Impact Area (Temporary Impacts)	USACE (Non-wetland Waters)		RWQCB Non-wetland Waters/CDFW Streambed		Vegetation Community
	Acres (Linear Feet)	Approximate Volume (Cubic Yards)	Acres (Linear Feet)	Approximate Volume (Cubic Yards)	
Site 1					
Road Area 1	0.002 (22.00 linear feet)	0.9	0.39 (211.27 linear feet)	184.9	coast live oak woodland / holly leaf cherry – toyon – greenbark ceanothus chaparral / big pod ceanothus chaparral
Sidecast 3 Rock Outliers	0.001 (15.42 linear feet)	<1.0	0.07 (53.39 linear feet)	17	coast live oak woodland
Subtotal	**0.002 (37.42 linear feet)**	**0.9**	**0.46 (264.66 linear feet)**	**201.9**	-
Site 3					
Road Area 2	0	0	0.09 (139.92 linear feet)	70.5	coast live oak woodland
Subtotal	**0**	**0**	**0.09 (139.92 linear feet)**	**70.5**	-
Site 4					
Creek Site 1	0.006 (25.77 linear feet)	17.6	0.03 (47.63 linear feet)	88.6	coast live oak woodland / developed
Creek Site 2	0.009 75.09 linear feet	30.9	0.08 (155.84 linear feet)	257.2	coast live oak woodland
Creek Site 3	0.007 70.05 linear feet	24.8	0.10 (97.16 linear feet)	346.6	California bay forest / coast live oak woodland
Creek Site 4	0.02 (91.46 linear feet)	51.7	0.24 (167.08 linear feet)	439.8	coast live oak woodland / holly leaf cherry – toyon – greenbark ceanothus chaparral
Subtotal	**0.042 (262.37 linear feet)**	**125.1**	**0.44 (467.71 linear feet)**	**1,132.2**	-
Site 5					
Creek Site 7	0.002 (21.51 linear feet)	8.4	0.002 (21.51 linear feet)	8.4	coast live oak woodland
Subtotal	0.002 (21.51 linear feet)	8.4	0.002 (21.51 linear feet)	8.4	-
Road Areas 5-9					
Road Areas 5-9	0.00	-	0.02 (162.31 linear feet)	-	coast live oak woodland / big pod ceanothus chaparral / holly leaf cherry – toyon – greenbark ceanothus chaparral
Subtotal	0.00	-	0.02 (162.31 linear feet)	-	-
TOTAL	**0.05 (321.3 linear feet)**	**121.9**	**1.01 (1056.11 linear feet)**	**1,413**	-

Notes: USACE (U.S. Army Corps of Engineers; SWRCB; RWQCB (Regional Water Quality Control Board); CDFW (California Department of Fish and Wildlife). Totals may not sum due to rounding. Volume estimates for the impacts to jurisdictional waters within Road Areas 5-9 were not performed as part of the 2021 analysis.

Table 3B. Summary of Proposed Temporary Jurisdictional Impacts within the Study Area (Contingency Disturbance Buffers)

Impact Area (Temporary Impacts)	USACE (Non-wetland Waters)	RWQCB Non-wetland Waters/CDFW Streambed	Vegetation Community
	Acres (Linear Feet)	Acres (Linear Feet)	
Site 1			
Road Area 1	0.01 (110.61 linear feet)	0.14 (181.32 linear feet)	coast live oak woodland / holly leaf cherry – toyon – greenbark ceanothus chaparral
Sidecast 3 Rock Outliers	0.001 (15.42 linear feet)	0.07 (53.39 linear feet)	coast live oak woodland
Subtotal	**0.01 (126.03 linear feet)**	**0.21 (234.71 linear feet)**	-
Site 3			
Road Area 2	0	0.06 (107.11 linear feet)	coast live oak woodland
Subtotal	**0**	**0.06 (107.11 linear feet)**	-
Site 4			
Creek Site 1	0.004 (27.72 linear feet)	0.02 (27.63 linear feet)	coast live oak woodland / developed
Creek Site 2	0.01 87.72 linear feet	0.02 (101.19 linear feet)	California bay forest / coast live oak woodland
Creek Site 3	0.003 21.40 linear feet	0.007 (31.90 linear feet)	coast live oak woodland
Creek Site 4	0.01 (45.13 linear feet)	0.02 (65.62 linear feet)	coast live oak woodland / holly leaf cherry – toyon – greenbark ceanothus chaparral
Subtotal	**0.03 (181.97 linear feet)**	**0.067 (226.34 linear feet)**	-
TOTAL	**0.04 (308.00 linear feet)**	**0.34 (568.16 linear feet)**	-

Notes: USACE (U.S. Army Corps of Engineers; SWRCB; RWQCB (Regional Water Quality Control Board); CDFW (California Department of Fish and Wildlife). Totals may not sum due to rounding.

5.1 Site 1 (Tributary to Mission Creek, Road Area 1)

One area along an unnamed drainage, west of Mission Creek, was identified where soil was observed spilling into potentially jurisdictional resources. As depicted in Tables 3A and 3B, temporary impacts to USACE jurisdiction at Site 1 total to 0.002 acre of proposed sidecast removal and 0.01 acre within the contingency disturbance buffer (0.8 cubic yards). RWQCB/CDFW jurisdiction totals to 0.39 acre resulting from sidecast removal and 0.14 acre within the contingency disturbance buffer (184.9 cubic yards). Proposed impacts to Site 1 are depicted on Figure 4a.

5.2 Sidecast 3 Rock Outliers

The following description of impacts at the SC 3 Rock Outliers Area has adapted from the Mission Creek Habitat Restoration Plan (Helix 2023).

