

Habitat Mitigation and Monitoring Plan

Monterey Peninsula Water Supply Project Phase One

California American Water

July 3, 2019

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Executive Summary

This Habitat Mitigation and Monitoring Plan (HMMP) presents biological resource impacts associated with Phase One of the Monterey Peninsula Water Supply Project (MPWSP or Project) and provides a comprehensive plan to offset those impacts. This document has been prepared to support Mitigation Monitoring and Reporting Plan (MMRP) requirements and related permit conditions associated with the Project, in accordance with the current applicable environmental laws. The Project boundary for Phase One includes a biological study area (BSA) within which biological resources were identified and temporary and permanent impact boundaries were established (see Appendix A). The total acreages of temporary and permanent impacts to listed species or their habitats for Phase One of the Project are summarized in Table ES1.

Table ES1: MPWSP – Phase One Biological Resource Impacts

Common Name	Species Name	Listing Status	Temporary Impacts (acres) ^a	Permanent Impacts (acres) ^a
California tiger salamander	<i>Ambystoma californiense</i>	FT, ST	35.04	14.73

^a No observations of California tiger salamander presence were noted in any of two dozen surveys conducted between September 2013 and June 2019. Presence was assumed in upland habitat at the Desalination Plant as a result of conversations in the field with Brandon Sanderson, CDFW, and from CNDDDB occurrences within dispersal range.

Mitigation ratios negotiated with the California Department of Fish and Wildlife (CDFW), and associated mitigation credits to be purchased by California American Water (CalAm) from South Bay Conservation Resources at the Sparling Ranch Conservation Bank, are summarized in Table ES2.

Table ES2: California Tiger Salamander Mitigation Ratios and Required Mitigation Credits Calculation

Species	Negotiated Mitigation Ratios	Mitigation Area Needed	Action
California tiger salamander	1.1 : 1 ratio for temporary impacts	35.04 ac x 0.1 = 3.50 ac	Obtain 47.69 mitigation bank credits
	3.0 : 1 ratio for permanent impacts	14.73 ac x 3.0 = 44.19 ac	

The proposed compensatory mitigation will preserve high-quality California tiger salamander habitat in perpetuity at the Sparling Ranch Conservation Bank near Hollister, California.

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List of Acronyms

a	acres
afy	acre-feet per year
AMM	Avoidance and Mitigation Measures
BA	Biological Assessment
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
CalAm	California American Water
CCC	California Coastal Commission
CCH	Consortium of California Herbaria
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife (formerly CDFG)
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cm	centimeters
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CRLF	California Red Legged Frog
CRPR	California Rare Plant Ranking System
CTS	California tiger salamander
DVD	digital versatile disc
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
ESA	Endangered Species Act
FEIR	Final Environmental Impact Report
FESA	Federal Endangered Species Act
FR	Federal Regulations
ft	feet
GIS	Geographic Information System
GPS	Global Positioning System
HMMP	Habitat Mitigation and Monitoring Plan
in	inch
km	kilometers
m	meter

MBARD	Monterey Bay Air Resources District
MBNMS	Monterey Bay National Marine Sanctuary
MBTA	Migratory Bird Treaty Act
mi	mile
min	minute
MMRP	Mitigation Monitoring and Reporting Plan
MPWSP	Monterey Peninsula Water Supply Project
NEPA	National Environmental Policy Act
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
yr	year

Statement of Limitations

The information in this report is considered to be accurate at the date of issue and is in accordance with the conditions observed at the sites at the dates sampled. This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

This report includes permit requirements as well as guidelines for site assessment in accordance with permits, but does not substitute for agency permits. Agency permits, including the 401 certification, Incidental Take Permit, Biological Opinion, 404 permit, and 1600 agreement should be consulted for the final agency requirements.

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1. Introduction

The purpose of the proposed California American Water Monterey Peninsula Water Supply Project (MPWSP) is to produce, transfer, and store desalinated water in order to convey it to CalAm customers via the existing distribution system. Implementation of the Project will also increase use of existing storage capacity in the Seaside Groundwater Basin.

CalAm and the MPWSP are constrained by legal decisions affecting the Carmel River and Seaside Groundwater Basin water resources. State Water Resources Control Board (SWRCB) Order 95-10, SWRCB Order 2009-0060, and the Monterey County Superior Court's adjudication of the Seaside Groundwater Basin in 2006 substantially reduced CalAm's rights to use these two primary sources of water supply. On July 19, 2016, the SWRCB adopted Order WR 2016-0016, amending Order WR 2009-0060, requiring that unauthorized diversions end by December 31, 2021 regardless of whether the envisioned projects are timely built. CalAm must replace this reduction in source water with a consistent and reliable water supply in order to maintain existing service to its Monterey District customers. In response, CalAm has proposed the MPWSP to the California Public Utilities Commission.

The proposed MPWSP will consist of an infrastructure expansion and installation of a seawater desalination plant (referred to in this document as the Proposed Desalination Plant Property), in order to provide CalAm with a flexible and cost-effective approach to serve its 40,000 customers and to meet the SWRCB orders in a timely manner. The proposed MPWSP will serve the greater Monterey Peninsula (Figure 1-1). It consists of several distinct physical components which are described below.

- A seawater intake system, which would have seven intake slant wells (the existing test slant well would be converted to a permanent well, plus 6 new wells) located at the CEMEX Lapis Plant site. These wells would extend offshore below the sea floor into the submerged lands of Monterey Bay National Marine Sanctuary (MBNMS). A Source Water Pipeline would convey the combined source water from the intake slant wells to the Desalination Plant.
- A 6.4 million gallons per day (mgd) Desalination Plant and auxiliary facilities, including source water receiving tanks; pretreatment, reverse osmosis (RO), and post-treatment systems; chemical feed and storage facilities; brine storage and conveyance facilities; and other associated non-process facilities.
- Desalinated water conveyance facilities, including pipelines, a pump station, and treated water storage tanks.
- Brine storage and disposal system including an uncovered 3 million-gallon brine storage basin with two impermeable liners, brine discharge pipeline to a proposed Brine Mixing Facility at the Monterey One Water (formerly known as Monterey Regional Water Pollution Control Agency) (M1W) wastewater treatment plant and a combined discharge to the existing M1W ocean outfall that discharges into MBNMS.
- An expanded aquifer storage and recovery (ASR) system, including two additional injection/extraction wells (ASR-5 and ASR-6 wells) and three parallel pipelines: the ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, and ASR Recirculation Pipeline. These pipelines would convey water to and from the new ASR injection/extraction wells, and backwash effluent from the wells to an existing settling basin.

CalAm has developed this Habitat Mitigation and Monitoring Plan (HMMP) to document planned mitigation measures that will compensate for impacts to habitat and species associated with Phase One actions to be implemented for the MPWSP. The required mitigation can and will be implemented through a purchase of compensatory credits from South Bay Conservation

Resources, LLS and mitigation areas at the Sparling Ranch Conservation Bank located near Hollister, CA.

This HMMP for Phase One actions has been prepared per the Mitigation Monitoring and Reporting Plan (MMRP) established in the MPWSP Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (SCH# 2006101004), and to support established or planned permit conditions, consultations and authorizations that CalAm has received, or expects to receive, from the following agencies:

- The U.S. Fish and Wildlife Service (USFWS) Biological Opinion, (08EVEN00-2017-F-0613).
- The Central Coast Regional Water Quality Control Board (RWQCB), for Water Quality Certification No. 32718WQ04
- California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game [CDFG]):
 - Streambed Alteration Agreement Notification #1600-2018-0056-R4, and
 - Incidental Take Permit No. 2081-2018-027-04

This HMMP quantifies the anticipated species and habitat impacts associated with Phase One of the MPWSP and the compensation that CalAm proposes for those impacts. Compensation is addressed in this document by the purchase of compensatory mitigation bank credits.

1.1 Responsible Parties

California American Water is the permit applicant and is financially responsible for the attainment of the mitigation goals. The contact information is:

California American Water

Monterey County District
511 Forest Lodge Road #100
Pacific Grove, CA 93950
Phone: 831-646-3287

Contact: Ian Crooks

Vice President, Engineering
Phone: 831-236-7014

The name and contact information for the property manager of the land on which the mitigation will take place (where mitigation credits will be purchased):

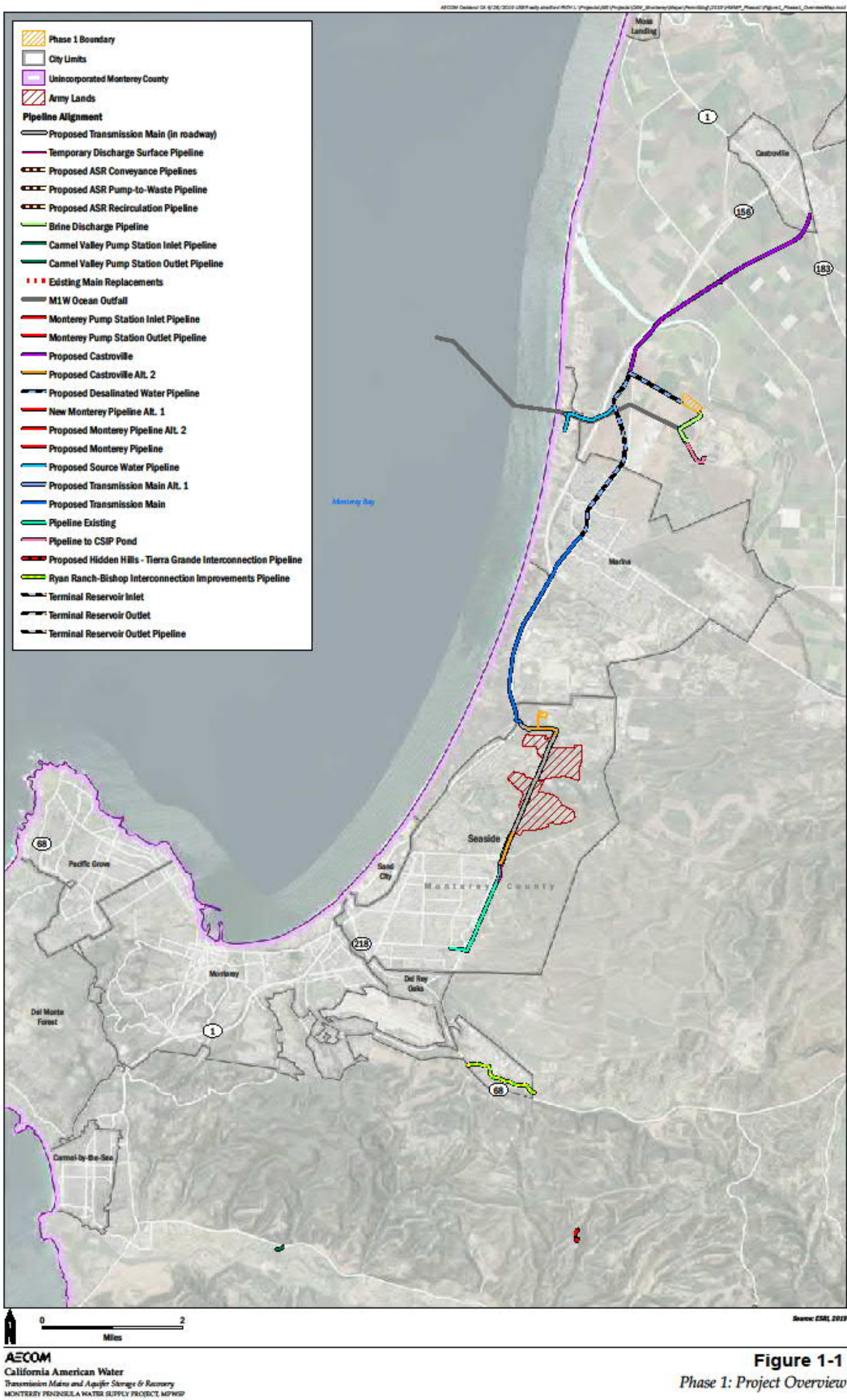
South Bay Conservation Resources, LLC

c/o Sparling Ranch Conservation Bank
2440 Bert Drive, Bldg. 200, Suite 201
Hollister, CA 95023
Phone: 831-636-3150

Contact: Michael C. Anderson

Principal
Phone: 831-630-1853

Figure 1-1. Project Overview



2. Project Requiring Mitigation

2.1 Location

The MPWSP is located in the cities of Marina, Seaside, the census-designated place of Castroville, Monterey, and unincorporated Monterey County (Figure 1-1). The Phase One Project area includes locations where pipelines and facilities will be installed initially, including proposed staging areas and their access routes (

Figure 2-1). Elevation in the entire Project area ranges from approximately 10 to 300 feet (3 to 91 meters) above mean sea level. Land use includes urban residential development, military properties, undeveloped land managed by California State Parks, and agricultural lands.

