



Initial Study & Draft Mitigated Negative Declaration

Los Padres Dam Outlet Modifications Project

Monterey County, California

August 2023

Prepared for:

Monterey Peninsula
Water Management
District

Prepared by:

HDR Engineering, Inc.



Mitigated Negative Declaration Information Sheet

Project Title

Los Padres Dam Outlet Modifications Project

Project Address

Los Padres Dam and Reservoir
Monterey County

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Project Summary

The proposed project is necessitated by rockslides originating from the left bank of the Los Padres Reservoir occurring in 2018, 2019, and 2020, that have covered the existing lower outlet with mud, rock, and debris, and reduced its overall reliability and capacity. Despite several attempts by divers contracted by California American Water (Cal-Am) to investigate and clear debris from the trash rack, the lower outlet's capacity remains diminished. Since the summer of 2021, the lower outlet has only been able to convey between 1 and 3 cubic feet per second (cfs) downstream of the dam. Its normal operating flow is generally between 10 and 15 cfs and it has a maximum capacity of between 30 and 50 cfs. The license to operate the dam issued by the State Water Resources Control Board requires Cal-Am to release a minimum of 5 cfs (with some exceptions for operational control).

Cal-Am is proposing to modify the existing low-level regulating outlet at the Los Padres Dam and Reservoir in Monterey County, California. The proposed project is intended to accomplish the following three primary goals: 1) meet the California Department of Water Resources Division of Safety of Dams (CA-DWR DSOD) mandated requirement to drain the reservoir in case of emergency; 2) supply water to the Carmel River during low-flow summer months to meet instream flow requirements and sustain aquatic organisms, including South Central California Coast Steelhead; and 3) restore water supply to the existing fish trap and ladder necessary to provide upstream fish passage to adult steelhead. Achieving these goals is essential for restoring the original purpose of the outlet and reliably achieving existing environmental mandates regarding sustaining aquatic organisms within the Carmel River and providing upstream fish passage at Los Padres Dam. The proposed project includes the following components:

1. Site preparation and access improvements
2. Relocation of the upstream entrance
3. Replacement of emergency outlet valves
4. Installation and connection of new pipeline to existing pipeline

5. Site restoration and demobilization

Construction mobilization activities are anticipated to begin in either quarter four of 2023 or quarter one of 2024, with demobilization and restoration anticipated to conclude in quarter four of 2024.

General Plan Designation and Zoning

Monterey County General Plan Designation: Resource Conservation 10 to 160 acre minimum

Monterey County Zoning: Resource Conservation

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Appendix Los Padres Dam Air Quality Modeling

Abbreviations/Acronyms

Acronyms and abbreviations used more than once in the document.

Term	Definition
ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
AQCR	Air Quality Control Region
BMP	best management practice
BSA	biological study area
CA-DWR DSOD	California Department of Water Resources Division of Safety of Dams
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal-Am	California American Water
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel scale
DPM	diesel particulate matter
EIR	environmental impact report
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHSZ	Fire Hazard Severity Zone
HDPE	High-density polyethylene
HUC	hydrologic unit code
Hz	hertz
L _{eq}	equivalent noise level
L _{dn}	day-night average sound level
MBARD	Monterey Bay Air Resources District
MLD	most likely descendants
MND	Mitigated Negative Declaration
MPWMD	Monterey Peninsula Water Management District
MRZ	Mineral Resource Zones

Term	Definition
MTCO ₂ e/year	metric tons of carbon dioxide equivalent per year
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	California Native Heritage Commission
NCCAB	North Central Coast Air Basin
ND	Negative Declaration
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NWIC	Northwest Information Center
NRHP	National Register of Historic Places
OCEN	Ohlone/Costanoan-Esselen Nation
PPV	peak particle velocity
PRC	Public Resources Code
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCP	traditional cultural property
TCR	tribal cultural resources
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
WM	Waste Management
WWTP	wastewater treatment plant

1 Introduction

California American Water (Cal-Am) is proposing to modify the existing low-level regulating outlet at the Los Padres Dam and Reservoir in Monterey County, California. The proposed project is intended to restore water supply reliability and accomplish the following three primary goals: 1) meet the California Department of Water Resources Division of Safety of Dams (CA-DWR DSOD) mandated requirement to drain the reservoir in case of emergency; 2) to supply water to the Carmel River during low-flow summer months to meet instream flow requirements and sustain aquatic organisms, including South Central California Coast Steelhead; and 3) restore water supply to the existing fish trap and ladder necessary to provide upstream fish passage to adult steelhead. Achieving these goals is essential for restoring the original purpose of the outlet and reliably achieving existing environmental mandates regarding sustaining aquatic organisms within the Carmel River and providing upstream fish passage at Los Padres Dam.

1.1 Purpose of the Initial Study

The California Environmental Quality Act (CEQA) applies to all discretionary activities proposed to be implemented or approved by a California public agency unless an exemption applies. Monterey Peninsula Water Management District (MPWMD) is the lead agency that will make the discretionary decision whether to approve the proposed project.

CEQA requires an agency to review the potential effects of a proposed project's actions on environmental resources, and the CEQA Guidelines are the primary rules and source of interpretation of CEQA (Public Resources Code [PRC] Section 21083). First, the lead agency prepares an initial study, which is a preliminary analysis used to determine if the proposed action may have a significant environmental effect. The initial study may use a checklist format, but fact-based explanations should be provided to support the checklist (CEQA Guidelines Section 15063).

If the initial study concludes that the proposed project could have a significant effect on the environment, then an environmental impact report (EIR) should be prepared; otherwise, the lead agency may prepare a Negative Declaration (ND) or Mitigated Negative Declaration (MND). An ND or MND is a written statement explaining why the proposed project would not have a significant environmental effect. For MNDs, the document must describe the mitigation measures included in the proposed project to avoid potentially significant effects (CEQA Guidelines Sections 15063, 15371; PRC Section 21092.6[a]).

CEQA requires the lead agency to provide the public and relevant agencies an opportunity to comment by filing and distributing a Notice of Intent (NOI) to adopt an ND or MND on a project. Following the 30-day public review period, the lead agency considers the ND or MND, together with any comments received, before approving the proposed project. Although there is no requirement to prepare formal responses to comments, the lead agency should have adequate information in the record explaining why the comment does not affect the conclusion that there would be no significant effects, and the lead agency must notify any commenting agencies of the date of any public hearing on the proposed project for which the ND or MND is prepared (CEQA Guidelines Sections 15072, 15073).

When adopting an MND, the lead agency must also adopt a monitoring and reporting program for the mitigation measures included in the MND, and if it approves the project, the lead agency may file

a Notice of Determination with the State Clearinghouse within 5 working days after project approval (CEQA Guidelines Sections 15074[d], 15075; PRC Sections 21081.6, 21092.3). Where, as in this case, the lead agency is a local agency, the Notice of Determination must be filed with the County Recorder's Office (CEQA Guidelines Section 15075[d]).