On September 28, 2021, SCE's fluvial geomorphologist and environmental remediation team conducted a survey of previously unmapped rock outliers at the terminus of a sidecast area 3 (SC 3) identified as SC 3 Rock Outliers (Figure 4b). During the survey, the team identified sidecast rock outliers consisting of scattered boulders located at the base of a slope and an individual boulder settled immediately adjacent to Mission Creek, approximately 0.5 mile downstream of Creek Site 4. Because these rocks are not contiguous with the main sidecast and are mostly individual rocks, they have been included within a contingency buffer at the terminal end of previously mapped SC 3. Their total volume does not exceed 0.07 acres (17 cubic yards) of sidecast in CDFW jurisdiction. The area is located down a steep portion of the canyon approximately 400 linear feet and 200 vertical feet downslope and east of the road, having an average slope of 77 percent. SC 3 Rock Outliers occur at two primary locations: (1) within an upland terrace (17 cubic yards), presumably outside of large creek flood events, and (2) within the floodplain terrace (less than 1.0 cubic yard in USACE/RWQCB jurisdiction) which only conveys creek flow during large storm events. No material was observed within the low flow creek bed itself. Proposed impacts to the SC 3, Rock Outliers area are depicted on Figure 4b and listed in Tables 3A and 3B.

5.3 Site 3 (Tributary to Mission Creek, Road Area 2)

One area along another unnamed drainage, west of the Mission Creek mainstem, was identified where soil was observed spilling into potentially jurisdictional resources, specifically within CDFW/RWQCB jurisdiction. As depicted in Tables 3A and 3B, proposed temporary impacts to RWQCB/CDFW jurisdiction at Site 3 totals approximately 0.09 acre of sidecast removal (70.5 cubic yards) and 0.06 acre within the contingency disturbance buffer (225.0 cubic yards). The limits of the tributary were conservatively assumed to be equivalent to the jurisdictional stream and riparian habitat boundaries discussed below. No defined OWHM or channel was identified within the Study Area for this area, therefore no USACE jurisdiction was defined. Proposed impacts to Site 3 are depicted on Figure 4c.

5.4 Site 4 (Mission Creek, Creek Sites 1, 2, 3, and 4)

Temporary impacts to USACE jurisdiction at Site 4 totals to 0.042 acre of proposed sidecast removal and 0.03 acre within the contingency disturbance buffer (125.1 cubic yards). Temporary impacts to RWQCB/CDFW jurisdiction totals to 0.44 acre of proposed sidecast removal and 0.06 acre within the contingency disturbance buffer (1,132.2 cubic yards). Due to safety concerns, the bottom channel of Mission Creek was not accessed during the field survey; therefore, the calculations of jurisdictional features are approximate. Proposed impacts to Site 4 are depicted on Figure 4d and listed in Tables 3A and 3B.

Sidecast accumulation in Creek Sites 1 through 4 accounts for the majority of impacts to jurisdictional areas, particularly within the bed of the creek. The following descriptions have been adapted from those included in the Mission Creek Habitat Restoration Plan (Helix 2023).

5.4.1 Creek Site 1

Creek Site 1 occurs entirely upstream of the Spyglass Ridge Road bridge over Mission Creek, with 88.6 cubic yards of sidecast material within RWQCB/CDFW jurisdiction (Table 3A). Sidecast material occurs along the slopes on both sides of the creek, covering most of the slopes and creek banks from the bridge footings to approximately 15 feet (left bank) and approximately 70 feet (right bank) upstream. Some sidecast material has spilled over the banks and settled into the creek bed, where it is mixed with existing creek cobbles and boulders on both sides of the creek. The creek in this location consists of a series of channel pools separated by higher elevation areas of the creek bed containing exposed bedrock and/or large boulders. A bedrock sheet cascade occurs along the upper portion of Creek Site 1 and is followed by two channel pools.

5.4.2 Creek Site 2

Creek Site 2 begins immediately downstream of the Spyglass Ridge Road bridge with sidecast material covering most of the western slope of the canyon (right bank) from the bridge footing to approximately 60 feet downstream. Sidecast volume in this creek site is estimated at 257.2 cubic yards in RWQCB/CDFW jurisdiction (Table 3A). When the stream is flowing under the bridge, the water plunges approximately 13 feet over a waterfall immediately downstream of the bridge and has created a scour pool at the upstream portion of Creek Site 2.

The creek along Creek Site 2 contains native creek gravels, a mixture of pre-impact rock with sidecast rock, and bedrock rockface along the entire left bank through the impact site. The natural creek morphology along the right bank through Creek Site 2 is mostly unknown due to the dept of sidecast material and the lack of pre-impact data or photographs.

5.4.3 Creek Site 3

The creek between Creek Sites 2 and 3 flows relatively straight in a southeasterly direction and curves slightly towards the south through Creek Site 3. The creek bed through this area is relatively flat and

wider than though the other creek sites. The sidecast deposition area of Creek Site 3 extends from the top of the road downslope to the right bank of the creek and fanned out laterally as it slid downhill so that the sidecast is more than twice the width at the creek as it is at the top of the slide. The sidecast volume at Creek Site 3 is estimated to be 346.6 cubic yards within RWQCB/CDFW jurisdiction, with material covering the entirety of the creek's right bank (Table 3A). With exception of a few outliers, the sidecast does not spill into the creek bed. The creek bed through this site contains native gravels, cobbles, and boulders, with a few scattered sidecast rock outliers.