2.2 Brief Summary of Project

CalAm and the MPWSP are constrained by legal decisions affecting the Carmel River and Seaside Groundwater Basin water resources. SWRCB Order 95-10, SWRCB Order 2009-0060, and the Monterey County Superior Court's adjudication of the Seaside Groundwater Basin in 2006 substantially reduced CalAm's rights to use these two primary sources of water supply. SWRCB Order 95-10 established that CalAm must reduce diversion of water from the Carmel River to 3,376 acre-feet per year (afy) and SWRCB Order 2009-0060 established that CalAm must reduce diversion from the Seaside Groundwater Basin to 1,474 afy by December 31, 2016. On July 19, 2016, the SWRCB adopted Order WR 2016- 0016, amending Order WR 2009-0060, requiring that unauthorized diversions end by December 31, 2021 regardless of whether the envisioned projects are timely built. CalAm must replace this reduction in source water with a consistent and reliable water supply in order to maintain existing service to its Monterey District customers. In response, CalAm has proposed the MPWSP to the California Public Utilities Commission.

The proposed MPWSP will consist of an infrastructure expansion and installation of a seawater desalination plant (referred to in this document as the Proposed Desalination Plant Property), in order to provide CalAm with a flexible and cost-effective approach to serve its 40,000 customers and to meet the SWRCB orders in a timely manner. The purpose of the proposed MPWSP is to produce, transfer, and store desalinated water in order to convey it to CalAm customers via the existing distribution system. Implementation of the Project will also increase use of existing storage capacity in the Seaside Groundwater Basin. The proposed MPWSP will serve the greater Monterey Peninsula (

Figure 2-1). It consists of several distinct physical components which are described below.

Phase One of the MPWSP is comprised of the following planned facilities:

- The Desalination Plant (Figure 2-2) will be constructed on approximately 25 acres of a vacant, 46-acre parcel of land located along Charles Benson Road in unincorporated Monterey County. The plant will house the seawater desalination infrastructure used to desalinate 6.4 million gallons of water per day. The plant includes auxiliary facilities, including source water receiving tanks; pretreatment, reverse osmosis, and post-treatment systems; chemical feed and storage facilities; brine storage and facilities; and other associated non-process facilities.
- The Desalinated Water Pipeline and Transmission Main within the City of Seaside. The pipeline conveyance system installed during Phase One will include new pipelines that will eventually bring desalinated water to existing and subsequently phased CalAm water infrastructure. All of the new pipelines that will be installed in the City of Seaside will be

placed under currently paved areas within Lightfighter Drive and portions of General Jim Moore Boulevard.

A more detailed project description is provided in the MPWSP Biological Assessment (AECOM 2018).

2.2.1 Site Preparation and Construction Staging

Construction workers will clear and prepare the construction areas in stages, as construction progresses. The contractor will clear and grade the portions of the project area where work will occur just prior to the start of construction, removing vegetation and debris as necessary to provide a relatively level surface for the movement of construction equipment. The contractor will re-contour and restore all temporary construction work areas to their original profile and condition upon completion of construction, and will hydroseed or pave the areas, as appropriate.

Construction equipment and materials will be stored within the construction work areas to the extent feasible. For construction of facilities and pipelines, construction workers will also use six strategically located staging areas in the project vicinity. The proposed staging areas are sited with the intent of avoiding sensitive riparian areas or habitat for protected species and are primarily in paved parking lots located in highly disturbed areas.

Construction-related Best Management Practices (BMPs) will be implemented and construction activities will adhere to applicable permits. Soil or waste will be stockpiled and reused, to the extent feasible, or hauled away for offsite disposal at an approved landfill facility. Pipeline installation will be sequenced to minimize land use disturbance and traffic disruption to the extent possible.

Construction is expected to start no earlier than September 2019 and continue through end of 2022 (40 months total). A detailed description of construction activities is provided the MPWSP Biological Assessment (AECOM 2018).

Figure 2-1. Project Location

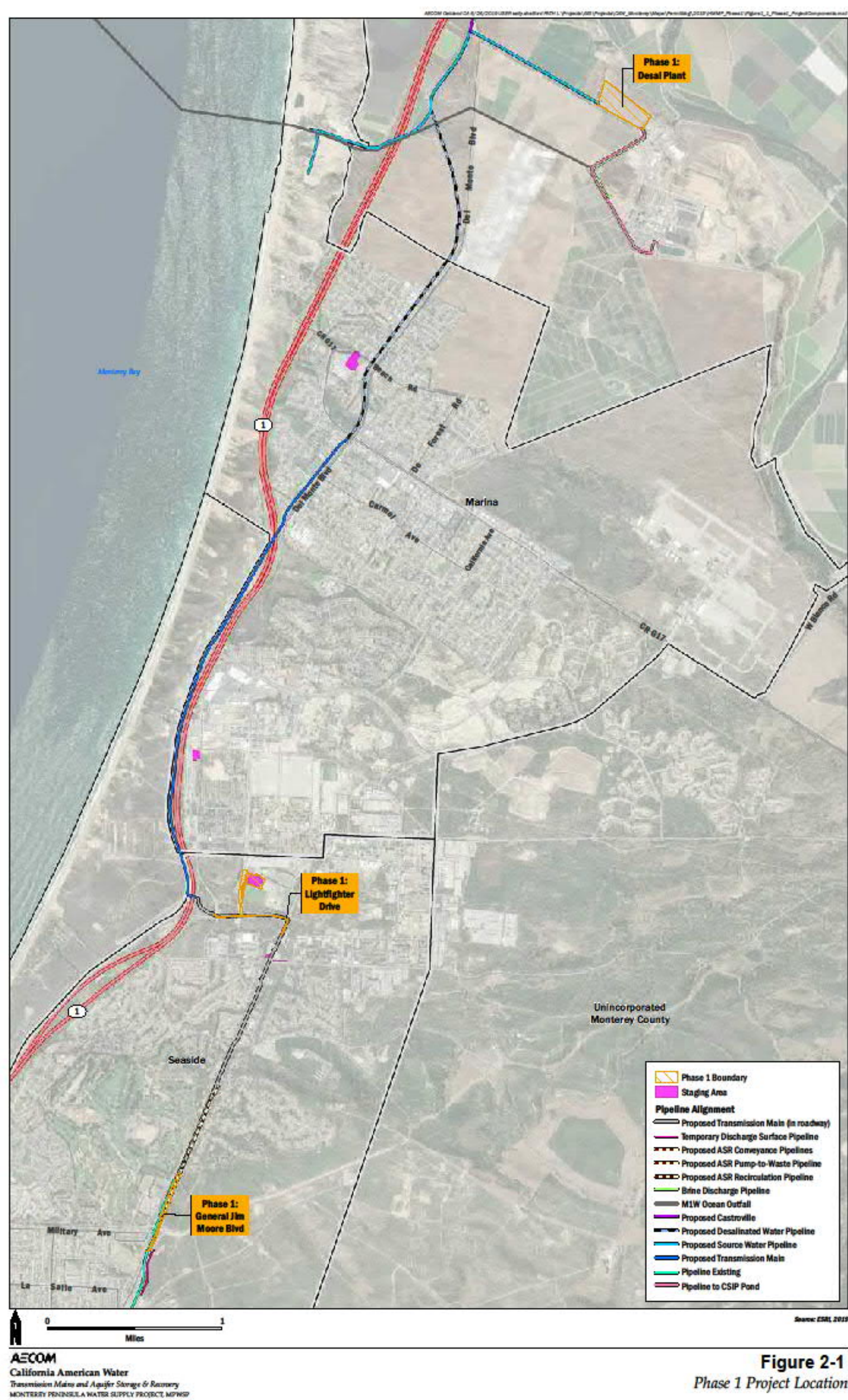
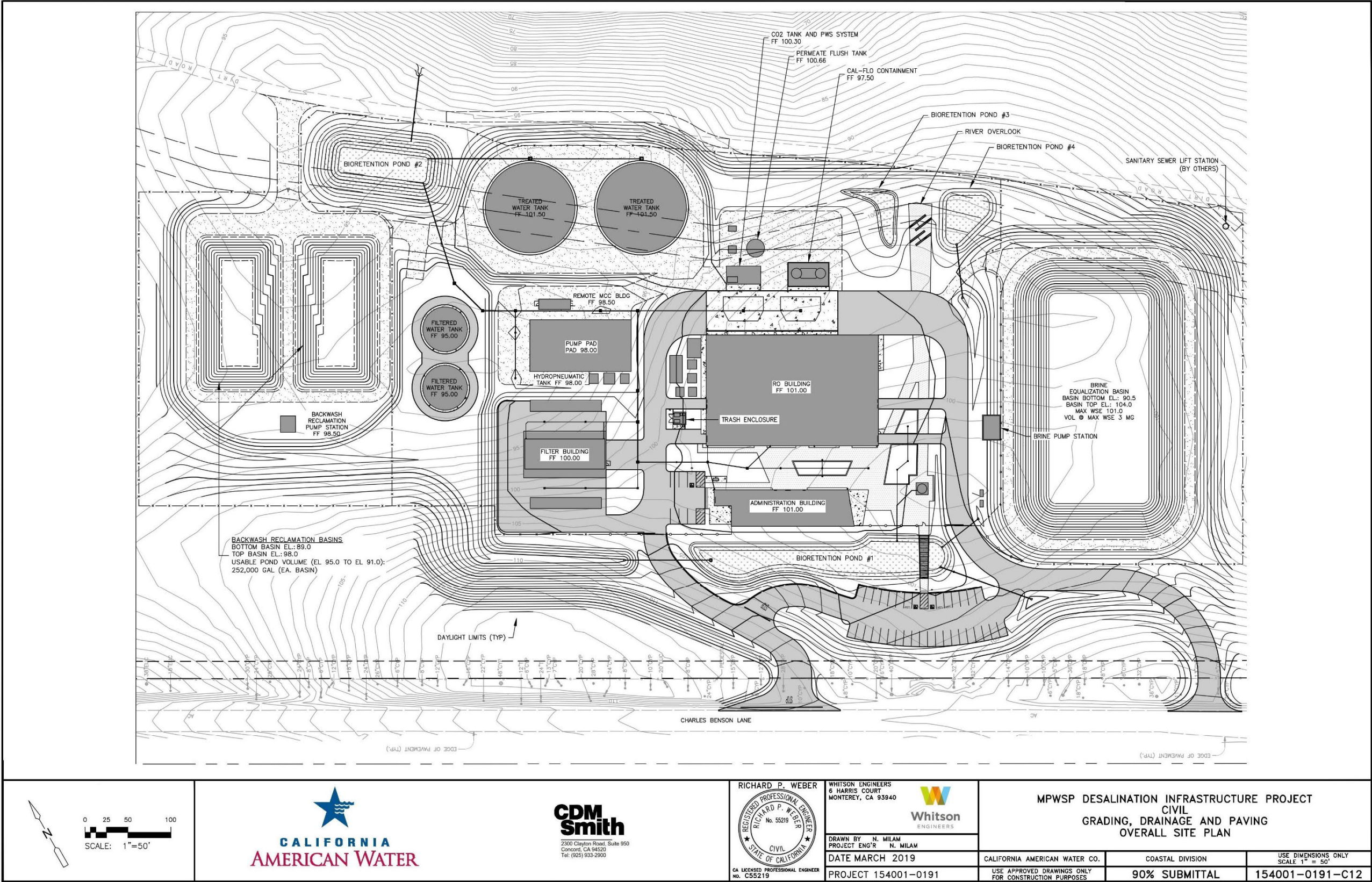


Figure 2-2. Desalination Overall Site Plan



3. Project Impacts, Avoidance, and Mitigation Measures

Construction of Phase One the MPWSP will result in impacts to biological resources. These impacts will be moderated through avoidance and mitigation measures (AMMs). In determining the potential direct and indirect impacts associated with construction and operation impacts on biological resources, the following assumptions and limitations were established:

- Temporary and permanent impacts to biological resources are mitigated for differently, with permanent impacts requiring greater mitigation.
- Temporary impacts would be defined as construction and operation impacts that can be fully restored to pre-disturbance conditions following construction. Temporary impacts would include construction staging areas, construction laydown areas, trenching areas, and other work space that would not be occupied by above-ground facilities during Project operation.
- Permanent impacts would be defined as having lasting effects beyond the Project construction period, or those that could not be fully restored following construction. Permanent impacts would include any above-ground areas that would be covered by structures such as the desalination plant structures.
- Assuming presence of special-status wildlife species, based on a habitat-level assessment, could overestimate the magnitude and severity of the impacts on these resources.
- Assuming presence of biological communities and special-status plant species in potentially suitable habitats where permission to enter was not granted could overestimate the magnitude and severity of the impacts on these resources.

The EIR/EIS provides established AMMs designated for biological resources within the Project area. These AMMs vary depending on temporary and permanent impacts, and also on location.