2 Project Description

This section describes the proposed project, including the proposed project need and objectives, and each of the proposed project components. This section also discusses construction sequencing, and operation and maintenance. In addition, discretionary actions and approvals that may be required are summarized.

2.1 Project Location

The proposed project is located in Monterey County at the Los Padres Dam and Reservoir, a 148-foot-tall earth-filled structure, on River Mile 24.8 on the Carmel River, approximately 20 miles southeast of Monterey along the Central Coast of California.

The project can be accessed via Carmel Valley Road, Cachagua Road (or Tassajara Road to Cachagua Road), and then Nason Road to the dam site. Alternatively, larger vehicles and vehicles with heavy loads can navigate to the site via Highway 101 to Arroyo Seco Road, to E. Carmel Valley Road, to Tassajara Road, to Cachagua Road, to Nason Road. A gated access point is located 1 mile southwest of the community of Cachagua and about 12 miles from Carmel Valley Village. Upon entering the gate and Cal-Am property, an unimproved gravel road extends to the dam site. The road crosses the lower end of the spillway via an HS-20 loaded bridge crossing and continues up the embankment of the earth fill dam and across the dam crest. The full length of the dam crest is accessible from the west hillslope abutment to the gravity wall located on the west side of the spillway. From the crest, a small unimproved ramp extends down along the upstream face of the dam to elevation 1,035 feet (NAVD88) and provides primitive boat access when water levels are adequate.

A branch of the existing access road extends downstream along the base of the dam and provides access to the existing fish collection facility and control valves to the lower outlet. Another branch extends along the right bank of the Carmel River and provides access to the Carmel River to a gravel bar located approximately 250 feet downstream of the spillway.

Prior to 2018, an unimproved access road paralleled the left bank of the reservoir for about a ½-mile and provided access to the beginning of a precarious hiking trail above the reservoir that led to the head of reservoir. However, since 2018, major hillslope failures and repeated rock falls have occurred resulting in the loss of a portion of the road. Future rockfalls are anticipated that may further expand loss of the road but are not expected to be a danger to the structural stability of the dam itself (Zinn Geology 2021).

The existing remaining access road is used heavily by the public to access the Carmel River Trail system. Access by the public is only allowed on foot.

Only authorized motor vehicles are currently allowed on site. Permission from MPWMD, the U.S. Forest Service (USFS), or Cal-Am is required before entering the site with a motor vehicle. The size and weight of vehicles required to access the site during construction will depend on the construction contractor's means and methods. However, there is a likely potential that permitted loads on longer

tractor trailers will be required to transport equipment such as FlexiFloat barge segments, drill rigs, and cranes. In these circumstances, it will be up to the contractor to coordinate permit approval and escorts for each load being hauled into or out of the project area.

2.2 Project Need

The proposed project is needed because rockslides originating from the left bank of the reservoir occurring in 2018, 2019, and 2020, have covered the existing lower outlet with mud, rock, and debris and reduced its overall reliability and capacity. Despite several attempts by divers contracted by Cal-Am to investigate and clear debris from the trash rack, the lower outlet's capacity remains diminished. Since the summer of 2021, the lower outlet has only been able to convey between 1 and 3 cubic feet per second (cfs) downstream of the dam. Its normal operating flow was generally between 10 and 15 cfs and it had a maximum capacity of between 30 and 50 cfs. The license to operate the dam issued by the State Water Resources Control Board (SWRCB) requires Cal-Am to release a minimum of 5 cfs (with some exceptions for operational control). Cal-Am can no longer meet this requirement through the lower outlet alone and must rely on other means to supplement releases including use of a siphon and an emergency pump, which are both not as reliable as a gravity-fed outlet.

Additionally, the National Marine Fisheries Service's (NMFS) South-Central California Steelhead Recovery Plan identifies the Carmel River population of Southern California Central Coast (S-CCC) steelhead as a Core 1 population. Core 1 populations have the highest priority for recovery and form the nucleus of the recovery implementation strategy. Los Padres Dam and Reservoir is identified as causing or contributing to a number of threats to the Carmel River steelhead population, including blocking or inhibiting the natural pattern of upstream and downstream migration of adult and juvenile steelhead, impeding access to most of the spawning and rearing habitat of the Carmel River Watershed, altering the natural surface flow, and reducing the recruitment of essential spawning gravels and sediments to support rearing habitat in the middle and lower reaches of the Carmel River. However, maintenance of surface flow downstream of Los Padres Dam during low flow periods has been shown to increase summer rearing habitat for young steelhead¹. In addition, at the time Cal-Am's predecessor was issued a SWRCB water rights permit (in 1948), the California Fish and Game Commission (now known as the California Department of Fish and Wildlife [CDFW]) consented to a dismissal of its protest by agreeing to a clause in the permit that required a release downstream of the dam of a minimum of 5 cfs.

Failure of the system to function properly following the rockslide events in 2018, 2019 and 2020 necessitated implementation of interim measures to provide required functionality. Interim measures include a combination of pumping, siphoning, and clearing debris from the outlet. These interim measures are expensive, unreliable for long-term use, and not sustainable over the full range of reservoir conditions. As an example, temporary pumping of water over the dam crest using diesel pumps is costly, is a potential environmental hazard, and cannot be relied upon over long periods of time without daily fueling and maintenance. In addition, the siphon can only convey water over the

¹ See "Response of a threatened steelhead trout population to water provisioning scenarios for the Carmel River, California." David A. Boughton, National Marine Fisheries Service, Southwest Fisheries Science Center, 110 McAllister Way, Santa Cruz, CA 95060, USA, Haley A. Ohms, University of California Santa Cruz, Santa Cruz, CA 95060, USA and National Marine Fisheries Service, Southwest Fisheries Science Center, 110 McAllister Way, Santa Cruz, CA 95060, USA. September 2022, 38 pages.

height of the existing dam spillway for a specific range of reservoir levels. When the reservoir levels fall below a specific elevation, the siphon ceases to be effective. This past fall (2022), this siphon stopped conveying water during low reservoir level conditions. A permanent solution is needed to restore the original function and purpose of the existing outlet and provide a long-term and sustainable solution to secure operation of the outlet works in the event of future rockslides.

The proposed project is also needed because the landslide potential in this area is expected to persist over time, and mitigation of the slope instability is infeasible as a potential solution. Specifically, according to Zinn Geology, who performed the preliminary landslide hazard map, “the rockfalls will continue to shed material into the reservoir and building up the talus apron that has currently formed” (Zinn Geology 2021). Should the low-level regulating outlet remain unreliable, plans for recovery of the Core 1 fish population within the Carmel River could suffer drastically.