5.4.4 Creek Site 4

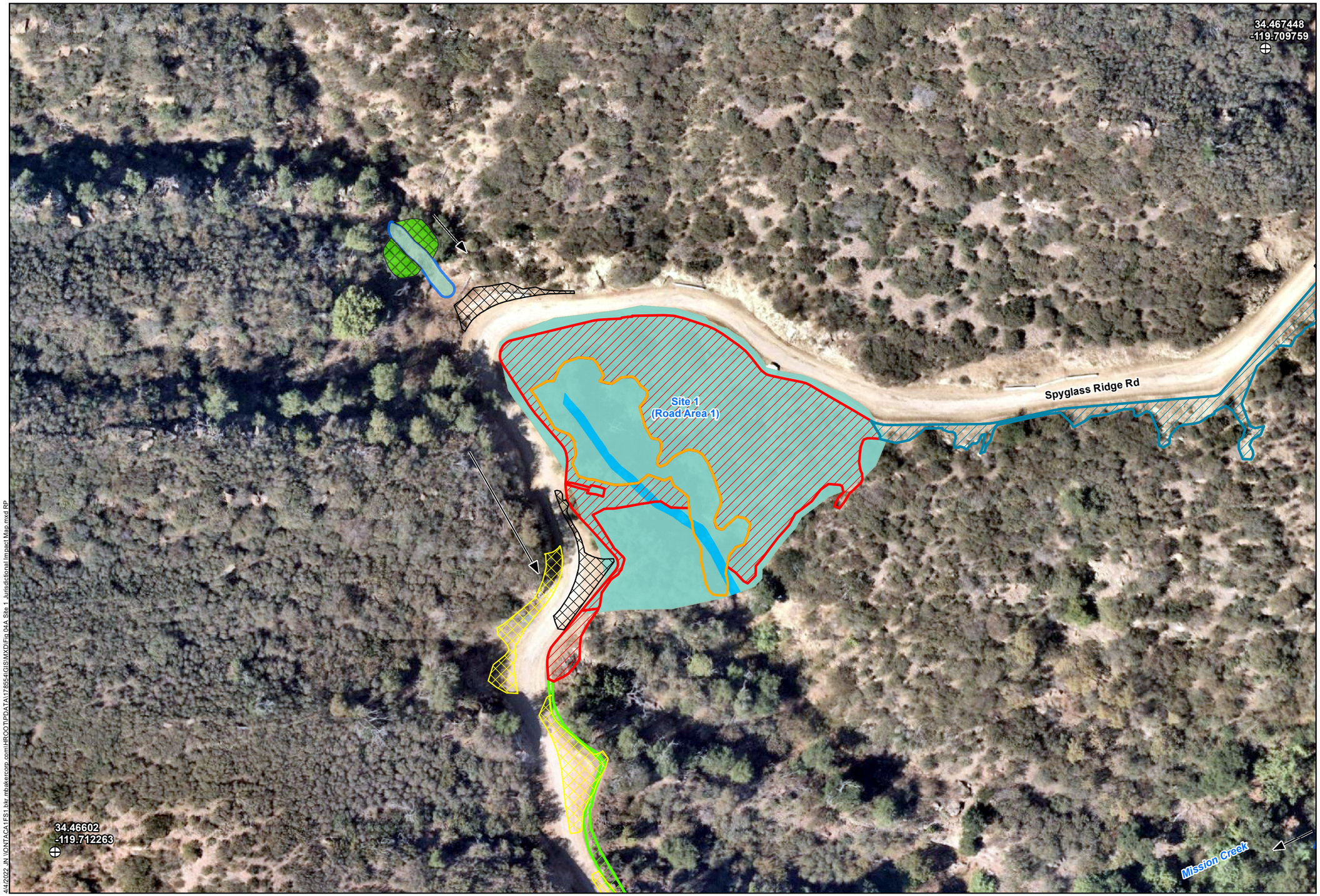
Creek Site 4 contains the highest estimated volume of sidecast material, consisting of 439.8 cubic yards of material in RWQCB/CDFW jurisdiction (Table 3A). Creek Site 4 includes a steep slope of sidecast deposit that extends from the road to the left bank of the creek. Creek Site 4 is the furthest downstream of the four sites, and the creek in this area consists of flatwater habitat along the upstream portion and cascade habitat along the downstream portion of the site. The majority of the sidecast occurs along the western slope (right bank), with a portion of the slide having spilled over the creek bank and into the creek, with large boulders covering much of the cascade habitat.

5.5 Site 5 (Mission Creek, Creek Site 7)

Temporary impacts to USACE and RWQCB/CDFW jurisdiction occur at Site 5 (Creek Site 7), totaling 0.002 acre (Table 3A, 8.4 cubic yards) of proposed sidecast removals. Due to safety concerns, the bottom channel of Mission Creek was not accessed during the field; therefore, the calculations of jurisdictional features are approximate. Proposed impacts to Site 5 (Creek Site 7) are depicted on Figure 4e.

5.6 Road Areas 5-9

Temporary impacts to RWQCB/CDFW jurisdiction occur in Road Areas 5-9, totaling 0.02 acre of proposed sidecast removals (Table 3A). Proposed impacts to Road Areas 5-9 are depicted on Figure 4f.



Legend

- CDFW Associated Riparian Vegetation (MBI, November 2021)
- USACE Non-Wetland Waters/ CDFW Streambed/RWQCB Non-Wetland Waters (MBI, November 2021)
- USACE Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- Contingency Buffer
- Storage/Staging Area
- Parking/Staging Area
- Earthen Berms

Restoration Area

(Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Reference Point

0 30 60 Feet

4/4/2022 J:\ONTACA1FS1.bkr.mbakercorp.com\HROOT\PDATA1\78554\GIS\MXD\Fig 04A Site 1 Jurisdictional Impact Map.mxd RP