Table 3-1. Mitigation Requirements Per Biological Resource Applicable to Phase One Construction

Regulatory Entity	Mitigation Activity	Mitigation Requirements	Permanent and Temporary Mitigation Ratios	Responsibility
NEPA/CEQA			Lead Agencies	Lead Agencies
MBNMS/ CPUC	Terrestrial Biological Resources		Not applicable	MBNMS
	General			
	Retain a Lead Biologist to Oversee Implementation of Protective Measures	Prior to initiation of construction, CalAm and/or representatives of CalAm shall retain a qualified Lead Biologist to oversee compliance with avoidance and minimization measures for all special-status species and sensitive habitats. The Lead Biologist shall be onsite, or shall appoint qualified biologists and/or qualified biological monitors to be onsite, during all fencing and ground disturbance activities. The Lead Biologist shall ensure that all compliance monitoring activities are documented on a daily basis, and shall prepare a summary monitoring report on a monthly basis to be submitted to regulatory agencies upon their request. See page 4.6-170 of the EIR/EIS for detailed information.	Not applicable	CalAm/ AECOM
	Construction Worker Environmental Awareness Training and Education Program	Prior to starting work, all construction workers at the project areas shall attend a Construction Worker Environmental Awareness Training and Education Program developed and presented by the Lead Biologist, appointed qualified biologist, and/or qualified biological monitor. An acknowledgement form shall be signed by each worker indicating that environmental training has been completed. A sticker shall be placed on hard hats indicating that the workers have completed the environmental training. Construction workers shall not be permitted to operate equipment within the construction area unless they attended training. A copy of the training transcript/training video and/or DVD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms, shall be submitted to the CPUC. See page 4.6-171 of the EIR/EIS for detailed information.	Not applicable	CalAm/ AECOM
	Habitat Mitigation and Monitoring Plan	CalAm shall develop and submit a Habitat Mitigation and Monitoring Plan (HMMP) to the appropriate resource agencies (CCC, CDFW, CCRWQCB, USACE, USFWS, and local agencies that require a habitat mitigation and monitoring plan) for approval prior to Project construction. See page 4.6-190 of the EIR/EIS for detailed information.	Not applicable	CalAm/ AECOM

Regulatory Entity	Mitigation Activity	Mitigation Requirements	Permanent and Temporary Mitigation Ratios	Responsibility
	General Avoidance and Minimization Measures	Measures for this mitigation include limited vehicle speeds, standard best management practices, fueling of vehicles in paved areas, delineating construction and staging areas and several other measures. The complete list should be reviewed by the contractor. See page 4.6-172 of the EIR/EIS for detailed information.	Not applicable.	All
	Nesting Birds	Nesting birds may be present at all of the proposed facility sites. A qualified biologist shall conduct preconstruction avian nesting surveys prior to initiation of construction activities at all facility sites. For all construction activities scheduled to occur during the nesting season (February 1 to September 15), the qualified biologist shall conduct a preconstruction avian nesting survey no more than 10 days prior to the start of staging, site clearing, and/or ground disturbance. Copies of the survey results shall be submitted to the CPUC. If active nests are found in the project area or vicinity (500 feet for raptors and 300 feet for other birds), the nests shall be continuously surveyed for the first 24 hours prior to any construction related activities to establish a behavioral baseline and, once work commences, all nests shall be continuously monitored to detect any behavioral changes as a result of the project, if feasible. See page 4.6-185 of the EIR/EIS for detailed information.	Not applicable.	CalAm/ AECOM/ DD&A
	Control Measures for Invasive Plants	Construction best management practices shall be implemented in construction areas within or adjacent to lands with native plant communities that may be susceptible to non-native plant species invasion to prevent the spread of invasive plants, seed, propagules, and pathogens. An environmental inspector, under direction of the Lead Biologist or appointed qualified biologist (see Mitigation Measure 4.6-1a) shall inspect vehicles and equipment prior to Project initiation at applicable work areas (listed above) for weed seeds and plant fragments that could colonize within the site or be transported to other sites. At Project initiation, all construction vehicles must be cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that are not clean shall be rejected until clear of weed seed and plant fragments. See page 4.6-193 of the EIR/EIS for detailed information.	Not applicable.	CalAm/ AECOM/ Contractor

Regulatory Entity	Mitigation Activity	Mitigation Requirements	Permanent and Temporary Mitigation Ratios	Responsibility
	Off-site Mitigation Program	CalAm shall work with the Monterey Bay Air Resources District (MBARD) and put forth a good faith effort to fund an off-site mitigation program that would be contemporaneous with Project construction to offset construction-related NOx. CalAm shall provide to the lead agencies documentation showing that it has reached an agreement with MBARD to fund an off-site emissions mitigation program that shall include offsets to be executed during construction of the Project. If such a program is determined by CalAm and MBARD to be infeasible given the construction schedule of the project, CalAm shall provide documentation to the Lead Agencies that substantiates such a determination. All documentation shall be provided to the Lead Agencies at least two weeks prior to the commencement of construction. See page 4.10-26 of the EIR/EIS for detailed information.	Not applicable.	CalAm/ AECOM/ Contractor
Federal Permits/Approvals				
US Fish and Wildlife Service	Section 7 Federal ESA Biological Opinion (BO) Conditions			
	General Avoidance and Minimization Measures:			
	Conservation Measures	Worker Environmental Awareness Training and Education Program* Preconstruction Surveys and Biological Monitoring* General Best Management Practices* Habitat Mitigation and Monitoring Plan* Exclusionary Fencing & Avoidance* Trash Abatement* Site-specific Construction Lighting Measures* *These measures in the BO (page 7) mirror those found within the EIR/EIS Notes: Preconstruction Surveys and Biological Monitoring; Retain a Lead Biologist Mitigation in EIR/EIS (page 4.6-171) General Best Management Practices = General Avoidance and Minimization in the EIR/EIS (page 4.6-172).	Not applicable	CalAm/ AECOM
	General Noise Controls	Construction equipment with internal combustion engines shall have sound control devices at least as effective as those provided by the original equipment manufacturer. No equipment will be permitted to have unmuffled exhaust. Impact tools must be hydraulically or electrically powered wherever possible. Stationary noise sources must be as far from nearby sensitive special-status species habitat as possible. See page 3-5 of the Biological Assessment (BA) for detailed mitigation. (BA, pg. 3-5; EIR/EIS, pg. 4.12-37).	Not applicable	CalAm/ AECOM/ Contractor

Regulatory Entity	Mitigation Activity	Mitigation Requirements	Permanent and Temporary Mitigation Ratios	Responsibility
Species-Specific Avoidance and Minimization				
	California Tiger Salamander and CRLF	The qualified biologist will prepare a relocation plan that describes appropriate survey and handling methods. Preconstruction surveys will be conducted 5 days prior to and again immediately prior to, vegetation removal, grading, or installation of exclusion fence to identify the species. For more detail, see BA 3-12 or EIR/EIS 4.6-193.	BO requires 3:1, EIR/EIS Requires 2:1 for permanent impacts; 1.1:1 required for temp impacts; Purchase conservation credits (BO Page 11)	CalAm/ AECOM/
	Birds Covered by the Migratory Bird Treaty Act*	Refer to Nesting Birds (EIR/EIS 4.6-185).	Not applicable	CalAm/ AECOM
State/Regional Permits/Approvals				
RWQCB	Section 402 NPDES			
California Department of Fish and Wildlife	CESA Section 2081 Incidental Take Permit			

3.1 Biological Resources

This section describes biological resources impacted by Phase One of the Project that would require compensatory mitigation. To identify sensitive biological resources within the Project area, AECOM biologists performed background investigations, field surveys, and MaxEnt modeling. Identification of suitable habitats for sensitive species was essential, as mitigation requirements are not typically focused on the numbers of impacted individual special-status species alone, but on the size of the impacted habitat. AECOM biologists have surveyed the entire Project area and all adjacent areas within 50 feet of the 46-acre CalAm property parcel boundary. This section describes the methodology used to survey the entire Project area; however, only findings relevant to Phase One of the Project are presented here.

3.1.1 Special-Status Species

Special-status species are plants or animals legally protected under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or other regulations such as the California Native Plant Act and the Migratory Bird Treaty Act (MBTA). Special-status species include the following:

- Species listed or proposed for listing as threatened or endangered under the ESA (50 Code of Federal Regulations [CFR] 17.12 [listed plants]; 50 CFR 17.11 [listed animals]).
- Species that are candidates for possible future listing as threatened or endangered under the ESA (81 Federal Regulations [FR] 87246).
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5).
- Species listed as CDFW species of special concern in the CDFW California Natural Diversity Database (CNDDDB) Special Animals List (CDFW 2017).
- Animals that are fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]) (CDFW 2016a).
- Bird species of conservation concern as identified by USFWS in Birds of Conservation Concern 2008 (USFWS 2008).
- Birds listed under the MBTA (16 U.S. Code Sections 703 to 712).
- Bald and golden eagles protected under the Bald and Golden Eagle Protection Act (16 U.S. Code Sections 668 to 668d, 54 Statute 250).
- Species that meet the definitions of 'endangered, rare or threatened' under CEQA (CEQA Guidelines Section 15380).
- Plant species listed as rare under the California Native Plant Protection Act (California Fish and Game Code Sections 1900 – 1913). These include species falling under the California Rare Plant Ranking (CRPR) System developed by the California Native Plant Society (CNPS). The CRPR System rates rare species based on the following lists (CNPS 2001):
 - CRPR 1A: Plants presumed extirpated in California and either Rare or Extinct elsewhere.
 - CRPR 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
 - CRPR 2A: Plants presumed extirpated in California, but more common elsewhere.
 - CRPR 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

- CRPR 3: Plants about which more information is needed - a review list.
- CRPR 4: Plants of limited distribution - a watch list.

3.1.2 Background Investigation

As part of the background investigation, AECOM reviewed the following literature and databases to determine the potential species or sensitive habitats of concern in the Biological Study Area (BSA):

- CNDDDB/RareFind: A map of special-status plant and wildlife species was prepared through an inquiry using the RareFind program and a Geographic Information System (GIS) mapping of all occurrences within 10 miles (16 kilometers) of the BSA. This was performed to ensure that all special-status species whose geographic location data had been suppressed were captured in the query (CNDDDB 2018).
- A query was made of the online USFWS (USFWS 2018) species list for Monterey County.
- A query was made of the CNPS' Inventory of Rare and Endangered Plants of California (8th edition) (CNPS 2018) for the 10 miles surrounding the BSA.
- A query was made of the database of Calflora (Calflora 2018), which contains information on California plants for education, research, and conservation.

3.1.3 Ecological Modeling

Ecological modeling was conducted for all federal, State, and CRPR-listed species with the potential to occur in the BSA. Maxent¹ software was used to help determine areas with moderate to high species occurrence potential. GIS specialists and qualified biologists input occurrence records, project survey data, and species range information to determine the potential of sensitive species to occur in the BSA.

Occurrence records were obtained from a variety of sources, including:

- CNDDDB (CNDDDB 2018);
- VertNet (VertNet 2018);
- Amphibiaweb (Amphibiaweb 2018);
- The Consortium of California Herbaria (CCH) (CCH 2018);
- Calflora (Calflora 2018); and
- Data collected during field surveys.

After these data were entered, the Maxent software identified patterns drawn from environmental features (such as soil, precipitation, and temperature data from the record localities) to produce an estimate of the species' distribution throughout the BSA. The output used differentiated layers to indicate where the species has a greater or lesser likelihood to occur.

3.1.4 Field Surveys

In addition to a background review and Maxent modeling, AECOM biologists conducted on-the-ground surveys to determine the presence or likelihood of sensitive resources. This section summarizes the methods used to complete the field surveys. Table 3-2 lists the survey dates of the various biological resource surveys described in this section.

¹ The Maxent software package is a tool for species distribution and environmental niche modeling.

Table 3-2. Biological Resource Survey Dates

Survey Type	Survey Dates	
Reconnaissance Field Trip	July 24, 2013	
Delineation of Jurisdictional Waters	March 18–21, 2014 April 22–24, 2014 June 9, 2016	
Habitat Assessment, General Wildlife Surveys	September 3–5, 2013; March 19–21, 2014; April 22–24, 2014; June 11–18, 2014; March 14–17, 2016; April 25–29, 2016; May 16–17, 2016; May 23–24, 2016;	May 31–June 1, 2016; June 15–16, 2016 March 19–23, 2018 April 9–13, 2018 May 14–18, 2018 June 13–15, 2018 December 20–21, 2018
Botanical Surveys, Plant Communities	September 3–5, 2013; March 17–21, 2014; April 22–24, 2014; June 11–18, 2014; April 7–9, 2015; May 20–22, 2015; June 10, 2015; June 15–18, 2015; March 14–18, 2016;	April 25–29, 2016; June 6–10, 2016 March 19–23, 2018 April 9–13, 2018 May 14–18, 2018 June 13–15, 2018 April 15–18, 2019 May 14–17, 2019 June 11–14, 2019
Nesting Bird/Raptor and Bank Swallow Surveys	March 14–17, 2016 April 25–29, 2016 June 6–10, 2016 August 6–8, 2018	
California Red-Legged Frog Protocol-Level Surveys	April 24, 2016 May 23–24, 2016 May 31–June 1, 2016 June 6, 2016 June 7–9, 2016 June 15–16, 2016	June 27–28, 2016 September 20–22, 2016 February 20–21, 2018 March 19–23, 2018 April 3, 2018 May 20, 2018
Burrowing Owl and Loggerhead Shrike Surveys	March 16, 2016 June 6–8, 2016 June 8, 2016 June 27–28, 2016 February 14–15, 2018 April 11–13, 2018 May 16–18, 2018 June 6–7, 2018	September 5–6, 2018 September 26–28, 2018 October 24–26, 2018 November 7–8, 2018 April 24–16, 2019 May 7–10, 2019 June 4–7, 2019
Bat Surveys	August 6–8, 2018	

3.1.4.1 Reconnaissance Field Trip

A reconnaissance field trip was conducted to review and obtain preliminary information for the purpose of planning the various field survey efforts and to determine health and safety hazards, resources present, and potential biological issues. The reconnaissance survey was conducted on July 24, 2013 and included a walking tour as well as driving tour of portions of the Project footprint.