2.3 Project Objectives

The objectives of the proposed project are to

1. Restore the original purpose and function of the existing lower-level outlet to Los Padres Dam;
2. Permanently repair and restore a reliable water supply to the Los Padres Dam fish passage facilities in compliance with state and federal fish passage obligations critical to restoration and recovery of the Core 1 fish population within the Carmel River;
3. Permanently repair and restore a more reliable water supply system necessary to maintain instream flow conditions and sustain existing aquatic organisms present within Carmel River during the summer and fall months in compliance with SWRCB license requirements and additional state mandates through the Regional Water Quality Control Board;
4. Implement improvements at the low-level regulating outlet that would protect it from damage or interruption in the event of future potential landslides; and
5. Meet CA-DWR DSOD requirements for timely evacuation of the reservoir during an emergency

2.4 Proposed Project

Cal-Am proposes to implement numerous permanent modifications to the existing low-level regulating outlet to accomplish the project objectives identified above (see also Figure 1). The proposed project elements are described in the following list and organized by project area:

In-Reservoir

1. Relocate the entrance to the outlet works: The entrance to the outlet works would be moved upstream to a location outside of the projected rockfall hazard area (Zinn Geology 2021). The entrance of the outlet works includes a new course debris rack and inlet valve mounted on a pile-supported steel foundation structure. The foundation is secured to existing bedrock using four, drilled and grouted, steel piles.
2. Connect to existing outlet pipe: A new 400-foot section of high-density polyethylene (HDPE) pipe would extend from the steel foundation along the bed of the existing entrance location.
3. Replace the inoperable emergency valve on the upstream face of the dam.

Downstream Toe of Dam

1. Replace flow control valves at the most downstream end of the outlet works: Remove and replace the valve array and supporting concrete structure at the pipe outfall. This element would include connecting to a new water supply branch that conveys water to the existing fish passage facilities and primary valves that control flow released directly to the Carmel River channel.
2. Abandon existing pipe: A section of pipe would be abandoned in place given it would be disconnected from any source of water and no longer viable for use. This includes a reach of water supply pipe that runs up the existing bank through oak woodland to an older water supply system to the fish passage facilities. This section will be abandoned in place to avoid additional impacts to localized bed and banks.

Downstream of the Dam

1. Bury new water supply pipe: A new 380-foot-long section of pipe would be installed below-grade along the existing dirt access road from the new outlet valves to the existing fish passage facilities. This section of pipe will replace the current water supply branch with a 12-inch diameter HDPE service.

Access Improvements

1. Access road revision to Bailey Bridge: A 275-foot reach of existing gravel access road adjoining the south approach to Baily Bridge will be relocated and paved. The new access road segment will improve the curvilinear approach to the bridge allowing for larger vehicles with trailers to access the north side of the spillway. This improvement benefits construction of the proposed project elements as well as all future operations and maintenance activities required at the existing dam infrastructure.

Construction

Construction of the proposed project elements would require a mix of specialized marine-based and conventional terrestrial-based construction means and methods. Potential construction and their associated impact mitigation strategies are provided in the following subsections for consideration.

Figure 1. Project Elements



2.4.1 Site Preparation

- Access for all personnel, equipment, and materials would be via Nason Road (off Cachagua Road) and gravel access road maintained by Cal-Am.
- Access to the reservoir, dam, and existing infrastructure would be via an existing gravel road network located throughout the project area.
- All access roads would require upkeep, maintenance, and would be supplemented with new aggregate surfacing material as part of construction.
- During dry months, water would be applied to gravel roads to reduce the production and distribution of dust.
- The proposed equipment and material laydown and staging area would be located on both sides of the existing access, east of the Bailey Bridge. It is composed of a 2.5-acre flat area that has been disturbed by previous construction activities and projects.
- At the discretion of the construction contractor, the existing Bailey Bridge could be modified or supported to increase its load bearing capacity above its current capacity of HS-20. Bridge supports during periods of low to no overflow through the spillway could be installed by using wood timber (i.e., scabbing) or screw jacks placed under the bridge onto the surface of the spillway. Alternatively, the contractor may elect to transport equipment and materials over the spillway using a crane. Both methods were used during the construction of the existing floating weir collection barge in 2015.

- Typical construction best management practices (BMPs) would be established during site preparation, including designated refueling areas, concrete/grout washout areas, heavy equipment storage areas, silt fencing, straw wattles, erosion control matting on slopes, flagging of construction limits, ground surface improvements, dust control, stockpiles, etc.
- Any ground that has been disturbed or left bare due to construction activities would be seeded at the conclusion of the project with a native erosion control seed mix. Seed would be applied using hydroseed with emulsified stabilization fibers and tackifier.
- Areas disturbed within existing critical or jurisdictional areas (e.g., within the ordinary high water mark) would be subject to restoration and/or mitigation measures that would be determined during consultation, designed, and installed as part of project construction.

2.4.2 Access Improvements

- Currently, vehicular access to the Los Padres Dam site is through sharp bends approaching the Los Padres Dam. The access road ties into the Bailey Bridge at the bottom of the Los Padres Dam Spillway. Construction vehicles and equipment would be required to cross the Bailey Bridge. Larger turning radiuses would be needed to negotiate the turns; therefore, an access road realignment is required. The total anticipated length of the access road improvements is approximately 275 feet.
- The access road would have an approximately 2 percent cross slope for drainage. The access road would be compacted with a gravel base and include an asphalt surface.
- Earthwork would be needed as the proposed access road realignment shifts the access road south requiring cuts. In general, the maximum slope for the access road realignment would be approximately 10 percent.
- Excavation would be required for the access road realignment in addition to the cut slopes required adjacent to the road on both sides.
- A masonry block type wall or cast-in-place retaining wall would be set to retain material adjacent to the access road on the uphill side of the access road. Cut slopes would be at a maximum horizontal to vertical ratio (H:V) of 2:1 and extend approximately the full length of the access road realignment. In both cases, the surface of the wall would mimic the natural surroundings and character of the project area. Split face blocks, textured forms, or modular tie-back panes would be used to achieve an appropriate level of aesthetic appeal.
- A drainage ditch with 2-foot depth and top-width of 8 feet would be provided opposite to the retaining wall. The drainage ditch would be lined with quarry rock to prevent erosion and sedimentation into the Carmel River.
- Access road cut slopes on the side opposite the retaining wall are estimated to be approximately 10:1 (H:V) until daylighting at existing grade.
- The new section of access road would also be paved to prevent erosion and sedimentation into the Carmel River.

2.4.3 Relocation of the Upstream Entrance

- In-reservoir work would begin with the delivery, assembly, and deployment of temporary floating construction barges. The temporary construction barge would be assembled near the

edge of water at the existing unimproved boat launch area. The construction barge would include a crane, hopper, tool enclosure, and personnel support equipment such as air supply systems for underwater divers.