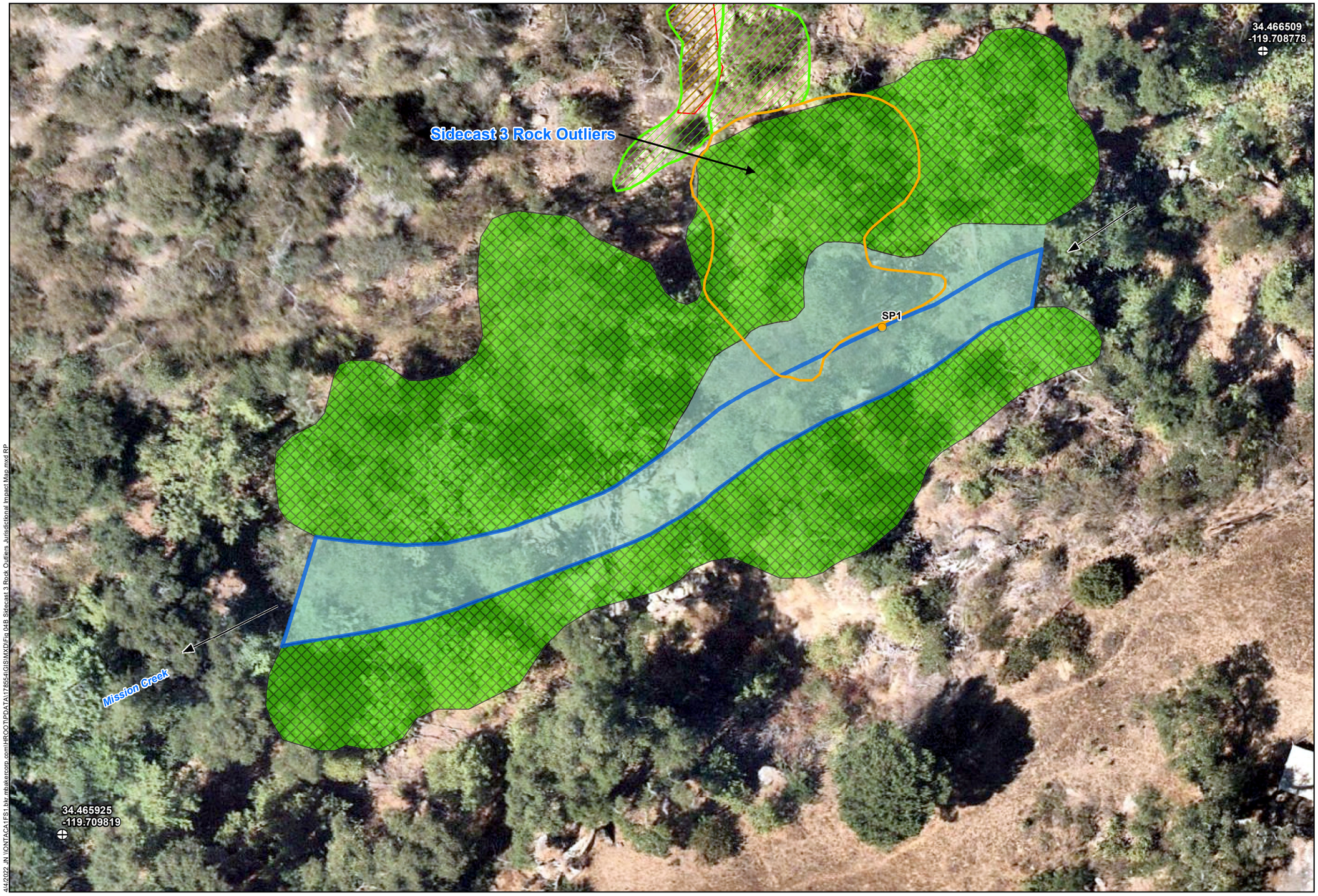
Michael Baker INTERNATIONAL

Source: Nearmap - August 2021

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Site 1 Jurisdictional Impact Map

Figure 4a



Legend

- USACE Non-Wetland Waters (MBI, November 2021)
- CDFW Associated Riparian Vegetation (MBI, December 2021)
- CDFW Vegetated Streambed/RWQCB Non-Wetland Waters (MBI, November 2021)
- Contingency Buffer (Sidecast 3 Rock Outliers)

Restoration Area (Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Soil Pit
- Reference Point

0 12.5 25 Feet

4/4/2022 -JN \\ONTACA1FS1.bkr.mbakercorp.com\HROOT\PDATA\172554\GIS\MXD\Fig 04b Sidecast 3 Rock Outliers Jurisdictional Impact Map.mxd RP

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Sidecast 3 Rock Outliers Jurisdictional Impact Map

Figure 4b

Michael Baker INTERNATIONAL

Source: Nearmap - August 2021

34.4685
-119.708059

Spyglass Ridge Rd

Site 3
(Road Area 2)

34.467048
-119.710607

Mission Creek

Legend

- USACE Non-Wetland Waters/CDFW Streambed/RWQCB Non-Wetland Waters (MBI, November 2021)
- CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- Contingency Buffer
- Storage/Staging Area
- Parking/Staging Area
- Earthen Berms

Restoration Area (Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Reference Point

0 30 60
Feet

4/4/2022 JN: \ONTACA1FS1.bkr.mbakercorp.com\HROOT\PDATA\178554\GIS\MXD\Fig 04C Site 3 Jurisdictional Impact Map.mxd RP

Michael Baker INTERNATIONAL

Source: Nearmap - August 2021

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Site 3 Jurisdictional Impact Map

Figure 4C

34.470085
-119.708154

Creek Site 1

Creek Site 2

Site 4
(Creek Sites 1-4)

Creek Site 3

Creek Site 4

Mission Canyon Catway

Area Delineated by MBI, November 2021

Mission Creek

Spyglass Ridge Rd

34.468745
-119.705604

Legend

- USACE Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- Contingency Buffer
- Storage/Staging Area
- Parking/Staging Area
- Earthen Berms

Restoration Area (Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Reference Point

0 30 60 Feet

4/4/2022, N:\ONTACA1FS1.bkr.mbakercorp.com\HROOT\PDATA\178554\GIS\MXD\Fig 04D Site 4 Jurisdictional Impact Map.mxd RP

Michael Baker INTERNATIONAL

Source: Nearmap - August 2021

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Site 4 Jurisdictional Impact Map

Figure 4d

34.473128
-119.70623

Site 5
(Creek Site 7)

Spyglass Ridge Rd

Mission Creek

34.47168
-119.708761

Legend

- USACE Non-Wetland Waters/ CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)

Restoration Area (Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Reference Point

0 30 60
Feet

4/4/2022 JN \\ONTACAT1FS1.bkr.mbakercorp.com\HROOT\PDATA1\78854\GIS\MXD\Fig 04E Site 5 Jurisdictional Impact Map.mxd RP

Michael Baker INTERNATIONAL

Source: Nearmap - August 2021

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Site 5 Jurisdictional Impact Map

Figure 4e

Mission Canyon Catway

Spyglass Ridge Rd

Road Area 5

Road Area 6

Road Area 7

Road Area 8

Road Area 9

Legend

- USACE Non-Wetland Waters/CDFW Streambed/RWQCB Non-Wetland Waters (MBI, November 2021)
- USACE Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- CDFW Streambed/ RWQCB Non-Wetland Waters (Rincon Consultants, Inc, 2020)
- Storage/Staging Area
- Parking/Staging Area
- Earthen Berms

Restoration Area (Temporary Impacts)

- Mechanical Removal
- Hand Removal
- No Removal
- Flow Direction
- Reference Point

0 75 150 Feet

4/4/2022 JN \\ONTACA1FS1.tbkr.mbakercorp.com\HROOT\PDATA\178554\GIS\MXD\Fig 04F RA 5_9 Jurisdictional Impact Map.mxd RP

Source: Esri (2020)

MISSION CANYON STREAM HABITAT RESTORATION PROJECT
JURISDICTIONAL DELINEATION

Road Areas 5-9 Jurisdictional Impact Map

Figure 4f

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7 List of Preparers

Michael Baker International

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Appendix A

Datasheets

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Sidecast 3 Rock outliers Site1/DS1