3.1.4.2 Inaccessible Features

In general, where properties within the BSA were not accessible because permission to enter was not granted, field crews performed visual surveys from adjacent public roads or parcels. In these cases, the crews recorded the extent of jurisdictional waters by drawing on field maps and manually digitizing visible features on a handheld GPS unit. If the feature could not be viewed in the field, a GIS specialist, with the assistance of the wetland ecologist, estimated the extent of the jurisdictional waters remotely using background information, field notes, and recent aerial photographs.

3.1.4.3 Habitat Assessment

Habitat assessment field surveys were conducted throughout the BSA to identify and map sensitive communities, in addition to habitat which may be useful to both wildlife and botanical resources. All habitats were identified to, and named as, a natural or semi-natural vegetation community in the BSA using the keys in MCV2 (Sawyer et al. 2009). These were hand-drawn on the field map book, which was at a scale of 1 inch = 200 feet (2.5 centimeters = 61 meters; 1:2,400). Communities were mapped if they were the same size or greater than the minimum mapping unit of 0.5 acre (0.2 hectare) established for these surveys.

The habitat assessment was general in nature; it was not intended to be a substitute for protocol-level surveys. Habitat assessment surveys were conducted by a combination of meandering pedestrian transect surveys of the BSA and windshield surveys from existing public roads, where permitted, and from individual parcels, depending on their permission-to-enter status.

Primary activities of the wildlife habitat assessment included the following:

- Investigating specific habitat elements (e.g., rock outcrops, north facing slopes, burrow concentrations) that may be suitable for special-status wildlife species.
- Confirming, identifying, and describing known or previously unreported suitable habitat for special-status species.
- Identifying and mapping locations of observed special-status wildlife species.

Information gathered during the background review and data collected during field surveys were used to make preliminary determinations of special-status species' potential to occur in the BSA. The locations of special-status wildlife species observed in the BSA were recorded using a Trimble GeoXH GPS unit or were hand-mapped, as appropriate. Observations included those species that were directly observed and those species whose presence can be inferred based on diagnostic signs such as burrows, fresh tracks, bird songs or calls, scat, or nests. All wildlife species observed, regardless of listing status, were identified to the species level and recorded (Appendix B) according to nomenclature found in Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFW 2016c).

3.1.4.4 California Red-Legged Frog Surveys

In 2016 site assessments were conducted for all aquatic features within California red-legged frog (*Rana draytonii*) dispersal distance (1.0 mile [1.6 kilometers]) from the BSA following the 2005 USFWS *Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog* (USFWS 2005). Following the site assessments, field surveys were conducted of

aquatic features in the BSA that were determined to contain potential California red-legged frog habitat.

Protocol level surveys followed the guidelines outlined in the USFWS's *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005). Based on these guidelines, both breeding and non-breeding surveys took place at suitable aquatic features. At each suitable aquatic feature, biologists conducted a total of two daytime and four nighttime breeding season surveys in addition to one daytime and one nighttime nonbreeding season survey.

3.1.4.5 California Tiger Salamander Assessment

Due to lack of access, no protocol-level surveys were conducted for California tiger salamander (*Ambystoma californiense*). Potential for this species, including habitat, was based on on-the-ground habitat assessments, in addition to Maxent modeling and desktop analyses, and conversations with resource agency staff.

3.1.4.6 Santa Cruz Long-Toed Salamander Assessment

Due to lack of access, no protocol-level surveys were conducted for Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*). Potential for this species, including habitat, was based on known species range, on-the-ground habitat assessments, and desktop analyses.

3.1.4.7 Reptile Species of Special Concern

Reptile species of special concern include coast horned lizard (*Phrynosoma blainvillii*), and Northern California legless lizard (described as two subspecies under the MMRP: black legless lizard (*Anniella pulchra nigra*) and silvery legless lizard (*Anniella pulchra pulchra*). These species were incidentally surveyed for during habitat assessment/general wildlife. Both species were observed within the BSA; coast horned lizard along the existing pipeline, and Northern California legless lizard near the intake wells on CEMEX property. Due to the fossorial nature of the California legless lizard, presence is assumed wherever sandy soils are present.

3.1.4.8 Smith's Blue Butterfly Assessment

There are no protocol-level surveys for Smith's blue butterflies (*Euphilotes enoptes smithi*), whose flight period occurs later than the general wildlife and botanical surveys were conducted. However, biologists took data on the presence of the Smith blue butterfly's host plants, sea cliff buckwheat (*Eriogonum parvifolium*) and coast buckwheat (*Eriogonum latifolium*). Any location where the host plants were observed was presumed to contain habitat for this species.

3.1.4.9 Snowy Plover

Western snowy plovers (*Charadrius nivosus nivosus*) have the potential to occur at the CEMEX Property. Due to access restrictions, AECOM biologists did not conduct protocol-level surveys for this species, but relied on Point Blue monitoring which occurs regularly at the CEMEX Property. Snowy plovers are known nesting from the CEMEX property.

3.1.4.10 Bank Swallow Surveys

Qualified biologists performed focused surveys for bank swallow (*Riparia riparia*) within the MPWSP during four separate survey events. The survey periods were chosen to capture peak activity of the species during the breeding season and coincided with days that offered good visibility and optimum weather conditions. The survey methodology included an investigation of potential foraging and nesting habitat throughout the BSA.

The June 2016 surveys focused on locations where bank swallows had been previously recorded in order to obtain more detailed observations of the species' occupancy of the BSA, and to investigate if the species was nesting. In May 2017 a biologist performed a focused investigation of the dunes and previously documented bank swallow colony at Fort Ord State

Park to determine the effect, if any, of the heavy winter rains on the colony. The same location was visited in August 2018.

3.1.4.11 Western Burrowing Owl and Loggerhead Shrike Surveys

Wildlife biologists surveyed areas with potential habitat for burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludovicianus*) within the BSA. The burrowing owl surveys were conducted in accordance with the Staff Report on Burrowing Owl Mitigation provided by CDFW (2012). The CDFW protocol calls for four site visits during the breeding season (between February and the end of August), in good weather conditions, timed to occur around sunrise and sunset. During surveys, biologists looked for burrows, especially those with signs of owl activity at the entrance, western burrowing owls, loggerhead shrikes and shrike nests. Two to four surveyors walked transects through suitable habitat over the entire BSA. Where access was granted, pedestrian survey transects were generally spaced 100 feet (30 meters) apart to allow for complete visual coverage of the ground surface. During these surveys, any burrows, nests, and bird locations observed were recorded on the site map and on the datasheet. Where access was not granted, surveys were conducted by scanning habitat with scopes and binoculars, and using auditory cues (i.e., the song of the loggerhead shrike) to determine presence.

3.1.4.12 Nesting Bird/Raptor Surveys

Qualified biologists performed focused nesting raptor surveys in the BSA during five surveys within three separate survey events in 2016. The survey periods were chosen to capture peak activity of courtship, nest-building, and brooding during the breeding season and were done in accordance to the recommended timing for Swainson's hawk (*Buteo swainsoni*) nesting surveys (CDFG 2000). The survey methodology included an investigation of potential foraging and nesting habitat throughout the BSA, focusing on areas where eBird and CNDDDB occurrences had been reported, and extending a half mile from the BSA, as recommended by CDFG (2000). Nesting raptor surveys were not conducted in 2017 or 2018. It is recommended that nesting raptor surveys take place the seasons prior to construction.

3.1.4.13 Bat Surveys

Three qualified biologists performed focused bat surveys in the BSA from August 6–8, 2018, to coincide with summer maternity season. Surveys consisted of daytime inspections to evaluate habitat suitability, look for evidence of bat use, and document presence of bats. Bridges and trees suitable for roosting were surveyed throughout the Project area. Bat activity was confirmed visually during daytime surveys, and during the evening emergence using night vision and acoustic detection under the north span of Highway 1 (August 6) and under the Del Monte Road bridge (August 7). Two Echo Meter Touch 2 PRO units (Wildlife Acoustics, Inc.) were deployed and operated using iPads (Apple, Inc.) during each evening survey. Bat calls were viewed on the iPads in real time, and the recordings were saved and later reviewed using Kaleidoscope Pro 5 (Wildlife Acoustics, Inc.). Suitable roosting habitat is present at all bridges within the BSA; however, evidence of active bat roosting was only found at Del Monte Road bridge and the north span of Highway 1 bridge. Evidence at the Del Monte Road bridge suggests it may be used as a night roost and could serve as a day roost during other times of the year. Additional seasonal surveys are recommended for this bridge.

A significant maternity roost of greater than 2,000 individuals of *Myotis* species was found under the north span of Highway 1, which is within 100 feet of the Del Monte Road bridge. Two *Myotis* species were detected in large numbers, visually and acoustically (Yuma myotis [*Myotis yumanensis*] and California myotis [*Myotis californicus*]), along with a much smaller number of Mexican free-tailed bats (*Tadarida brasiliensis*) and big brown bats (*Eptesicus fuscus*).

3.1.4.14 Botanical Surveys

Botanical surveys were conducted in 2014, 2015, 2016, 2018, and 2019 to map plant communities and to identify any special-status plant species present in the BSA. Botanical surveys were conducted according to the methods described in the *CNPS Botanical Survey Guidelines* (CNPS 2001), the *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFG 2009), and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996). In addition to the presence of special-status plants, botanical surveys recorded the presence of all native and naturalized plant species occurring within the alignments, including invasive species.

3.1.4.15 Special-Status Plants

All observed plants, including special-status plants located within the BSA, were identified to the finest taxonomic level possible using the *Jepson Manual, 2nd Edition* (Baldwin 2012) and *The Plants of Monterey County, An Illustrated Field Key, 2nd Ed.* (Matthews and Mitchell 2015). All special-status plant occurrences were mapped as contiguous populations (groups of individuals which fell within no greater than 0.25 mile [0.40 kilometer] from each other). Contiguous populations were recorded on a Trimble GeoXH GPS and CNDDDB forms were generated. Individual rare plants were marked with a single point locus on the GPS, and given a 20-foot (6-meter) buffer on the maps. Populations of special status plants or colonial shrubs greater than 20 feet (6 meters) in diameter were mapped as polygons.

Special-status plants bloom at varying times of the year, particularly in coastal Monterey County. Because the majority of species can only be identified by their flowers or fruits, a minimum of three separate seasonal survey periods were required to adequately capture all potential bloom periods for special-status plants. The first surveys were conducted in the fall of 2013 and continued into the spring and summer of 2014. However, because 2014 was considered a drought year in California, and because low rainfall can change bloom periods or even prevent a species from being detectable, staff at CDFW suggested that reference population surveys were necessary in conjunction with special-status plant surveys. Reference population surveys are also recommended as part of the *CNPS Rare Plant Program's Botanical Survey Guidelines* (CNPS 2001).

The reference population surveys included visiting known extant populations of as many of the special-status plant species occurring within a 10-mile (16-kilometer) radius of the BSA as could be accessed. To ensure that these plants were detectable during the same time frame surveys were being conducted, reference population surveys were conducted throughout, adjacent, or within 10-miles of the BSA, depending on access, within the same week as the special-status plant surveys. Additionally, botanists obtained bloom reports from other professional botanists and firms (such as Arcadis and Denise Duffy & Associates) who had conducted surveys at different times.

Special-status plant surveys continued in 2015, 2016, 2018, and 2019 when rainfall conditions were more conducive to blooms, and all of the highest-priority special-status plant species had been detected at reference populations.

3.2 Limitations that May Influence Results

Several limitations were encountered during field surveys within the BSA and may influence the results of the studies. These limitations are associated with the following issues:

- Lack of permissions to enter some private properties,
- Lack of access to all portions of certain properties,
- Timing of seasonal surveys, and

Where possible, areas close to public access were surveyed with binoculars or spotting scopes. Due to the inaccessibility of some portions of the BSA and the limitations of annual survey timing or inclement weather, it is possible that some special-status species in the BSA were not directly observed during surveys. A lack of observation of a species during the field surveys therefore does not indicate that the species is not present in the BSA. Instead, for all areas where field access was limited, conservative assumptions regarding the presence of biological resources were made based on assessments from adjacent areas, aerial photo interpretation, and/or post-survey GIS analysis.