- Additional equipment such as a larger land-based crane, wheeled back-hoe, articulated wheel loader, mid-sized tracked excavators, 10-yard dump trucks, service vehicles, and support trucks would likely be mobilized to the site during barge assembly and deployment.
- Upon configuration of the barge, a turbidity curtain would be installed encompassing the area surrounding the existing outlet works to isolate the work area from the rest of the reservoir and reduce the transport of turbidity and sediments elsewhere.
- A large 12-foot-diameter steel caisson would be lowered from the construction barge, into the reservoir, and secured onto the existing outlet concrete structure surface after removal of adjacent debris and penetration into existing reservoir sediments. As the caisson is placed, water jetting, vacuuming, and hand removal of sediments and debris would be required.
- Upon placement of the caisson, all debris and sediments remaining within the caisson would be removed such that the caisson establishes an isolated construction area that is accessible by underwater divers.
- Any material displaced as part of caisson installation would remain in the bottom of the reservoir and be cast aside of the work area on top of existing landslide deposits but within the turbidity curtain extents. Approximately 168 cubic yards of debris and reservoir sediments would be displaced. Debris is classified as rocks and woody material (branches, trunks, etc.).
- The existing outlet works, valves, and pipe spools would be disassembled and removed from the work area and disposed of at an approved off-site location in compliance with all federal, state, and local regulations.
- New pipe spools, reducers, bends, and fittings would be installed within the caisson protected area at the existing outlet to the reservoir.
- The new outlet structure would be installed at its new location outside of the landslide hazard zone. The new outlet structure would be supported by steel piles drilled and grouted into place. As each pile socket is drilled into existing rock, a larger diameter caisson would be temporarily held in place to isolate the drill site. Rock shavings and wash water would be vacuumed out of the caisson during the drilling process, settled in a Baker-style tank, removed from the site, and disposed of at an off-site location. Clean water, decanted from the settling tank, would be returned to the reservoir or distributed overland at a site to be determined during construction.
- The outlet works structure platform, pipe fittings, emergency valve, and ball-joints would be installed using a crane atop the construction barge and underwater divers.
- The new HDPE pipe would be assembled on land, floated into position, and sunk into its final configuration on the reservoir bottom. The ends of the HDPE pipe section would then be attached at the new outlet works structure and existing outlet by underwater divers.
- After the HDPE pipe is in place, ancillary features such as the air-management equipment and valve operators would be installed.
- Finally, the course debris rack would be installed on the outlet structure.

- The construction barge and equipment would be demobilized from the site.
- The turbidity curtain would remain in place until the turbidity inside the work area has subsided to acceptable thresholds established at some point in the future during consultation with the resource agencies.

2.4.4 Replacement of Emergency Outlet Valves

- Access to the existing outlet valves is via an existing access road with intermittent gravel and dirt surface. Equipment, materials, and personnel could be mobilized directly to the site without new access improvements.
- Replacing the outlet valves would begin with delineating the construction limits and installing BMPs to limit inadvertent impact to areas outside of the construction limits. A single sediment fence would be installed across the outlet channel just downstream of the work area to retain any redistributed sediment within the immediate construction area.
- The existing outlet pipeline would be drained by first closing the newly installed isolation valve in the reservoir and then opening the most downstream valve in the existing outlet valve array.
- The existing outlet valve array would then be completely removed using conventional demolition techniques, including saw cutting, impact hammering from medium sized tracked excavators, removal using hand tools, etc. Concrete dust originating from demolition activities would be minimal, as the structure is very small, but mitigation of concrete dust could be accomplished by spraying water on the concrete surface when necessary. All removed debris and materials would be completely removed from the project site and disposed of in an approved off-site facility in accordance with all federal, state, and local requirements.
- The footprint of the new valve array would then be cleared using a mid-sized tracked excavator and laborers. Preparation of the foundation would occur by smoothing the ground surface and applying a compacted layer of crushed aggregate.
- Mechanical pipe fitters would configure encased piping elements such as spools, fittings, and bends.
- Concrete forms and steel reinforcement would be erected.
- Cast-in-place concrete would be placed within the forms. Any washout from the concrete trucks would be performed in designated washout areas in the project material and equipment laydown areas.
- Forms would be stripped and removed from the site.
- The remaining miscellaneous metals (e.g., guardrails), valves, pipe supports, and pipe spools would be installed.
- Rock slope protection would be placed around the concrete structure to inhibit bank erosion immediately adjacent to the outlet valves.
- The site would be restored by filling in divots, smoothing earth surfaces, and removing debris and deleterious materials remaining from construction activities.

- At this time, BMPs would remain in place. Any seeding or mitigation planting would be performed at a later stage upon completion of all construction-related activities.

2.4.5 Installation and Connection of Newly Proposed Pipeline to Existing Pipeline

- Access to the new outlet valves and proposed pipeline alignment would be via the existing access roads with intermittent gravel and dirt surface.
- A mid-sized, tracked excavator would excavate the pipe trench along its alignment within the extents of the existing access road.
- Trench spoils would be cased alongside the trench.
- Although no impacts to areas beyond the existing road are anticipated, a high-visibility sediment fence would be installed on the waterside of the road to prevent unanticipated redistribution of materials beyond the road embankment and potentially into the existing Carmel River bypass channel.
- Portions of the new HDPE pipe would be assembled and/or butt-fused at the discretion of the contractor. Completed sections would be installed into the bottom of the trench and fitted to one another longitudinally for a total of 380 feet.
- The trench would be backfilled using existing common borrow and compacted, per project specifications.
- Any excess common borrow (earth, rocks, etc.) would be removed from the project area and disposed of in a legal manner.
- Ends of the pipe would be fitted to the new outlet valves and the supply pipe to the existing fish trap and ladder.
- A new layer of crushed aggregate would be placed and compacted along the access road.
- The site would be restored by filling in divots, smoothing earth surfaces, and removing debris and deleterious materials remaining from construction activities.
- All BMPs would be removed from the construction area.
- All seeding, planting, and mitigations requirements identified as part of the design and permitting process would be installed.

2.4.6 Site Restoration and Demobilization

- The site would be restored by filling in divots, smoothing earth surfaces, and removing debris and deleterious materials remaining from construction activities using a mid-sized excavator and laborers with hand tools.
- All BMPs would be removed from the construction area.
- All equipment, unused materials, and construction debris would be removed from the project site.
- All seeding, planting, and mitigations requirements identified as part of the design and permitting process would be installed.

2.5 Construction Schedule and Information

Construction is anticipated to begin in fall 2023 after the adoption of this initial study/mitigated negative declaration (IS/MND) and conclusion of permitting. Although several alternatives concerning the future of the dam and reservoir are under consideration, the improvements described in this IS are the only proposed permanent improvements to the outlet works and pipeline at this time.

2.5.1 Construction Work Hours and Crew Size

As currently proposed, it is assumed that construction of the proposed project would be accomplished in standard 8-hour day shifts, 5 days per week. The day shifts would change to accommodate temperature and daylight conditions as seasons change, but would generally occur from 7:00 AM to 3:00 PM each day.