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Mission Creek Restoration Project
Project Number: 17854
Stream: Mission Creek
Investigator(s): Ryan Phanoff

Date: 10/22/21 **Time:** 0924
Town: Santa Barbara **State:** CA
Photo begin file#: 4943 **Photo end file#:** 4946

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Reach of mission Creek in Los Padres National Forest

Projection: CA SPS **Datum:** NAD1983(2011)
Coordinates: 34.466329°, -119.709109

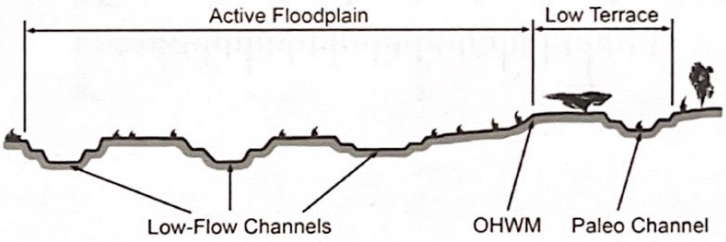
Potential anthropogenic influences on the channel system: Sidecast from trail was above creek has fallen down the slope - large boulders are w/in jurisdictional streambed + OHWM, potential to obstruct flows.

Brief site description: Riparian stream corridor w/ large cobbles + boulders, some finer sediments in streambed. Plant community consists of coast live oak and sycamore growing along canyon walls, w/ alder, California bay laurel and a mixed understory of poison oak, mugwort, sticky snakeroot, wood fern, and smilo grass.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

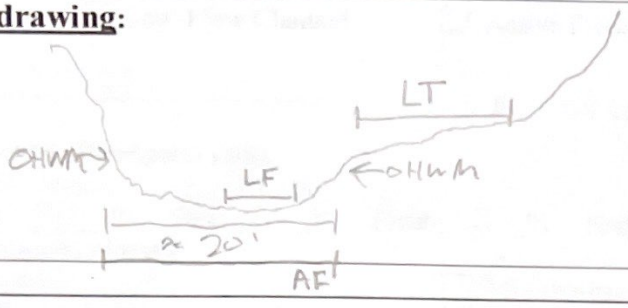
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☑ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: Mission Creek **Cross section ID:** Site1/DS1 **Date:** 10/22/21 **Time:** 0933

Cross section drawing:



OHWM

GPS point: OHWM DS1

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [x] Other: wrack / debris
- [ ] Other: _____

Comments: Clear break in bank slope, w/ a shift from large rocks/cobbles in the low-flow to finer sediments deposited above. Clear wrack line visible. young saplings + herbaceous establishing in low flow, larger sapplings along + above OHWM.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: LF DS1 PH 4945-46

Characteristics of the floodplain unit:

Average sediment texture: Granule

Total veg cover: 95 % Tree: 60 % Shrub: 20 % Herb: 15 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Drift and debris noted deposited in low spits in channel, and above low flow. Clear bed and bank w/ low flow below a clear break in bank slope. Surface of bed defined by exposed rocks and cobbles and finer deposited sediments.

Project ID: Mission Creek **Cross section ID:** Site1 DS1 **Date:** 10/22/21 **Time:** 0948

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: AF DS1 Ph 4944

Characteristics of the floodplain unit:

Average sediment texture: very fine sand

Total veg cover: 100 % Tree: 90 % Shrub: 5 % Herb: 15 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☑ Drift and/or debris
- ☑ Presence of bed and bank
- ☐ Benches
- ☑ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments: Clear bed and bank visible through cross-section. Drift and debris along OHWM, with some in AF. Soil much finer grain size in AF when compared to LF.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☑ Low Terrace

GPS point: LT DS1 Ph 4943

Characteristics of the floodplain unit:

Average sediment texture: course silt

Total veg cover: 90 % Tree: 60 % Shrub: 10 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☑ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☑ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments: Terrace appears to be part of bench which likely only receives flows very periodically, with minimal evidence to suggest frequent overtopping

Site 1/DS2
Sidecast 3 Rock Outlets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Mission Creek Restoration project
Project Number: 178554
Stream: Mission Creek
Investigator(s): Ryan Phanor

Date: 10/22/21 **Time:** 0951
Town: Santa Barbara **State:** CA
Photo begin file#: 4890 **Photo end file#:** 4892

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: Reach of Mission Creek in Los Padres National Forest.

Projection: CA SP5 **Datum:** NAD_83 (2011)
Coordinates: 34.4413140°, -119.709053°

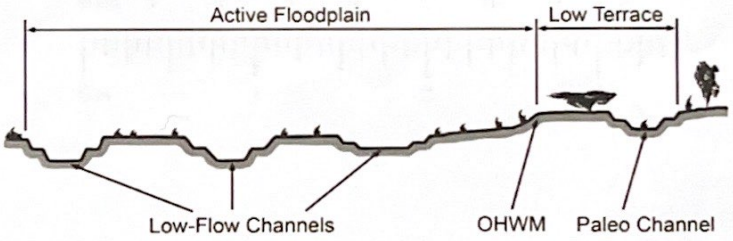
Potential anthropogenic influences on the channel system: Side cast material from trail along slope above canyon has fallen into the canyon adjacent to the streambed and along the bank.

Brief site description: Riparian / Riverine stream corridor w/ large cobbles + boulders + some finer sediments deposited in streambed. Plant community consists of coast live oak and sycamore growing along canyon walls, w/ alder, CA bay laurel, and a mixed herb/shrub understory of poison oak, mugwort, sticky snakeroot, wood fern, and monkeyflower.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

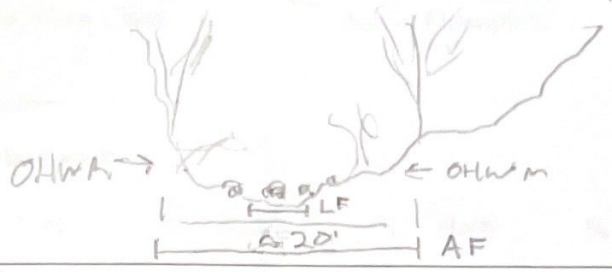
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☑ Mapping on aerial photograph
   - ☑ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

ect ID: MissionCreek **Cross section ID:** Sit1/DS2 **Date:** 10/22/21 **Time:** 0954

Cross section drawing:



OHWM

GPS point: OHWM DS2

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Clear break in bank slope, w/ sheer bank on east side of stream (facing DS). Large cobbles transition to rock wall/bnk. Veg. shifts from herbs/young saplings to larger, more mature trees.