Survey results reported in this section include data only for the species to be covered in the ITP. Survey results for other species are covered in other, separate reports including, but not limited to, *California Red-Legged Frog Survey Report for California American Water Monterey Peninsula Water Supply Project* (AECOM 2019), *Western Burrowing Owl and Loggerhead Shrike Survey Results for California American Water Monterey Peninsula Water Supply Project* (AECOM 2019), and *Monterey Peninsula Water Supply Project Biological Resources Technical Memorandum* (AECOM 2019).

3.3 Phase One MPWSP Biological Survey Results

While not observed during multi-year surveys, based on a review of published sources and discussions with CDFW staff, AECOM biologists have assumed the following State or federally threatened and endangered sensitive species as having the potential to be present within the Phase One work area for the proposed MPWSP Desalination Plant.

Table 3-3. Federally or State Threatened and Endangered Species with Moderate or Higher Potential to Occur in Phase One of the MPWSP

Federally or State Threatened or Endangered Plants

Species Name	Common Name	Listing Status	Likelihood of Occurrence	Notes
<i>Ambystoma californiense</i>	California tiger salamander	Federally and State Threatened	Moderate: Known adjacent to MPWSP	No observations made during focused surveys in the BSA.

In addition to this species, data on non-threatened or endangered special-status wildlife species were observed, however, none occur in the Phase One area of the Project.

Additionally, CalAm has modified elements of the design of the MPWSP to minimize possible take of all listed species with the potential to occur in the BSA. This document outlines the proposed avoidance and minimization measures that will be implemented to avoid potential take.

3.4 Impacts to Sensitive Species

Subsequent to determining what species would be impacted as a result of activities related to Phase One of the Project, data on habitat type and on actual occurrences were analyzed to further refine where habitat of these species may occur within the Phase One Project area. Based on the habitat present in the Project area, both temporary and permanent impacts were determined. Table 3-4 summarizes the calculated acreages of temporary and permanent impacts to federally and State listed species' habitats.

Table 3-4. Temporary and Permanent Impacts to Federally and State Listed Species

Federally or State Threatened or Endangered Animals

Table 3-4. Temporary and Permanent Impacts to Federally and State Listed Species**Federally or State Threatened or Endangered Animals**

Common Name	Species Name	Listing Status	Temporary Impacts (acres)	Permanent Impacts (acres)
California tiger salamander	<i>Ambystoma californiense</i>	Federally and State Threatened	35.04	14.73

^a No observations of California tiger salamander were made in any surveys. Presence was assumed in upland habitat at the Desalination Plant as a result of conversations in the field with CDFW and CNDDB occurrences within dispersal range.

3.5 Mitigation Requirements

This section describes the potential mitigation requirements pertaining to species which have been determined to occur within Project area; or that are known or assumed to be present within it.

Mitigation requirements are determined by several regulations under the Federal Endangered Species Act (FESA) and the CESA.

Mitigation ratios were established based on the MPWSP EIR/EIS requirements and related consultations with the natural resource agencies. They determine the number of acres that must be purchased or restored in order to compensate for impacted natural resources. If more than one resource is impacted, and they overlap, then the mitigation ratio determined area can apply to both resources.

Mitigation for temporary impacts is proposed at a 1.1:1 ratio, resulting in 1.1 acres of required mitigation for every acre of impacted biological resource. Because temporarily impacted areas will be restored in place, which equals 1.0 of the 1.1:1 ratio, the off-site mitigation required for temporary impacts will be only 0.1 of the temporarily impacted habitat area. Mitigation for permanent impacts is proposed at a 3:1 ratio, resulting in three acres of required mitigation habitat for every acre of a biological resource permanently impacted by the Project.

Table 3-5 below summarizes the mitigation acreages required for California tiger salamander (CTS); the only listed species impacted by Phase One of the Project.

Table 3-5. Mitigation Acreages Required for Federally and State Listed Species**Federally or State Threatened or Endangered Animals**

Common Name	Species Name	Temporary Impacts	Permanent Impacts	On-Site Temporary Impacts Mitigation	Total Off-Site Mitigation Area Required
California tiger salamander	<i>Ambystoma californiense</i>	35.04 ac	14.73 ac	35.04 ac	47.69 = (0.1x35.04 ac+3x14.73 ac)

3.6 Plan for Sensitive Species Mitigation

This section describes the federally and State-listed species that have a moderate or high likelihood of occurring within the footprint of Phase One of the MPWSP, or which are known to occur. This section will describe the mitigation potential for these species.

3.6.1.1 California tiger salamander

All applicable conservation, avoidance, and mitigation measures will be implemented for this species. A qualified biologist will prepare a relocation plan that describes appropriate survey and handling methods. Specimens found would most appropriately be placed in burrows adjacent to, but outside of, the construction area. Preconstruction surveys will be conducted two weeks prior,

5 days prior to and again immediately prior to, vegetation removal, grading, or installation of exclusion fence to identify the species. Preconstruction surveys would consist of using a borescope with camera to investigate burrows and ensure that California tiger salamanders are not living within the project area. If they are detected, a qualified biologist will extract the individuals and follow the directive set forth in the relocation plan.

Impacts to California tiger salamander habitat occur in upland habitats. Mitigation for California tiger salamander habitat will be sought in the form of purchase of mitigation credits from the Sparling Ranch, a USFWS and CDFW-approved mitigation bank for California tiger salamanders within the Central Coast Geographic Region.

4. Mitigation Areas

This section describes the mitigation property that may be used to compensate for natural resource impacts of Phase One of the project. Section 4.1 provides details regarding this conservation bank.

4.1 Selection Process

The mitigation area was selected based on:

- Consultations and coordination with resource agencies and CalAm staff;
- Selection of a USFWS and CDFW-approved mitigation bank for California tiger salamanders within the Central Coast Geographic Region
- Mitigation requirements as determined by the preliminary assessment of the effects of the Project on protected natural resources.

4.2 Mitigation Property – Sparling Ranch

4.2.1 Existing Conditions

Sparling Ranch, located near Hollister, California in Santa Clara and San Benito Counties, is a conservation bank that contains more than 2,000 acres that are permanently protected for California tiger salamanders and California red legged frogs. Mitigation credits may be purchased from this conservation bank to offset impacts to California tiger salamander for Phase One of this project (USFWS 2019).

4.2.1.1 Habitats Types and Listed/Special-Status Species

Habitat types within Sparling Ranch include oak woodlands and grassland as well as wetland habitat to include 14 breeding ponds. Sparling Conservation Bank is considering adding another 1,282 acres containing seven more ponds in the future (USFWS 2019). The breeding ponds on-site are used by both California tiger salamander and California red-legged frog as well as additional species.

4.2.2 Available Credits

As of June 13, 2019, South Bay Conservation Resources, LLC indicated that 47.69 credits were available for purchase from the Sparling Ranch Conservation Bank. These credits are available on a 'first-come, first-served' basis; therefore, the current sufficient credit inventory cannot be guaranteed until an executed Agreement for the Sale of Conservation Credits for the above-mentioned credits (Anderson 2019).

4.3 Completion of Mitigation Responsibilities

The completion of mitigation responsibilities will be achieved through an executed credit purchase agreement.

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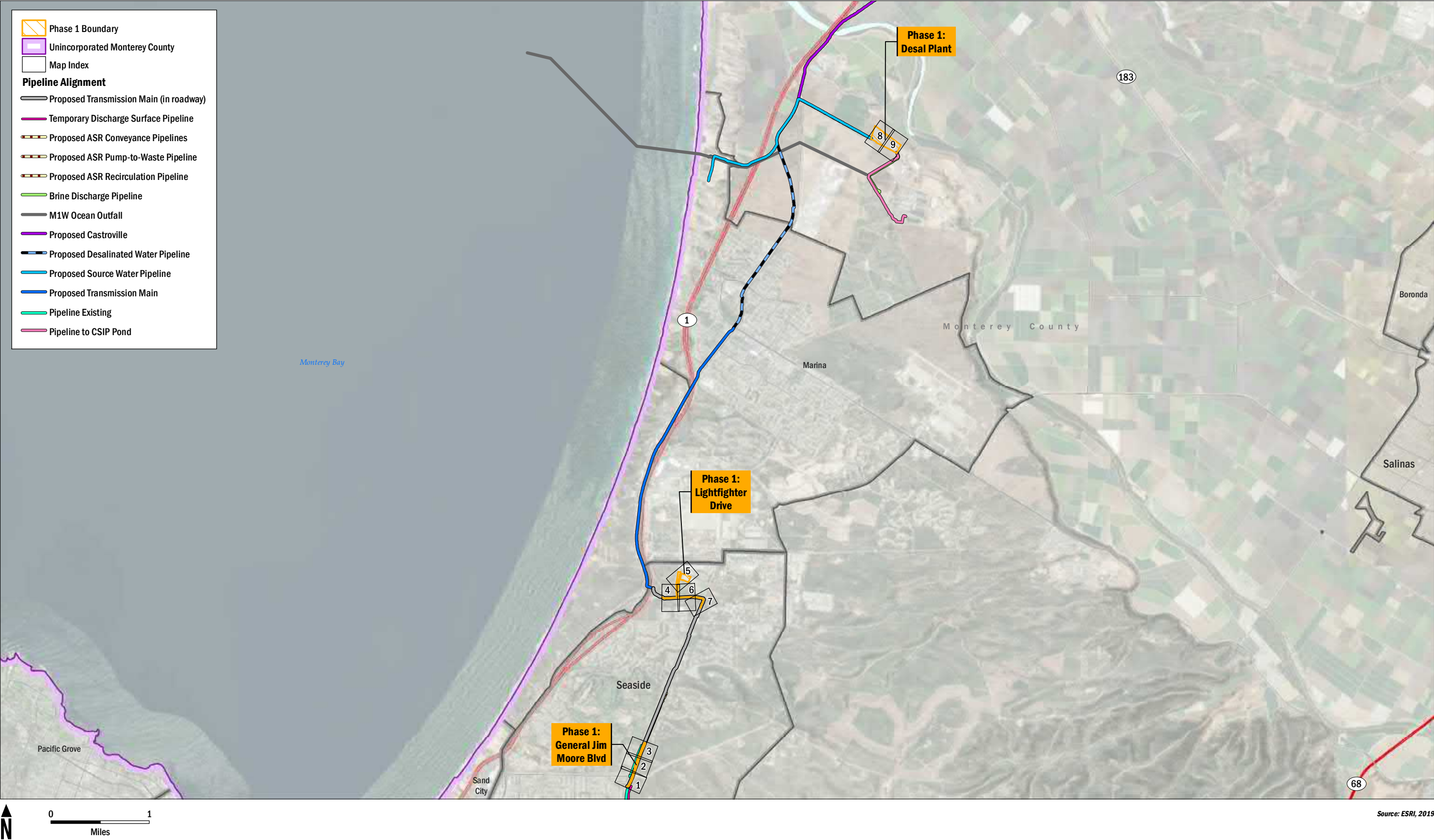
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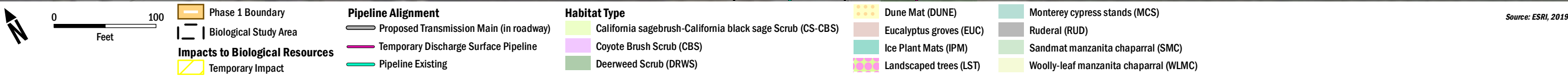
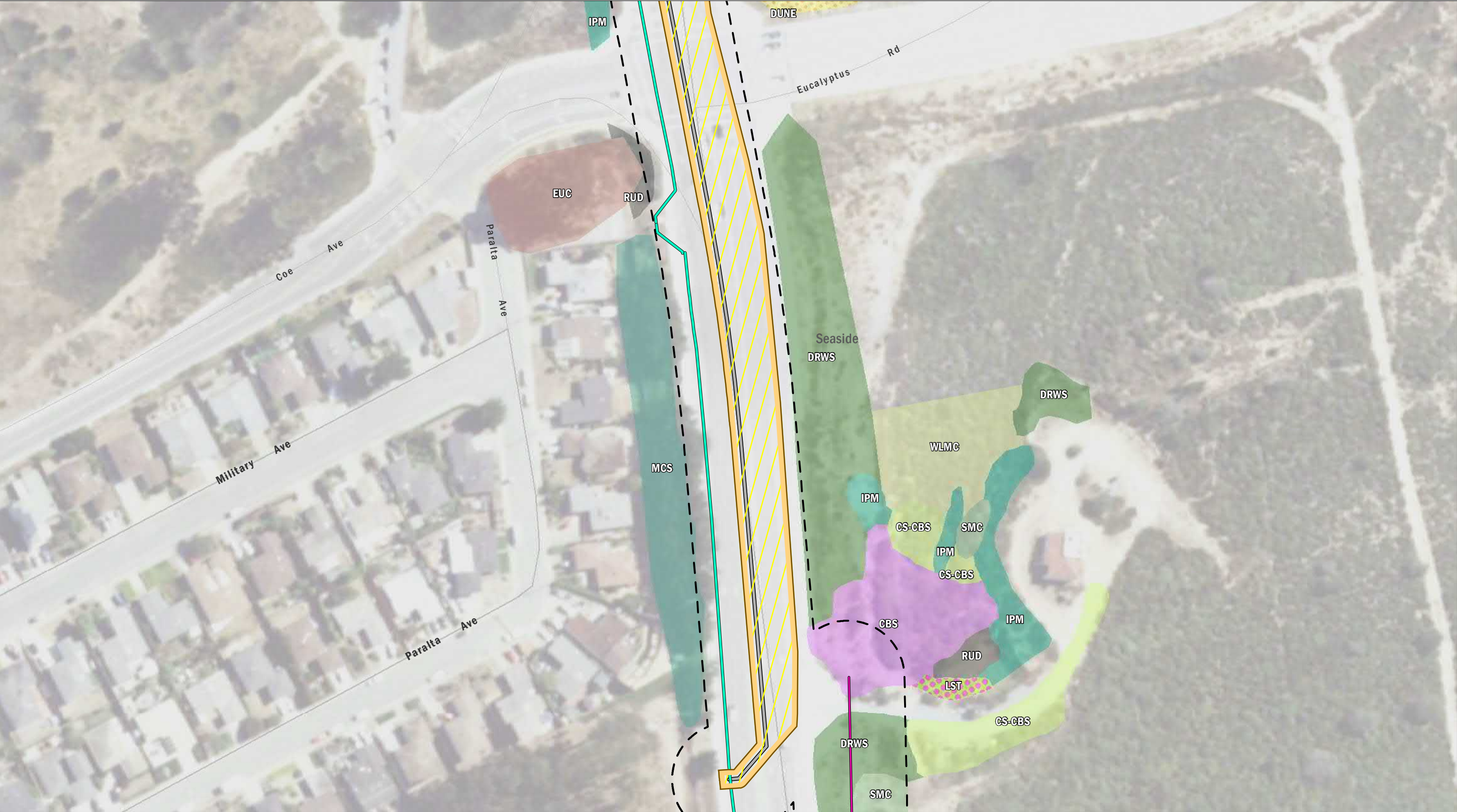
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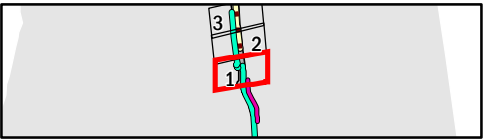
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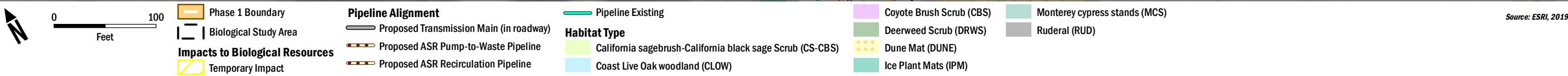
Biological Resources and Temporary and Permanent Impacts