2.5.2 Construction Best Management Practices

Air Quality

- Water all active construction areas as required. Frequency should be based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities during periods of high wind at the project site (over 15 miles per hour [mph]).
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area.
- Haul trucks shall maintain at least 2 feet 0 inches of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Sweep streets if visible soil material is carried out from the construction site.
- Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance).
- Limit the area under construction at any one time.

Biological Resources

- Install a turbidity curtain.
- Isolate construction areas from flowing water.

- Control sediment and erosion as required under the stormwater pollution prevention plan (SWPPP).
- Water all active terrestrial construction areas, as necessary.
- Install temporary and permanent stabilization measures, including revegetation.

2.5.3 Operations and Maintenance

Permits and Approvals Needed

Permit/Approval	Issuing Body	Timing of Permit/Approval Clearance
Clean Water Act Section 404 Permit	United States Army Corps of Engineers, San Francisco District – Nationwide Permit (NWP)	After adoption of CEQA determination and before construction
Clean Water Act Section 401 Water Quality Certification	Central Coast Regional Water Quality Control Board (Region 3)	
Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement	California Department of Fish and Wildlife	
Endangered Species Act – Section 7 Consultation	National Marine Fisheries Service and United States Fish and Wildlife Service	
National Historic Preservation Act, Section 106	State Historic Preservation Office	
Grading permits	Monterey County	Prior to breaking ground for construction
Clean Water Act Section 402 (National Pollution Discharge Elimination System [NPDES])	Central Coast Regional Water Quality Control Board	
River Work Permit	Monterey Peninsula Water Management District	Prior to working in river
Construction General Permit	California State Water Resources Control Board	Prior to construction

3 Environmental Checklist Form

Project Title: Los Padres Dam Outlet Modifications

Lead Agency name and address: Monterey Peninsula Water Management District

P.O. Box 85, Monterey, CA 93955

Contact person and phone number: Maureen Hamilton (831-658-5622)

Project location: Los Padres Dam, APN 418-191-035

Project sponsor's name and address:

California American Water attn: J. Aman Gonzalez

511 Forest Lodge Road,

Pacific Grove, CA, 93955

Tel: (831) 236-6828

General Plan designation: Designated Resource Conservation 10 to 160 acre minimum, per the 2010 Monterey County General Plan

Zoning: Per the 2010 Monterey County General Plan, Cachagua Land Use Plan, the lands encompassed by the project are zoned for Resource Conservation. The nearby rural area of Cachagua includes commercial and residential, low-density zoning. Areas north of Cachagua, along the Carmel River, are zoned for farmland (40 to 160 acre minimums).

Description of project: California American Water (Cal-Am) is proposing to modify the existing low-level regulating outlet at the Los Padres Dam and Reservoir in Monterey County, California. The proposed project is intended to accomplish the following three primary goals: 1) meet the California Department of Water Resources Division of Safety of Dams (CA-DWR DSOD) mandated requirement to drain the reservoir in case of emergency; 2) to supply water to the Carmel River during low-flow summer months to meet instream flow requirements and sustain aquatic organisms, including South Central California Coast Steelhead; and 3) restore water supply to the existing fish trap and ladder necessary to provide upstream fish passage to adult steelhead. Achieving these goals are essential for restoring the original purpose of the outlet and reliably achieving existing environmental mandates regarding sustaining aquatic organisms within the Carmel River and providing upstream fish passage at Los Padres Dam.

Surrounding land uses and setting: The 2010 Monterey County General Plan (Figure LU2: Cachagua Area Land Use Plan) identifies the lands immediately surrounding the project area as zoned for resource conservation. Beyond those areas, the valley contains lands zoned for grazing and farmland, with the Cachagua area zoned for commercial and low-density residential. The Los Padres National Forest is located predominantly south of the project area with some forest service lands located directly west of the project. Outlet modifications include work within Los Padres Reservoir and the Carmel River riparian corridor.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.): Monterey County, U.S. Army Corp of Engineers (USACE), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), California Regional Water Quality Control Board, California Office of Historic Preservation (OHP).

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? In accordance with PRC 21080.3.1(b), Ohlone/Costanoan-Esselen Nation provided the Monterey Peninsula Water Management District (MPWMD) a formal request for notification and information on proposed projects for which MPWMD will serve as lead agency under the California Environmental Quality Act (CEQA) in a letter dated June 28, 2015. To date, no other California Native American Tribes have requested notification from MPWMD pursuant to PRC 21080.3.1(b). Accordingly, MPWMD provided formal notification of the opportunity to consult on the proposed project (PRC 21080.3.1(d)). To date, no response to this letter has been received.

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

3.2 Determination (To be Completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the project would not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project may have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date:

3.3 Evaluation of Environmental Impacts

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

- Earlier Analysis Used. Identify and state where they are available for review.
- Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

The explanation of each issue should identify:

- The significance criteria or threshold, if any, used to evaluate each question; and
- The mitigation measure identified, if any, to reduce the impact to less than significance.

I. Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The California State Scenic Highway System Map (2018) does not denote a scenic highway in the vicinity of the project; however, the Monterey County Scenic Highway Corridors & Visual Sensitivity Map (Figure 12 of the General Plan [Monterey County 2010a]) shows a proposed route along Carmel Valley Road, which falls outside the project boundary. Additionally, the map denotes visual areas of both sensitive and highly-sensitive designations near the project.

The Upper Carmel Valley is a rural, scenic portion of the Monterey Peninsula, with vineyards, rangelands, and forests. Located approximately 28 miles south of Monterey, California, in Monterey County, and surrounded by the Monterey Ranger District of the Los Padres National Forest, the area has seen recent impacts from wildfires that have impacted much of California in the last several years, including the Carmel Fire of 2020, with ongoing residual aesthetic impacts.

Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

It is anticipated that the proposed project would have limited, temporary impacts to scenic vistas. Upon receipt of permits, construction mobilization activities are anticipated to begin in either quarter four of 2023 or quarter one of 2024, with demobilization and restoration anticipated to conclude in quarter four of 2024. The construction schedule could change based on acquisition of permits or delays due to weather impacts. Visual impacts to vistas would take place during construction and conclude with demobilization and the conclusion of site restoration. The planned permanent fix associated with the project would avoid current equipment, monitoring,

and emergency repair work that has affected the visual character as a result of the successive landslides. The change to visual character would most likely be noticed by recreationists using trails near the project site. The quality of the view of the site would be affected during construction activities, but is anticipated to return to its present condition following the demobilization and the conclusion of site restoration activities. The limited duration and footprint of construction activities on the reservoir, dam, and adjacent, existing roadway ensures that **impacts to scenic vistas would be less than significant.**

- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

Recognizing the project footprint is limited to the reservoir, dam, and adjacent, existing road, there are no anticipated impacts historic buildings or state scenic highways, and impacts to trees from trimming or removal, if necessary, would be temporary. A portion of the project would be attached to a rock outcropping that is submerged in the reservoir. The rock outcropping would not be damaged as a result of proposed activities. Finally, the dam, although more than 50 years old, has been determined ineligible for listing to the National Register of Historic Places (NRHP). Therefore, for all resources under section I.b., **there are no anticipated impacts.**

- c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

It is anticipated that there would be limited, temporary impacts to the existing visual character during the construction activities associated with the proposed project. The planned permanent fix associated with the project would avoid current equipment, monitoring, and emergency repair work that has affected the visual character as a result of the successive landslides. Construction activities are anticipated to begin in quarter four of 2023 or quarter one of 2024 with demobilization and restoration anticipated to conclude in quarter four of 2024. The change to visual character would most likely be noticed by recreationists using trails near the project site. The quality of the view of the site would be affected during construction activities, but is anticipated to return to its present condition following the demobilization and the conclusion of site restoration activities. The limited duration and extent of **impacts would be less than significant.**

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

There are no components of the proposed project that would result in the creation of new sources of light or glare. Additionally, there is no nighttime work anticipated for the project. Therefore, there are **no anticipated impacts** associated with this component of the analysis.

Mitigation Measures

None required.

II. Agriculture and Forestry Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

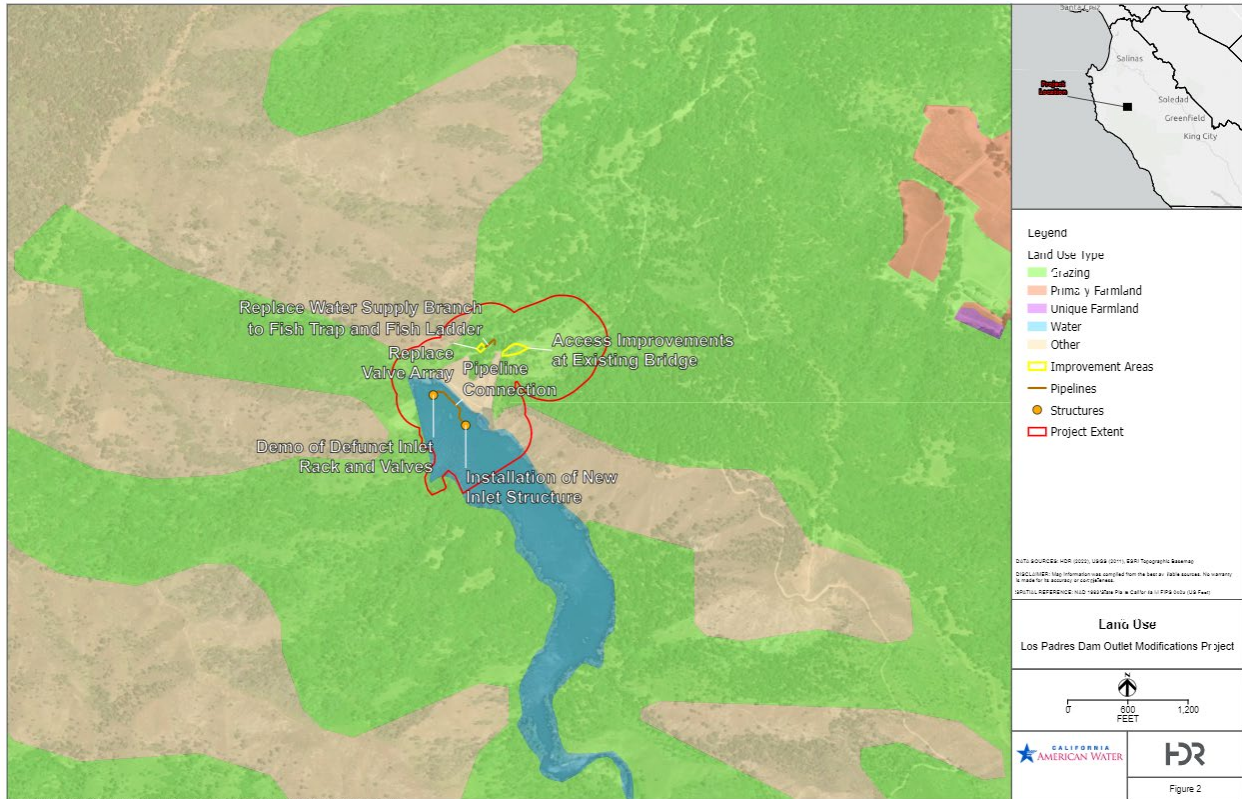
Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Although there are various species of trees in the lands surrounding the project area, the California Farmland Mapping and Monitoring Program identifies grazing lands as the only agriculture and forestry-related land type in close proximity to the project area (see Figure 2). The California Important Farmland Finder identifies both Prime Farmland and Unique Farmland to the northeast of the project, beyond the rural community of Cachagua and to the south of the community.

Figure 2. Local Land Uses



Impact Analysis

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

The California Farmland Mapping and Monitoring Program identifies only grazing lands adjacent to the dam and reservoir. There are no identified Prime Farmlands or Farmlands of Statewide Importance within or adjacent to the project area; therefore, there are **no anticipated impacts** to these resources.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed project is limited to reservoir, dam, and adjacent lands. The California Farmland Mapping and Monitoring Program denotes grazing land adjacent to the project area. There are no identified Prime Farmlands or Farmlands of Statewide Importance within or adjacent to the project area. There are **no anticipated impacts** to Williamson Act contracts as a result of the proposed project.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Proposed project activities would be limited to the reservoir, dam, and lands directly adjacent, and with adjacent lands being classified as grazing lands. The California Farmland Mapping and

Monitoring Program identifies no forest or timberlands within or adjacent to the project area. Therefore, there are **no anticipated impacts** to forest lands, timberlands, or existing zoning.

d) Result in the loss of forest land or conversion of forest land to nonforest use?

Lands adjacent to the reservoir and dam are classified as grazing lands per the California Farmland Mapping and Monitoring Program. The California Farmland Mapping and Monitoring Program identifies no forest or timberlands within or adjacent to the project area. Therefore, there are no anticipated losses of forest land or forest conversion resulting from the proposed activities, resulting in **no impacts**.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to nonforest use?

The lack of identified farmland or timberlands precludes the likelihood of conversion of such landcover types. Therefore, there are **no anticipated impacts** associated with the proposed project resulting in no impacts.

Mitigation Measures

None required.

III. Air Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

TOPOGRAPHY AND METEOROLOGY

Monterey County, including the proposed project area, is located within the North Central Coast Air Basin (NCCAB). Air quality within the NCCAB is regulated at the local level by the Monterey Bay Air Resources District (MBARD). The NCCAB lies along the central coast of California, including Monterey, Santa Cruz, and San Benito counties. The northwest sector of the basin is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary, and together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the basin. Farther south, the Santa Clara Valley evolves into the San Benito Valley, which runs northwest to southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of the Carmel Valley (MBARD 2008).