Floodplain unit:

- [ ] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: LF DS2

Characteristics of the floodplain unit:

Average sediment texture: gravel

Total veg cover: 100 % Tree: 75 % Shrub: 5 % Herb: 25 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Clear bed and bnk, w large cobbles and finer sediments deposited in bed. Surface relief from boulders and areas of finer sediment. Drift and debris above LF along OHWM

ect ID: Cross section ID: Date: Time:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

None

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

☐ NA
☐ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☐ Presence of bed and bank
☐ Benches
☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☑ Active Floodplain ☐ Low Terrace

GPS point: AF DS2

Characteristics of the floodplain unit:

Average sediment texture: very fine sand

Total veg cover: 95 % Tree: 65 % Shrub: 5 % Herb: 15 %

Community successional stage:

☐ NA
☐ Early (herbaceous & seedlings)
☑ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

☐ Mudcracks
☐ Ripples
☑ Drift and/or debris
☑ Presence of bed and bank
☐ Benches
☑ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

presence of bed and bank w/ clear OHWM. AF characterized by some drift / debris deposited over top finer sediments than found in LF.

Site 1 / DS3
Sidecast 3 rock outlets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Mission creek Restoration
Project Number: 178554
Stream: Mission Creek
Investigator(s): Ryan Phanenf

Date: 10/22/21 **Time:** 1030
Town: Santa Barbara **State:** CA
Photo begin file#: 4950 **Photo end file#:** 4953

Y ☑ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details:

Projection: CA SPS **Datum:** NAD 1983(2011)
Coordinates: 34.462640°, -119.709235°

Potential anthropogenic influences on the channel system: Sidecast material from trail along slope above canyon has fallen into the canyon adjacent to the streambed and along the bank.

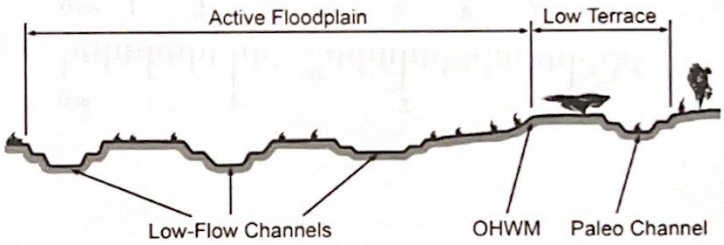
Brief site description: Riparian/riverine stream corridor w/ large cobbles + boulders + some finer sediments deposited along streambed. Plant community consists of coast live oak and western sycamore growing along canyon walls, w/ also CA bay laurel, and a mixed herb/shrub understory of poison oak, mugwort, sticky snakeroot, wood fern, and smilo grass.

Checklist of resources (if available):

- ☑ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☑ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☑ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units



Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

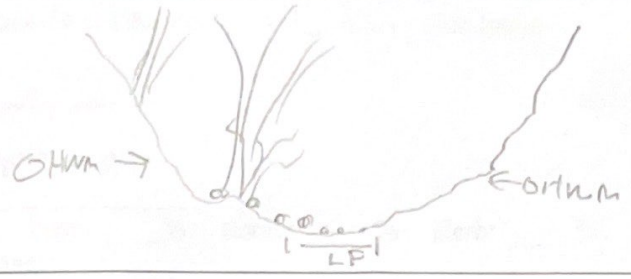
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☑ Mapping on aerial photograph
   - ☑ Digitized on computer
   - ☑ GPS
   - ☐ Other:

Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud

Project ID: Mission Creek **Cross section ID:** Site1/DS3 **Date:** 10/22/21 **Time:** 1032

Cross section drawing:



OHWM

GPS point: OHWM DS3

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Sediments finer above OHWM, below = granules + larger rock / cobble. Vegetation primarily herbaceous, w/ canopy cover below OHWM, above – denser herb + shrub. Clear break in bank slope.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: LF DS3

Characteristics of the floodplain unit:

Average sediment texture: granule

Total veg cover: 100 % Tree: 95 % Shrub: 5 % Herb: 10 %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [x] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Drift + debris throughout Low flow area. Clear drift deposit along OHWM abv low flow, w/ clear break in bank slope. Finer sediments deposited along channel bottom.

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

None

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Sidecast 3
Rock Outliers

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mission Creek Restoration Project City/County: Santa Barbara Sampling Date: 10/22/21
Applicant/Owner: Southern California Edison State: CA Sampling Point: SP1
Investigator(s): R. Phemenf Section, Township, Range: S33 T3N R27W
Landform (hillslope, terrace, etc.): Terrace/stream bank Local relief (concave, convex, none): slightly concave Slope (%): ~1%
Subregion (LRR): California Lat: 34.466304° Long: -119.787168° Datum: NAD 83
Soil Map Unit Name: Lodo-Sespe complex, 50-75% slopes NWI classification: PFOC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____ No ✓	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rhombifolia	45	Y	FACW
2. Umbellularia californica	15	Y	FAC
3. Quercus agrifolia	10	–	UPL
4.			
	70	= Total Cover	

Sapling/Shrub Stratum (Plot size: None.)			
1.			
2.			
3.			
4.			
5.			
	____	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Artemisia douglasiana	15	Y	FAC
2. Ageratina adenophora	5	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	

Woody Vine Stratum (Plot size: None)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum ~5% % Cover of Biotic Crust 0%

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	/	x 1 =	/
FACW species	45	x 2 =	90
FAC species	30	x 3 =	90
FACU species	5	x 4 =	20
UPL species	10	x 5 =	50
Column Totals:	90 (A)		250 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
✓ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: ~75 cover duff/leaf litter in herb stratum. Plant community w/in vicinity of SP1 was typical of a riparian/riverine system w/ a community composition consistent w/ what was observed elsewhere w/in Mission Creek.