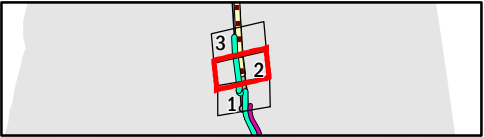


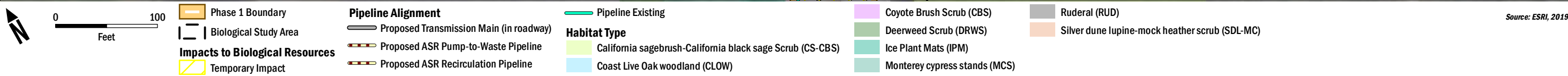
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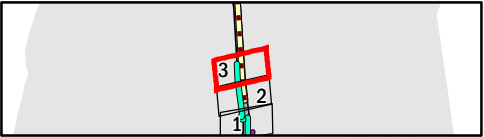


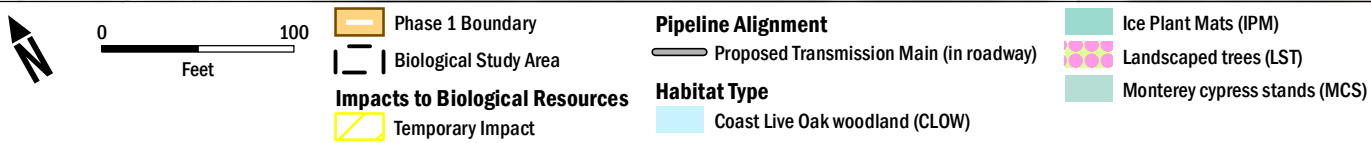
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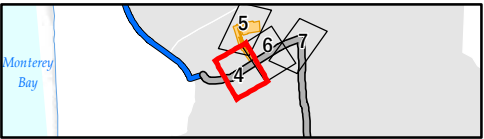


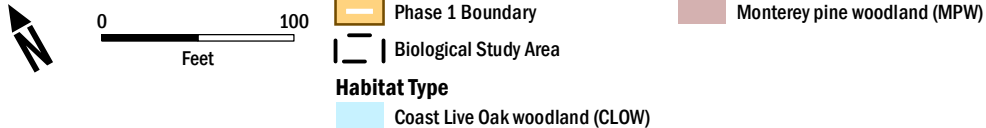
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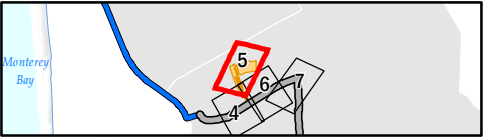


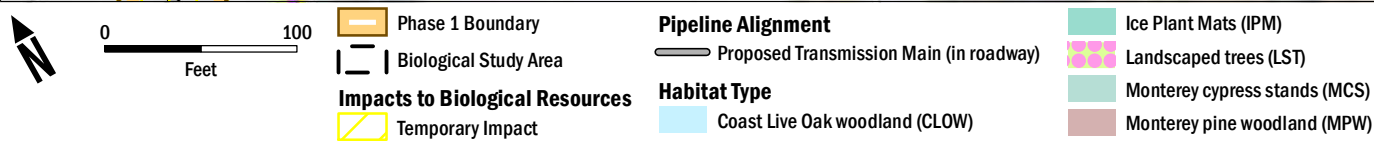
Source: ESRI, 2019



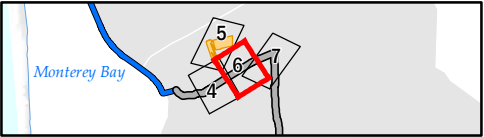


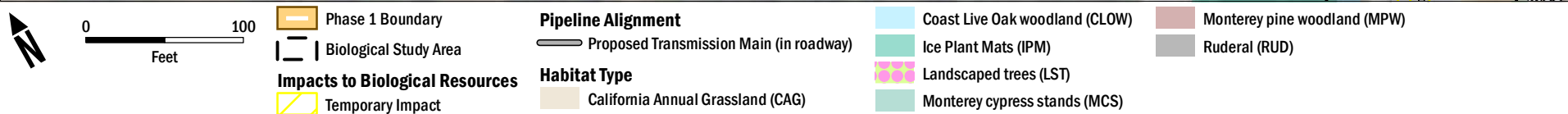
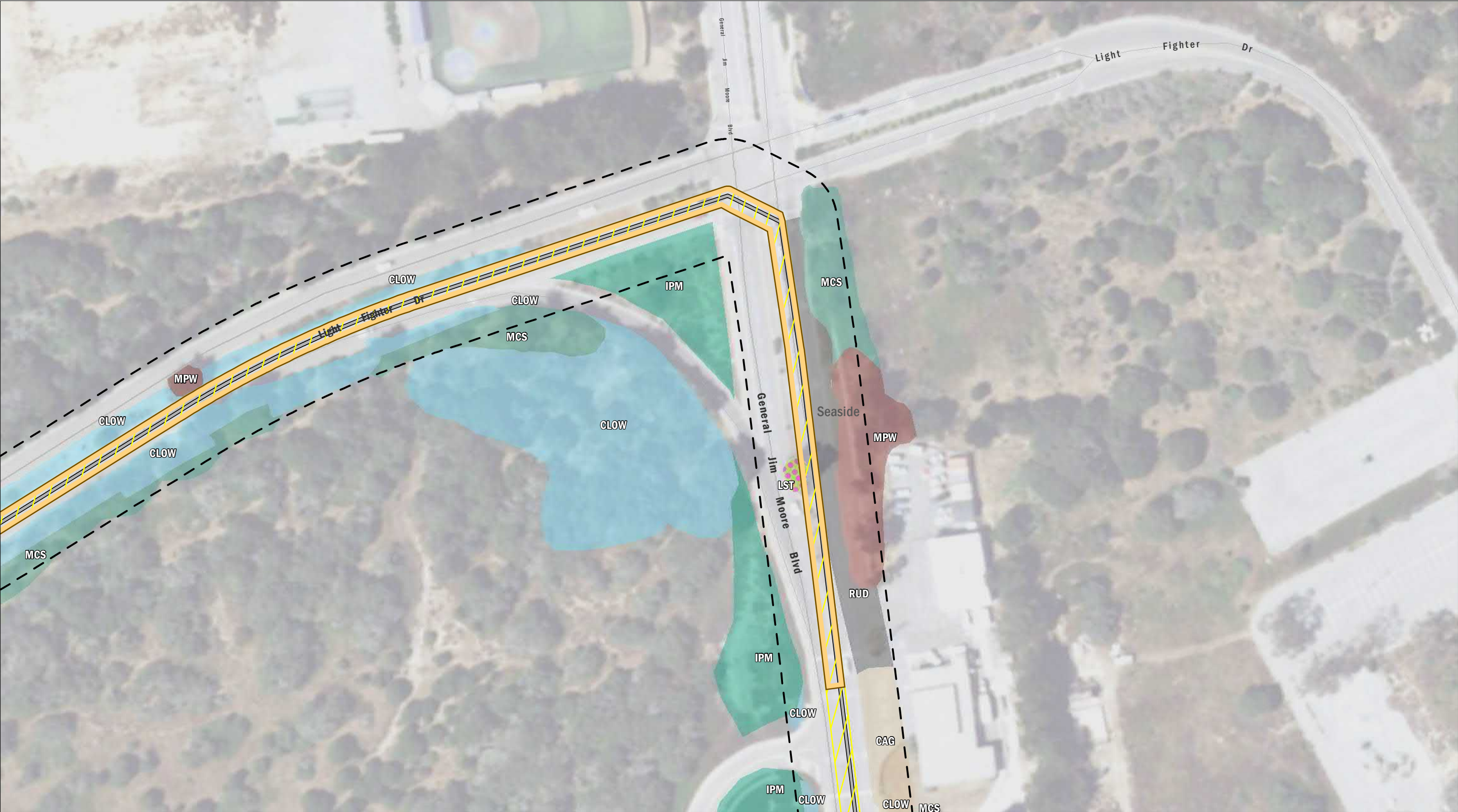
Source: ESRI, 2019



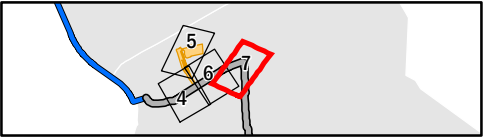


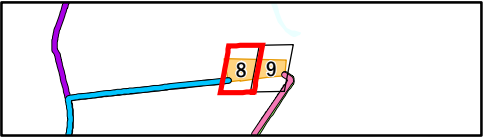
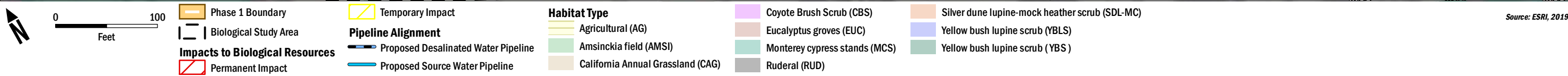
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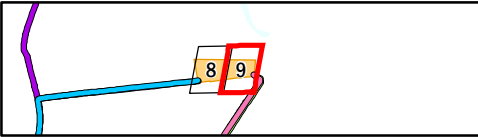
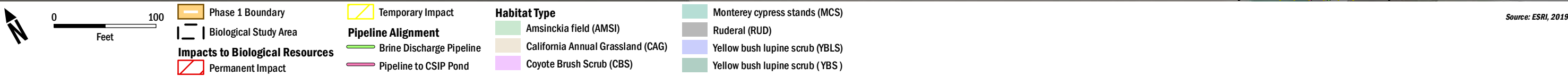