The climate of NCCAB is controlled by a semi-permanent high-pressure cell in the eastern Pacific, which causes west and northwest winds over the coast during the summer and a temperature inversion. However, due to its location inland, the temperature inversion effect often does not extend to the project site. During extended dry periods, fires can ignite that can cause air quality to deteriorate for long periods (up to several months). In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. During early winter low pressure cells originating in the Gulf of Alaska increase northwest air flow. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High-pressure cell, which allows pollutants to build up over a period of a few

days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay area or the Central Valley into the NCCAB. During the winter, air flows in the southeasterly direction out of the Salinas and San Benito valleys and the absence of temperature inversions typically result in good air quality for the NCCAB in winter and early spring (MBARD 2008).

CRITERIA AIR POLLUTANTS

The six common air pollutants (also known as “criteria air pollutants”) found all over the United States include ground-level ozone (O₃); carbon monoxide (CO); nitrogen dioxide (NO₂); particulate matter, including particulate matter 10 micrometers or less (PM₁₀) and particulate matter 2.5 micrometers or less (PM_{2.5}); sulfur dioxide (SO₂); and lead (Pb) (USEPA 2023). Table 1 summarizes the criteria air pollutants, their sources, and their effects on humans and the environment.

Table 1. Sources and Effects of Criteria Air Pollutants

Pollutant	Sources	Effects
Ground-level Ozone (O ₃)	Chemical reaction between volatile organic compounds (VOC) and oxides of nitrogen (NO _x) in the presence of sunlight and heat.	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • By-products from incomplete combustion of fuels and other carbon containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Impairment of mental function. • Impairment of vision. • Death at high levels of exposure. • Aggravation of some heart diseases.
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Particulate Matter (PM ₁₀ and PM _{2.5})	<ul style="list-style-type: none"> • Combustion of solid fuels. • Construction activities. • Industrial processes. • Unpaved roads. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of respiratory and cardiorespiratory diseases. • Increased cough and chest discomfort. • Reduced visibility. • Premature death.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Contributes to acid rain. • Damages statues and monuments.
Lead (Pb)	<ul style="list-style-type: none"> • Lead-based industrial processes like battery production and smelters. • Lead paint. • Leaded gasoline. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children. • Decreased plant and animal growth.

Source: USEPA 2023



ATTAINMENT STATUS

In accordance with federal Clean Air Act (CAA) requirements, the air quality in a given region or area is measured by the concentration of criteria pollutants in the atmosphere. Under the CAA, the U.S. Environmental Protection Agency (USEPA) developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS are the maximum allowable concentrations for the following criteria air pollutants: O₃, CO, NO₂, PM₁₀, PM_{2.5}, SO₂, and Pb.

The CAA also gives the authority to states to establish air quality rules and regulations. The State of California has adopted the NAAQS and promulgated additional California Ambient Air Quality Standards (CAAQS) for criteria air pollutants. The CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

The USEPA classifies the air quality in an Air Quality Control Region (AQCR), or in subareas of an AQCR, according to whether the concentrations of air pollutants in ambient air exceed the NAAQS. Areas within each AQCR are designated as attainment, nonattainment, maintenance, or unclassified for each of the six criteria air pollutants. Attainment means that criteria air pollutant levels in an AQCR are lower than the NAAQS; nonattainment means that criteria air pollutant levels exceed the NAAQS; maintenance means that an AQCR was previously designated nonattainment but is now attainment; and unclassified means that there is not enough information to appropriately classify an AQCR, so the area is considered attainment. USEPA has delegated the authority for ensuring compliance with the NAAQS to the California Air Resources Board (CARB). The CARB has delegated responsibility for implementing the federal CAA and California CAA to local air pollution control agencies. Table 2 summarizes the state and national area designations for criteria air pollutants in NCCAB.

Table 2. North Central Coast Air Basin Attainment Status

Pollutant	Attainment Status	
	State Area Designations	National Area Designations
O ₃	Attainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO ₂	Attainment	Unclassified/Attainment
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Attainment	Unclassified/Attainment
SO ₂	Attainment	Unclassified/Attainment
Pb	Attainment	Unclassified/Attainment
Sulfates	Attainment	-
Hydrogen Sulfide	Unclassified	-
Visibility Reducing Particles	Unclassified	-

Source: CARB 2023

Abbreviations: O₃ = ground-level ozone; PM_{2.5} = particulate matter 2.5 micrometers or less; PM₁₀ = particulate matter 10 micrometers or less; CO = carbon monoxide; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; Pb = lead

As shown in Table 2, the NCCAB is in nonattainment for PM₁₀ and is in attainment or unclassified for all other criteria air pollutants. The NCCAB is in unclassified/attainment with the federal standards for all criteria air pollutants.

THRESHOLDS OF SIGNIFICANCE

MBARD has developed thresholds of significance for criteria air pollutants. In developing these thresholds, MBARD considered the emission levels for which a project's individual emissions would be cumulatively considerable (MBARD 2008). Projects that do not exceed the MBARD's adopted threshold are not anticipated to result in a cumulatively considerable air quality impact. The construction and operational thresholds presented in the *CEQA Air Quality Guidelines* (MBARD 2008) are summarized in Table 3.

Table 3. MBARD Thresholds of Significance for Criteria Air Pollutants¹

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)
VOC	-	137
NO _x , as NO ₂	-	137
CO	-	550
SO ₂	-	150
PM ₁₀	82	82
PM _{2.5}	-	-

Source: MBARD 2008

Abbreviations: lbs/day = pounds per day; VOC = volatile organic compounds; NO_x = nitrogen oxides; NO₂ = nitrogen dioxide; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter 10 micrometers or less in diameter; PM_{2.5} = particulate matter 2.5 micrometers or less in diameter

Notes: There is no adopted MBARD threshold for VOC, NO_x, CO, SO₂, and PM_{2.5} during construction or PM_{2.5} during operation. MBARD has adopted a quantitative threshold only for PM₁₀ to determine construction-related air quality impacts.

Sensitive Receptors

An air quality sensitive receptor is generally defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (K-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes (MBARD 2008). The nearest air quality sensitive receptors to the project area are residences along Nason Road, which are located approximately 0.7 miles (or 4,000 feet) away.

Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

The *2012-2015 Air Quality Management Plan* (2012-2015 AQMP; MBARD 2017) adopted by MBARD in 2017 is the air quality management plan applicable to the proposed project. The 2012-2015 AQMP focuses on reduction of ozone levels within the NCCAB. As identified by MBARD, projects that conflict with the population projections on which the 2012-2015 AQMP is based, are not accommodated in the 2012-2015 AQMP and would have a significant cumulative impact unless offset (MBARD 2008).