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13"	10YR 3/4	100	/	/	/	/	loamy sand	forms ball with some difficulty, does not ribbon. Gritty.
13" =	bottom of Pit							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: rock as cobble
Depth (inches): 13"

Hydric Soil Present? Yes ___ No ✓

Remarks: No redox features or other hydric soils indicators observed. Consistent soil characteristics throughout profile. Soils appear to be well drained.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ✓ Drift Deposits (B3) **(Riverine)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___
Water Table Present? Yes ___ No ✓ Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None available.

Remarks: Soil pit taken on stream terrace/along OHWM. Evidence of wetland hydrology, but typical of riverine system. Water does not appear to pool/pond long enough to form hydric soils. Channel bed itself is very rocky/cobbly, with finer sediment generally consisting of coarse sands - pebbles.

Appendix B

Regulatory Overview and Definitions

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USACE Jurisdiction

The USACE, under provisions of Section 404 of the Clean Water Act and USACE implementing regulations, has jurisdiction over the "waters of the United States." "Waters" include all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, seasonal drainage channels, etc.), all impoundments of waters otherwise defined as waters of the U.S., tributaries of waters otherwise defined as waters of the U.S., territorial seas, and wetlands adjacent to waters of the U.S. USACE jurisdictional limits are typically identified by the presence of an Ordinary High Water Mark (OHWM). The OHWM is the line on the shore or banks of a water course 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 area. The USACE defines wetlands as containing three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology (USACE 1987, 2008a).

Since 1972, the Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA)jointly regulate discharges of dredged or fill material into "waters of the U.S." (WoUS), including wetland and non-wetland aquatic features, pursuant to Section 404 of the Clean Water Act (CWA). Section 404 is founded on the findings of a significant nexus (or connection) between the aquatic or other hydrological feature in question and interstate commerce via Relatively Permanent Waters (RPW), and ultimately Traditional Navigable Waters (TNW), through direct or indirect connection as defined by Corps regulations. However, the limits to which this is applied have changed over time as discussed below, as summarized in the EPA's *Current Implementation of Waters of the United States* (EPA 2021).

SWANCC and Rapanos

In 1984, the Migratory Bird Rule enabled the Corps to expand jurisdiction over isolated waters, and in 1985, the U.S. Supreme Court upheld the inclusion of adjacent wetlands in the regulatory definition of WoUS. However, in 2001, the Corps' jurisdiction was narrowly limited following the Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) in which the U.S. Supreme Court held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not, by itself, sufficient basis for the exercise of Federal regulatory authority under the CWA. In 2006, a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions in the consolidated cases of Rapanos v. United States and Carabell v. United States (collectively referred to as Rapanos), concluding that wetlands isolated by surface connection are WoUS nonetheless if they significantly affect the chemical, physical, and biological integrity of other covered waters (significant nexus). The Navigable Waters Protection Rule (NWPR) eliminated the case specific application of the significant nexus test articulated in the Rapanos decision.

2015 Clean Water Rule

In 2015, the Corps and EPA published the "Clean Water Rule" clarifying the scope of coverage of the CWA. Upon issuance however, numerous lawsuits were filed and consolidated in the Sixth Circuit, immediately putting a "stay" on its implementation. In January 2018, the U.S. Supreme Court ruled that the Sixth Circuit did not have jurisdiction over the case, and in February 2018, dismissed it and dissolved the stay. In August 2018, a Federal judge found that the suspension failed to give an adequate public notice and therefore violated the Administrative Procedure Act. The 2015 Clean Water Rule remained in effect in 22 states, including California, the District of Columbia, and the U.S. territories until the December 23, 2019.

Repeal of 2015 Clean Water Rule

On October 22, 2019, the EPA and the Corps published a final rule to repeal the 2015 Clean Water Rule and restore the regulatory methodology that existed prior to the 2015 Rule. Under this rule, which became effective on December 23, 2019, jurisdictional WoUS were defined by the 1986/1988 regulatory definition of WoUS under CWA regulations 40 CFR 230.3(s).

Navigable Waters Protection Rule

On January 23, 2020, the EPA and the Corps finalized the NWPR to define WoUS. On April 21, 2020, the EPA and the Corps published the NWPR in the Federal Register. On June 22, 2020, 60 days after publication in the Federal Register, the NWPR became effective across the nation including the state of California. Therefore, jurisdictional features were discussed in the June 2021 Delineation Report based on the methodologies associated with the NWPR.

Remand and Vacatur of the Navigable Waters Protection Rule

On August 30, 2021, the NWPR was remanded and immediately vacated by the United States District Court For The District Of Arizona. In light of this order, the EPA and the Corps halted implementation of the NWPR nationwide and reinstated the pre-2015 definition of WoUS. Under the pre-2015 definition of the WoUS, the Corps and EPA require the case specific application of the significant nexus test, as articulated in the Rapanos decision, to determine WoUS.

RWQCB Jurisdiction

Applicants for a Federal license or permit for activities that may discharge to WoUS must seek a Water Quality Certification (WQC) from the State or Indian tribe with jurisdiction[3]. In California, there are nine (9) Regional Boards that issue or deny Certification for discharges within their geographical jurisdiction. Such Certification is based on a finding that the discharge will meet water quality standards, which are defined as numeric and narrative objectives in each Regional Board's Basin Plan, and other applicable requirements. The State Water Resources Control Board (SWRCB) has this responsibility for projects affecting waters within multiple Regional Boards. The Regional Board's jurisdiction extends to all WoUS, including wetlands, and to waters of the State (described below, SWRCB 2019).

The Porter-Cologne 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 Act has become an important tool for the regulatory environment following the SWANCC[4] and Rapanos[5] court cases, with respect to the state's authority over isolated and otherwise insignificant waters. Generally, in the event that there is no nexus to a Traditionally Navigable Water (TNW), any person proposing to discharge waste into waters of the State that could affect its water quality must file a Report of Waste Discharge. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

On April 2, 2019 the State Water Resources Control Board adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the State; 3) wetland delineation procedures; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures were approved by the Office of Administrative Law on August 28, 2019 and became effective May 28, 2020.

3 Title 33, United States Code, Section 1341; Clean Water Act Section.

4 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001).

5 *Rapanos v. United States*, 547 U.S. 715 (2006).

CDFW Jurisdiction

Fish and Game Code section 1602 requires any person, state or local governmental entity, or public utility to notify CDFW before engaging in any activity that may "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake." If CDFW determines that the proposed activity "may substantially adversely affect an existing fish or wildlife resource," a Lake or Streambed Alteration Agreement containing "reasonable measures necessary to protect the resource" is required prior to commencing the activity (CDFW 2022).