Source: ESRI, 2019







Appendix B

Wildlife Species Observed in Entire MPWSP

Species Name	Common Name	Listing Status ¹	Notes
Crustaceans			
<i>Pacifastacus leniusculus</i>	signal crayfish	—	Invasive
<i>Procambarus clarkia</i>	red swamp crayfish	—	Invasive
<i>Emerita analoga</i>	Pacific mole crab	—	Burrowing in the outfall
Insects			
<i>Battus philenor</i>	pipevine swallowtail	—	—
<i>Papilio zelicaon</i>	anise swallowtail	—	—
<i>Papilio rutulus</i>	western tiger swallowtail	—	—
<i>Anthocharis sara</i>	Sara orangetip	—	—
<i>Satyrium californicum</i>	California hairstreak	—	—
<i>Callophrys viridis</i>	Coastal green hairstreak	G2G3, N3N3	—
<i>Callophrys dumetorum</i>	Lotus hairstreak	—	—
<i>Icaricia acmon</i>	Acmon blue	—	—
<i>Celastrina echo</i>	Echo blue	—	—
<i>Euphilotes</i> spp.	blues	— FE if sp. <i>enoptes</i> (G5T1T2S1S2 & XERCES:CI) or <i>battoides allyni</i> (G5T1S1 XERCES:CI)	Smith's blue butterfly not positively identified
<i>Cupido amyntula</i>	western tailed blue	—	
<i>Glaucopsyche lygdamus</i>	silvery blue		
<i>Speyeria coronis</i>	Coronis fritillary		
<i>Euphydryas chalcedona</i>	Chalcedon checkerspot	—	—
<i>Vanessa cardui</i>	painted lady	—	—
<i>Vanessa annabella</i>	West Coast lady	—	—
<i>Junonia coenia</i>	common buckeye	—	—
<i>Pieris rapae</i>	European cabbage	—	—
<i>Limenitis lorquini</i>	Lorquin's Admiral	—	—
<i>Danaus plexippus</i>	Monarch	S3 G4T2T3 S2S3 USFS:S	No overwintering colonies
<i>Erynnis brizo</i>	sleepy duskywing	—	—
<i>Hesperia colorado</i>	western branded skipper	—	—
<i>Polites sabuleti</i>	Sandhill skipper	—	—
<i>Tramea lacerata</i>	black saddlebags	—	—
<i>Synchlora faseolaria</i>	sagebrush green	—	—
<i>Orgyia vetusta</i>	western tussock moth	—	—
<i>Synanthedon</i> sp.	hornet moth	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Zygentoma</i>	Silverfish and springtails	—	—
<i>Anax junius</i>	common green darner	—	—
<i>Libellula saturata</i>	Flame skimmer	—	—
<i>Enallagma</i> spp.	damselflies	—	—
<i>Schistocerca nitens</i>	Pallid grbird grasshopper	—	—
<i>Trimerotropis pallidipennis</i>	pallid-winged grasshopper	—	—
<i>Gryllus</i> spp.	field cricket	—	—
<i>Platylyra californica</i>	chaparral katydid	—	—
<i>Dracotettix monstrosus</i>	dragon lubbers grasshopper	—	—
<i>Ceuthophilus californianus</i>	California camel cricket	—	—
<i>Stenopelmatus</i> sp.	Jerusalem cricket	—	—
<i>Chlorochroa uhleri</i>	Uhler's stink bug	—	—
<i>Murgantia histrionica</i>	harlequin bug	—	—
<i>Leptoglossus clypealis</i>	western leaf-footed bug	—	—
<i>Boisea rubrolineata</i>	western box-elder bug	—	—
<i>Chrysoperla</i> sp.	green lacewing	—	—
<i>Tipula</i> spp.	Crane flies	—	—
Family Culicidae	mosquitoes	—	—
<i>Tabanus punctifer</i>	Western horse fly	—	—
<i>Bombylius major</i>	greater bee fly	—	—
Family calliphoridae	blow flies	—	—
<i>Hippodamia convergens</i>	convergent lady beetle	—	—
<i>Coccinella californica</i>	California lady beetle	—	—
<i>Eleodes</i> spp.	desert stink beetles	—	—
<i>Chrysochus auratus</i>	dogbane beetle	—	—
<i>Chrysochus cobaltinus</i>	blue milkweed beetle	—	—
<i>Carabus</i> sp.	ground beetle	—	—
<i>Coelus ciliatus</i>	ciliate dune beetle	—	—
<i>Coelus globosus</i>	globose dune beetle	G1, City of Marina Species of Special Interest G1G2 S1S2 IUCN:VU	Found extensively on the CEMEX property
<i>Cryptocephalus sanguinicollis</i>	redhead leaf beetle	—	—
<i>Diabrotica undecimpunctata</i>	Spotted cucumber beetle	—	—
<i>Gastrophysa cyanea</i>	green dock beetle	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Nemognatha lurida</i>	punctate blister beetle	—	—
<i>Pidonia scripta</i>	flower longhorn	—	—
<i>Linepithema humile</i>	Argentine ant	—	—
<i>Pogonomyrmex californicus</i>	California harvester ant	—	—
<i>Bembix</i> spp.	sand wasps	—	—
<i>Tamalia coweni</i>	manzanita leaf gall aphid	—	—
<i>Rhopalomyia californica</i>	coyote brush bud gall midge	—	—
<i>Pontania californica</i>	Willow leaf gall sawfly	—	—
<i>Pepsis</i> spp.	tarantula hawk	—	—
<i>Dasymutilla aureola</i>	red velvet ant	—	—
<i>Bombus californicus</i>	California bumble bee	—	—
<i>Bombus crotchii</i>	Crotch's bumble bee	G3G4 S1S2	—
<i>Apis mellifera</i>	Western honey bee	—	—
Arachnids			
<i>Dermacentor variabilis</i>	American dog tick	—	—
<i>Dermacentor occidentalis</i>	Pacific Coast tick	—	—
<i>Ixodes pacificus</i>	western black-legged tick	—	—
<i>Paruruoctonus maritimus</i>	Monterey dune scorpion	—	—
<i>Cyclosa turbinata</i>	trashline orbweavers	—	—
<i>Phidippus johnsoni</i>	red-backed jumping spider	—	—
<i>Misumena vatia</i>	goldenrod crab spider	—	—
Myriopods			
<i>Scolopocryptops gracilis</i>	wester fire centipede	—	—
<i>Oxidus gracilis</i>	greenhouse millipede	—	Non-native
Mollusks			
<i>Arion intermedius</i>	hedgehog slug	—	Non-native
<i>Oxychilus alliarius</i>	garlic snail	—	Non-native
<i>Helix aspera</i>	garden snail	—	Non-native
<i>Otala lactea</i>	milk snail	—	Non-native
<i>Helminthoglypta californiensis</i>	Point Pinos dune snail	—	—
<i>Helminthoglypta dupetithouarsii</i>	cypress shoulderband	—	—
<i>Helminthoglypta</i> sp.	dune snail	—	—
Fish			
<i>Gambusia affinis</i>	western mosquitofish	—	—

Species Name	Common Name	Listing Status ¹	Notes
Amphibians			
<i>Batrachoseps luciae</i>	Santa Lucia Mountains slender salamander	—G2G3 S3 IUCN:LC	—
<i>Anaxyrus boreas halophilus</i>	California western toad	—	—
<i>Pseudacris sierra</i>	Sierran treefrog	—	—
<i>Lithobates catesbeianus</i>	American bullfrog	—	—
<i>Rana draytonii</i>	California red-legged frog	FT, SSC G2G3 S2S3 IUCN:VU	Observed adjacent to BSA
Reptiles			
<i>Actinemys marmorata</i>	western pond turtle	SSC G3G4 S3 BLM:S, IUCN:VU, USFS:S	Adjacent to BSA, but not in it
<i>Trachemys scripta elegans</i>	red-eared slider	—	—
<i>Plestiodon skiltonianus</i>	western skink	—	—
<i>Aspidoscelis tigris</i>	Western whiptail	—	—
<i>Elgaria multicarinata</i>	Southern alligator lizard	—	—
<i>Anniella pulchra 'nigra'</i>	black legless lizard	SSC G3S3 USFS:S	Found at the CEMEX property; habitat for this species is extensive throughout BSA
<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC G3G4 S3S4 BLM:S IUCN:LC	Found east of General Jim Moore Blvd. in high numbers
<i>Uta stansburiana</i>	Common side-blotched lizard	—	—
<i>Sceloporus occidentalis</i>	western fence lizard	—	—
<i>Lampropeltis californiae</i>	California kingsnake	—	—
<i>Pituophis catenifer</i>	gopher snake	—	—
<i>Masticophis lateralis lateralis</i>	California striped racer	—	—
<i>Contia tenuis</i>	common sharp-tailed snake	—	—
<i>Thamnophis sirtalis infernalis</i>	California red-sided gartersnake	—	—
<i>Thamnophis elegans terrestris</i>	coast gartersnake	—	—
<i>Thamnophis atratus zaxanthus</i>	Diablo Range gartersnake	—	—
<i>Crotalus oreganus oreganus</i>	Northern Pacific rattlesnake	—	—
Birds			
<i>Branta bernicla</i>	brant	SSC G5S2? IUCN:LC	—

Species Name	Common Name	Listing Status ¹ (Wintering and staging)	Notes
<i>Branta canadensis</i>	Canada goose	—	—
<i>Spatula cyanoptera</i>	cinnamon teal	—	—
<i>Spatula clypeata</i>	northern shoveler	—	—
<i>Mareca strepera</i>	gadwall	—	—
<i>Anas platyrhynchos</i>	mallard	—	—
<i>Aythya marila</i>	greater scaup	—	—
<i>Melanitta perspicillata</i>	surf scoter	—	—
<i>Bucephala albeola</i>	bufflehead	—	—
<i>Bucephala clangula</i>	common goldeneye	—	—
<i>Lophodytes cucullatus</i>	hooded merganser	—	—
<i>Mergus serrator</i>	red-breasted merganser	—	—
<i>Oxyura jamaicensis</i>	ruddy duck	—	—
<i>Callipepla californica</i>	California quail	—	—
<i>Meleagris gallopavo</i>	wild turkey	—	—
<i>Podilymbus podiceps</i>	pied-billed grebe	—	—
<i>Podiceps auritus</i>	horned grebe	—	—
<i>Podiceps nigricollis</i>	eared grebe	—	—
<i>Aechmophorus occidentalis</i>	western grebe	—	—
<i>Aechmophorus clarkii</i>	Clark's grebe	—	—
<i>Columba livia</i>	rock pigeon	—	—
<i>Patagioenas fasciata</i>	band-tailed pigeon	—	—
<i>Streptopelia capicola</i>	ring-necked dove	—	—
<i>Streptopelia decaocto</i>	Eurasian collared-dove	—	—
<i>Zenaidura macroura</i>	mourning dove	—	—
<i>Geococcyx californianus</i>	greater roadrunner	—	—
<i>Aeronautes saxatalis</i>	white-throated swift	—	—
<i>Calypte anna</i>	Anna's hummingbird	—	—
<i>Selasphorus rufus</i>	rufous hummingbird	—G5S1S2 IUCN:LC NABCI:YWL USFWS:BCC (nesting)	—
<i>Selasphorus sasin</i>	Allen's hummingbird	—	—
<i>Rallus limicola</i>	Virginia rail	—	—
<i>Porzana carolina</i>	sora	—	—
<i>Fulica americana</i>	American coot	—	—
<i>Himantopus mexicanus</i>	black-necked stilt	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Recurvirostra americana</i>	American avocet	—	—
<i>Charadrius nivosus nivosus</i>	western snowy plover	FT	Nesting at CEMEX plant
<i>Charadrius vociferus</i>	killdeer	—	—
<i>Numenius phaeopus</i>	whimbrel	—	—
<i>Numenius americanus</i>	long-billed curlew	DFW WL G5S2 USFWS:BCC IUCN:LC NABCI:YWL (nesting)	—
<i>Limosa fedoa</i>	marbled godwit	—	—
<i>Arenaria melanocephala</i>	black turnstone	—	—
<i>Calidris alba</i>	sanderling	—	—
<i>Calidris mauri</i>	western sandpiper	—	—
<i>Tringa semipalmata</i>	willet	—	—
<i>Tringa melanoleuca</i>	greater yellowlegs	—	—
<i>Larus heermanni</i>	Heermann's gull	—	—
<i>Larus canus</i>	mew gull	—	—
<i>Larus delawarensis</i>	ring-billed gull	—	—
<i>Larus occidentalis</i>	western gull	—	—
<i>Larus californicus</i>	California gull	—G5 S4 CDFW:WL IUCN:LC (nesting colonies)	—
<i>Larus argentatus smithsonianus</i>	American herring gull	—	—
<i>Larus glaucescens</i>	glaucous-winged gull	—	—
<i>Gavia immer</i>	common loon	SSC (nesting) G5S1 IUCN:LC	Not nesting
<i>Phalacrocorax penicillatus</i>	Brandt's cormorant	—	—
<i>Phalacrocorax auritus</i>	double-crested cormorant	WL (nesting colony) G5 S4	No nesting colonies
<i>Pelecanus erythrorhynchos</i>	American white pelican	SSC (nesting colony) G4 S1S2 IUCN: LN	No nesting colonies
<i>Pelecanus occidentalis californicus</i>	California brown pelican	F delisted, S delisted, FP	seen overhead
<i>Ardea herodias</i>	great blue heron	CDF S (nesting colony) G5S4 IUCN:LC	No nesting colonies
<i>Ardea alba</i>	great egret	CDF S (nesting colony) G5S4 IUCN:LC	No nesting colonies