Wetlands

The USACE defines wetlands as containing three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology (USACE 2008a). The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USFWS published the National List of Plant Species That Occur In Wetlands (Lichvar 2013), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Occur almost always (estimated probability >99%) under natural conditions in wetlands.
- **Facultative Wetland (FACW).** Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
- **Facultative (FAC).** Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
- **Facultative Upland (FACU).** Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).
- **Obligate Upland (UPL).** May occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the USFWS list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation (USACE 2008a). Field indicators of wetland soils include observations of ponding, inundation, or saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying, which indicates reducing conditions by a blue-grey color, or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation (USACE 2008a). If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Appendix C

Site Photographs

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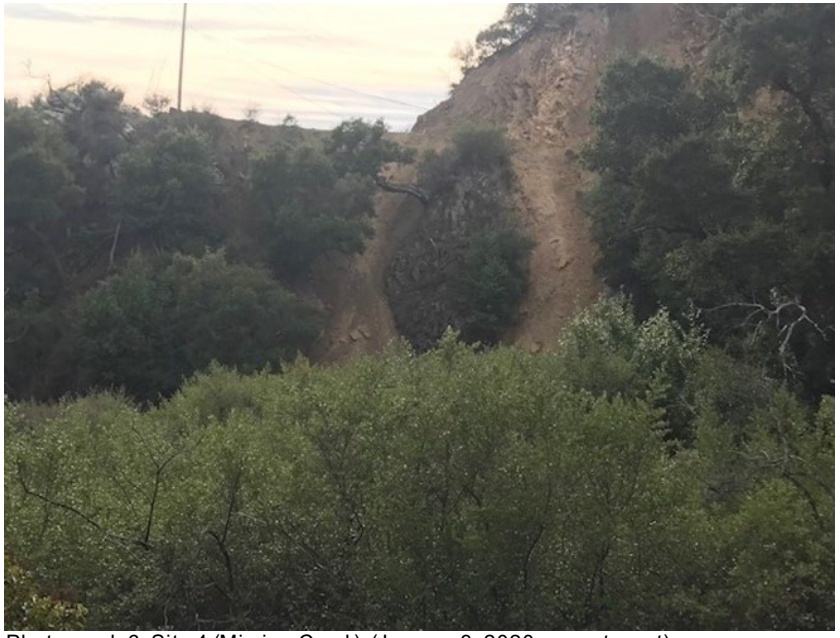
Photograph 1. Site 4 (Mission Creek) slope covered with jute netting and silt fencing installed at base of slope (January 3, 2020; aspect: south).

Photograph 2. Site 4 (Mission Creek) slope covered with jute netting and silt fencing installed at base of slope (January 3, 2020; aspect: south).

Photograph 3. Site 4 (Mission Creek) slope covered with jute netting and silt fencing installed at base of slope (January 3, 2020; aspect: south).

Photograph 4. Site 4 (Mission Creek) slopes covered with jute netting and silt fencing installed at base of slope (January 3, 2020; aspect: east).

Photograph 5. Site 4 (Mission Creek) slope covered with jute netting and silt fencing installed at base of slope (January 3, 2020; aspect: north).



Photograph 6. Site 4 (Mission Creek). (January 3, 2020; aspect: west).

Photograph 7. Site 4 (Mission Creek). (January 3, 2020; aspect: east).

Photograph 8. Site 4 (Mission Creek) (January 3, 2020; aspect: east).

Photograph 9. Site 3 showing side cast material off road, in foreground along Tunnel Trail. (January 3, 2020; aspect: west).

Photograph 10. Site 1, western bank (January 3, 2020; aspect: southeast).

Photograph 11. Site 1. showing east and west bank, along Tunnel Trail (January 3, 2020; aspect: northeast).

Photograph 12. Site 1 (east bank) showing side cast material off road/trail, (January 3, 2020; aspect: west).

Photograph 13. Site 6, no impacts from road grading activities observed (March 27, 2020; aspect: south).

Photograph 14. Site 6, no impacts from road grading activities observed (March 27, 2020; aspect: east).

Photograph 15. Other non-jurisdictional drainage features observed within Study Area (March 27, 2020; aspect: north).

Photograph 16. Other non-jurisdictional drainage features observed within Study Area (March 27, 2020; aspect: northeast).

Photograph 17. Looking upstream from Tunnel Trail at Drainage 1, no impacts from road grading activities observed (November 11, 2021; aspect: northwest).

Photograph 18. Looking upstream from Tunnel Trail at Drainage 2, no impacts from road grading activities observed (November 11, 2021; aspect: northeast).

Photograph 19. Looking downstream in Mission Creek, immediately adjacent to Sidecast 3 Rock Outliers Area (October 22, 2021; aspect: southwest).

Photograph 20. Looking downstream in Mission Creek, immediately adjacent to Sidecast 3 Rock Outliers Area (October 22, 2021; aspect: northeast).

Photograph 21. Looking downstream in Mission Creek, adjacent to Sidecast 3 Rock Outliers Area. Photograph depicts wrack and debris along OHWM (October 22, 2021; aspect: southwest).

Photograph 22. Looking downstream in Sidecast 3 Rock Outliers Area, depicting rock outliers location (October 22, 2021; aspect: southwest).

Photograph 23. Looking upstream from Mission Canyon Catway at Drainage 3, no impacts from road grading activities observed (November 11, 2021; aspect: north).

Photograph 24. Looking upstream from Mission Canyon Catway at Drainage 4, no impacts from road grading activities observed (November 11, 2021; aspect: north).

Photograph 25. Photograph 24. Looking upstream from Mission Canyon Catway at Drainage 5, (upstream of rockpile depicted in photograph) no impacts from road grading activities observed (November 11, 2021; aspect: northeast).

Photograph 26. Looking upstream from Mission Canyon Catway at Drainage 6 (upstream of rockpile depicted in photograph) no impacts from road grading activities observed (November 11, 2021; aspect: northwest)

Photograph 27. Photograph depicts SP1, performed within USACE/RWQCB non-wetland woUS immediately adjacent to Sidecast 3 Rock Outliers area (October 22, 2021).