Species Name	Common Name	Listing Status ¹	Notes
<i>Egretta thula</i>	snowy egret	—G5S4 IUCN: LC (nesting colonies)	—
<i>Butorides virescens</i>	green heron	—G5S4 IUCN:LC	—
<i>Nycticorax nycticorax</i>	black-crowned night heron	—	—
<i>Cathartes aura</i>	turkey vulture	—	—
<i>Pandion haliaetus</i>	osprey	CDF: S G5S4 CDFW: WL IUCN::LC (nesting)	Flying overhead
<i>Elanus leucurus</i>	white-tailed kite	FP G5S3S4 BLM:S IUCN:LC (nesting)	—
<i>Aquila chrysaetos</i>	Golden eagle	FP G5S3 BLM:S CDF:S CDFW:WL IUCN:LC USFWS:BCC (nesting and wintering)	—
<i>Circus hudsonius</i>	Northern harrier	FP G5S3 IUCN:LC (nesting)	—
<i>Accipiter striatus</i>	sharp-shinned hawk	—	—
<i>Accipiter cooperii</i>	Cooper's hawk	WL G5 S4 IUCN:LC (nesting)	—
<i>Haliaeetus leucocephalus</i>	Bald eagle	FP G5S3 F delisted, SE, BLM:S CDF:S IUCN:LC USFS:S USFWS:BCC (nesting and wintering)	
<i>Parabuteo unicinctus</i>	Harris's hawk	—	Confirmed to be a falconer's bird, not a wild one
<i>Buteo lineatus</i>	red-shouldered hawk	—	—
<i>Buteo swainsoni</i>	Swainson's hawk	ST, FP G5S3 USFWS:BCC BLM:S IUCN:LC (nesting)	Foraging
<i>Buteo jamaicensis</i>	red-tailed hawk	—	—
<i>Buteo regalis</i>	ferruginous hawk	DFW WL IUCN:LC USFWS:BCC G4 S3S4 (wintering)	Foraging at Armstrong Ranch
<i>Tyto alba</i>	barn owl	—	—
<i>Bubo virginianus</i>	great horned owl	—	—
<i>Athene cunicularia</i>	burrowing owl	SSC G4S3 BLM:S IUCN:LC	Occupying wintering burrows along Lapis Rd. in the TAMC ROW.

Species Name	Common Name	Listing Status ¹	Notes
		USFWS:BCC (Burrowing sites and some wintering sites)	
<i>Asio flammeus</i>	short-eared owl	G5S3 SSC IUCN: LC	(for Nesting)
<i>Megasceryle alcyon</i>	Belted kingfisher	—	—
<i>Melanerpes formicivorus</i>	acorn woodpecker	—	—
<i>Sphyrapicus ruber</i>	red-breasted sapsucker	—G5S4 (nesting)	—
<i>Dryobates pubescens</i>	downy woodpecker	—	—
<i>Dryobates nuttalli</i>	Nuttall's woodpecker	USFWS BCC	—
<i>Dryobates villosus</i>	hairy woodpecker	—	—
<i>Colaptes auratus</i>	northern flicker	—	—
<i>Falco sparverius</i>	American kestrel	—	—
<i>Falco columbarius</i>	Merlin	—	—
<i>Falco peregrinus anatum</i>	North American peregrine falcon	Delisted, FP CDF:S USFWS:BCC G4T4S3S4 (nesting)	Foraging
<i>Falco mexicanus</i>	prairie falcon	—G5S3 CDFW: WL IUCN:LC USFWS: BCC (nesting)	Foraging
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	—	—
<i>Tyrannus verticalis</i>	western kingbird	—	—
<i>Contopus sordidulus</i>	Western wood-pewee	—	—
<i>Empidonax difficilis</i>	Pacific-slope flycatcher	—	—
<i>Sayornis nigricans</i>	black phoebe	—	—
<i>Sayornis saya</i>	Say's phoebe	—	—
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC G4S4 IUCN:LC USFWS:BCC (nesting)	Found along Fort Ord Dunes State Park, the proposed desalination plant, and Armstrong Ranch
<i>Vireo cassinii</i>	Cassin's vireo	—	—
<i>Vireo gilvus</i>	warbling vireo	—	—
<i>Cyanocitta stelleri</i>	Steller's jay	—	—
<i>Aphelocoma californica</i>	California scrub jay	—	—
<i>Corvus brachyrhynchos</i>	American crow	—	—
<i>Corvus corax</i>	common raven	—	—
<i>Eremophila alpestris actia</i>	California horned lark	WL G5T4Q S4	IUCN-LC
<i>Tachycineta bicolor</i>	tree swallow	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Tachycineta thalassina</i>	violet-green swallow	—	—
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	—	—
<i>Riparia riparia</i>	bank swallow	ST G5S2 IUCN:LC (nesting)	Not breeding, but foraging around BSA. Former breeding areas at Fort Ord Dunes State Park visited and confirmed to be vacated in 2018.
<i>Petrochelidon pyrrhonota</i>	cliff swallow	—	—
<i>Hirundo rustica</i>	barn swallow	—	—
<i>Poecile rufescens</i>	chestnut-backed chickadee	—	—
<i>Baeolophus inornatus</i>	oak titmouse	—G4S4 IUCN:LC NABCI:YWI USFWS:BCC (nesting)	—
<i>Psaltiriparus minimus</i>	bushtit	—	—
<i>Sitta canadensis</i>	red-breasted nuthatch	—	—
<i>Sitta carolinensis</i>	white-breasted nuthatch	—	—
<i>Sitta pusilla</i>	Pygmy nuthatch		
<i>Troglodytes aedon</i>	house wren	—	—
<i>Cistothorus palustris</i>	marsh wren	—	—
<i>Thryomanes bewickii</i>	Bewick's wren	—	—
<i>Poliophtila caerulea</i>	blue-gray gnatcatcher	—	—
<i>Regulus calendula</i>	ruby-crowned kinglet	—	—
<i>Chamaea fasciata</i>	wrentit	—	—
<i>Sialia mexicana</i>	western bluebird	—	—
<i>Catharus ustulatus</i>	Swainson's thrush	—	—
<i>Catharus guttatus</i>	hermit thrush	—	—
<i>Turdus migratorius</i>	American robin	—	—
<i>Toxostoma redivivum</i>	California thrasher	—	—
<i>Mimus polyglottos</i>	northern mockingbird	—	—
<i>Sturnus vulgaris</i>	European starling	—	—
<i>Passer domesticus</i>	house sparrow	—	—
<i>Haemorhous mexicanus</i>	House finch	—	—
<i>Spinus psaltria</i>	lesser goldfinch	—	—
<i>Spinus lawrencei</i>	Lawrence's goldfinch	—G3G4 S3S4 IUCN:LC NABCI:YWL (nesting)	USFWS BCC
<i>Spinus tristis</i>	American goldfinch	—	—
<i>Pipilo maculatus</i>	spotted towhee	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Aimophila ruficeps</i>	rufous-crowned sparrow	DFG WL	—
<i>Melospiza crissalis</i>	California towhee	—	—
<i>Artemisiospiza belli</i>	Bell's sparrow	DFG WL	—
<i>Passerculus sandwichensis</i>	savannah sparrow	—	—
<i>Passerculus sandwichensis alaudinus</i>	Bryant's savannah sparrow	SSC G5T2T3 S2S3	—
<i>Ammodramus savannarum</i>	grasshopper sparrow	—G5S3 CDFW:SSCC IUCN:LC (nesting)	—
<i>Melospiza melodia</i>	song sparrow	—	—
<i>Melospiza lincolnii</i>	Lincoln's sparrow	—	—
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	—	—
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow	—	—
<i>Junco hyemalis</i>	dark-eyed junco	—	—
<i>Sturnella neglecta</i>	western meadowlark	—	—
<i>Icterus cucullatus</i>	hooded oriole	—	—
<i>Icterus bullockii</i>	Bullocks oriole	—	—
<i>Agelaius phoeniceus</i>	red-winged blackbird	—	—
<i>Agelaius tricolor</i>	tricolored blackbird	State Threatened G2G3 S1S2 BLM:S IUCN:EN NABCI:RWL USFWS:BCC	Foraging and flying over the Proposed Desalination Plant
<i>Molothrus ater</i>	brown-headed cowbird	—	—
<i>Euphagus cyanocephalus</i>	Brewer's blackbird	—	—
<i>Oreothlypis celata</i>	orange-crowned warbler	—	—
<i>Setophaga petechia brewsteri</i>	yellow warbler	SSC G5 S3S4 USFWS:BCC (nesting)	—
<i>Setophaga coronata</i>	yellow-rumped warbler	—	—
<i>Setophaga nigrescens</i>	black-throated gray warbler	—	—
<i>Setophaga townsendi</i>	Townsend's warbler	—	—
<i>Cardellina pusilla</i>	Wilson's warbler	—	—
<i>Piranga ludoviciana</i>	western tanager	—	—
<i>Pheucticus melanocephalus</i>	black-headed grosbeak	—	—
Mammals			
<i>Didelphis virginiana</i>	Virginia opossum	—	Introduced
<i>Sorex ornatus salarius</i>	Monterey shrew	G5T1T2 S1S2, CDFW: SSC	

Species Name	Common Name	Listing Status ¹	Notes
<i>Eptesicus fuscus</i>	big brown bat		Two observed visually under Hwy 1 southbound at Salinas River Crossing among other bat species. Also captured on acoustic monitoring equipment.
<i>Myotis californicus</i>	California myotis	—	— Observed in maternity roost under Hwy 1 southbound at Salinas River Crossing. Also capture using acoustic monitoring equipment.
<i>Myotis yumanensis</i>	Yuma myotis	G5 S4 BLM: S IUCN: LC WBWG: LM	In maternity roost of a couple thousand under Hwy 1 southbound at Salinas River Crossing. Identified by sight (in day roost) and with acoustic monitoring equipment.
<i>Tadarida brasiliensis</i>	Brazilian free-tailed bat		Observed in day roost among <i>Myotis</i> Hwy 1 southbound at Salinas River Crossing. A handful of bats among the others, seen and also captured using acoustic equipment.
?	Bats	?	Unidentified bats seen flying throughout alignment
<i>Lepus californicus</i>	Black-tailed jackrabbit	—	—
<i>Sylvilagus audubonii</i>	Audubon's cottontail	—	—
<i>Sylvilagus bachmani</i>	brush rabbit	—	—
<i>Sciurus griseus</i>	western gray squirrel	—	—
<i>Sciurus niger</i>	Eastern fox squirrel	—	—
<i>Otospermophilus beecheyi</i>	California ground squirrel	—	—
<i>Tamias merriami</i>	Merriam's chipmunk	—	—
<i>Thomomys bottae</i>	Botta's pocket gopher	—	—
<i>Dipodomys</i> sp.	kangaroo rat	—	Footprints, burrows observed
<i>Microtus californicus</i>	California vole		Not rare ssp. halophilus, which is restricted to saltwater wetlands around Moss Landing and Seaside.
<i>Neotoma macrotis luciana</i>	Monterey dusky-footed woodrat	SSC G5T3 S3 IUCN:DD	Nests mapped throughout BSA
<i>Peromyscus maniculatus</i>	American deer mouse	—	—
<i>Peromyscus</i> spp.	deer mice	—	—
<i>Canis familiaris</i>	feral dog	—	domestic
<i>Urocyon cinereoargenteus</i>	gray fox	—	—
<i>Canis latrans</i>	coyote	—	—

Species Name	Common Name	Listing Status ¹	Notes
<i>Phoca vitulina</i>	harbor seal	MMPA	—
<i>Procyon lotor</i>	northern raccoon	—	—
<i>Enhydra lutris nereis</i>	southern sea otter	FT, FP G4T2 S2 IUCN:EN MMC:SSC	—
<i>Taxidea taxus</i>	American badger	SSC G5S3 IUCN:LC	Burrows, remains
<i>Mustela frenata</i>	long-tailed weasel	—	Observed at Armstrong Ranch
<i>Mephitis mephitis</i>	striped skunk	—	—
<i>Felis catus</i>	feral cat	—	Domestic
<i>Odocoileus hemionus</i>	black-tailed deer	—	—

Notes:

— = Not applicable

¹Listing Status:

BCC – Birds of conservation concern

FE – Federally endangered

FP – CDFW Fully protected

FT – Federally threatened

MMPA – Marine Mammal Protection Act

SSC – California species of special concern

ST – State threatened

WL – Watch list