The proposed project includes repair and replacement of the outlet works of the Los Padres Dam and Reservoir, and by nature, would not induce population growth in the project area. All construction workers required for the proposed project would be sourced from the existing local or regional workforce and would not relocate to the project area permanently. As a result, the proposed project would be consistent with the population projections in the 2012-2015 AQMP. The proposed project would also not exceed the MBARD construction and operational thresholds for criteria air pollutant emissions, as shown in Table 4, and would implement MBARD's dust-related best practices to reduce PM₁₀ emissions during construction. Therefore,

the proposed project would not conflict with or obstruct implementation of the 2012-2015 AQMP, resulting in a **less-than-significant impact**. No mitigation would be required.

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The proposed project would generate criteria air pollutant emissions during construction from the operation of heavy-duty construction equipment; truck trips associated with hauling of construction materials, including export of existing ground and debris; and vehicle trips associated with commute of construction workers. Construction criteria air pollutant emissions from the proposed project have been estimated based on the construction schedule, phasing, labor, and equipment projections presented in the project description. The project-specific data was populated into the California Emissions Estimator Model (CalEEMod) version 2020.4.0. It is assumed that vehicles traveling on the unpaved gravel road (Nason Road) would adhere to a 15-mph speed limit. The CalEEMod inputs, assumptions, and outputs are presented in Appendix A. Table 4 summarizes the maximum daily criteria air pollutant emissions during construction.

Table 4. Construction Criteria Air Pollutant Emissions

Construction	Pollutants (lbs/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	2.36	20.30	19.56	0.09	66.10	7.32
MBARD Thresholds ¹	-	-	-	-	82	-
Exceeds MBARD Thresholds?	NA	NA	NA	NA	No	NA

Source: CalEEMod version 2020.4.0 and Appendix A

Abbreviations: lbs/day = pounds per day; VOC = volatile organic compounds; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter 10 micrometers or less in diameter; PM_{2.5} = particulate matter 2.5 micrometers or less in diameter; MBARD = Monterey Bay Air Resources District; NA = not applicable

Notes: There is no adopted MBARD threshold for VOC, NO_x, CO, SO₂, and PM_{2.5}. MBARD has adopted a quantitative threshold only for PM₁₀ to determine construction-related air quality impacts.

As shown in Table 4, construction of the proposed project would result in a maximum of 66.10 pounds per day (lbs/day) of PM₁₀ emissions, which is below MBARD's threshold of 82 lbs/day for PM₁₀. Further, the proposed project would be required to implement MBARD's dust-related best practice measures, which would further reduce PM₁₀ emissions. Furthermore, because this project would not exceed the MBARD's significance thresholds, added to the remoteness of the project work that limits the additive emissions with other projects in the county, this project is not expected to result in a cumulatively considerable impact on air quality. Therefore, impacts during construction would be **less than significant** and no mitigation would be required.

Once construction is complete, operation and maintenance of the Los Padres Dam and Reservoir would be similar to existing conditions before blockage of the outlet. No change or additional operations or maintenance activities are anticipated. As the proposed project would restore the original purpose and function of the existing lower-level outlet, interim measures would no longer be required, which would eliminate the need for emission intensive activities like pumping or siphoning thereby resulting in a reduction in NO_x and PM emissions. As a result, the proposed project would not generate new criteria air pollutant emissions during operations. Therefore, impacts during operations would be **less than significant** and no mitigation would be required.

c) Expose sensitive receptors to substantial pollutant concentrations?

The proposed project has the potential to generate toxic air contaminants (TACs) from the use of diesel equipment during construction. TACs are pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential hazard to human health. The primary TAC of concern is diesel particulate matter (DPM). DPM is a carcinogen emitted by diesel engines that could affect existing sensitive receptors. The nearest sensitive receptors are residences along Nason Road, which are located approximately 0.7 miles (or 4,000 feet) from the project area.

Only portions of the project area would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location on the project area. Periodic operation of construction equipment would allow for the dispersal of DPM by avoiding continuous construction activity in the portions of the project area closest to existing sensitive receptors. According to Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (Office of Environmental Health Hazard Assessment 2015), DPM poses a carcinogenic health risk that is generally measured using an exposure period of 30 years for sensitive residential receptors. However, as presented in Table 4, PM_{2.5} emissions or DPM (DPM is strongly correlated with PM_{2.5} emissions) are minimal. Although the localized analysis does not directly measure health risk impacts, it provides data that can be used to evaluate the potential to cause health risk impacts. The very low level of PM_{2.5} emissions coupled with the short-term duration of construction activity and distance to the nearest receptor would result in an overall low level of DPM concentrations within the project area. Furthermore, compliance with the CARB Airborne Toxic Control Measures (ATCM) anti-idling measure, which limits idling to no more than 5 minutes at any location for diesel-fueled commercial vehicles, would further minimize DPM emissions in the project area. Therefore, construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations, resulting in a **less-than-significant impact**. No mitigation is required.

No generators or stationary sources are included as part of the proposed project. The recent rockslides in the project area that caused blockages in the existing lower outlet have required the use of diesel pumps to clear water over the dam. Operation of the proposed project would eliminate the use of diesel pumps, and as a result, DPM would likely decrease compared to existing conditions. Therefore, operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations, resulting in **no impact**.

d) Result in other emissions, such as those leading to odors adversely affecting a substantial number of people?

Construction activities associated with the proposed project may generate objectionable odors from the use of heavy-duty equipment (i.e., diesel exhaust). Any odors generated during construction would be temporary in nature and cease upon completion of construction activities. The proposed project includes repair and replacement of the outlet works of the Los Padres Dam and Reservoir, and by nature, would not result in other odors in the project area. Any potential odors would be controlled by MBARD Rule 402, which treats odors as a public nuisance. Therefore, the proposed project would not generate emissions of odors affecting a substantial number of people, and impacts would be **less than significant**. No mitigation is required.

Mitigation Measures

None required.

IV. Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Data Collection Methodology

LITERATURE REVIEW

The following sources were used to characterize the environmental setting in the project vicinity. Project-related documentation was reviewed for site-specific data regarding habitat suitability for special-status species. Secondly, preliminary searches of the following databases were performed to identify special-status species and their habitats, as well as aquatic resources, with the potential to occur in the area:

- USFWS Information Planning and Conservation System (2023a)

- USFWS Critical Habitat Portal (2023b)
- USFWS National Wetland Inventory (2023c)
- NMFS, West Coast Region, California Species List Tools (2023)
- CDFW California Natural Diversity Database (CNDDDB) QuickView Tool in BIOS 5 (2023a)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2023)
- Google Earth aerial imagery of the proposed project area (2023)

The USFWS database was queried to identify special-status species within USFWS jurisdiction that have the potential to occur in the biological study area (BSA), as defined in the *Environmental Setting*, below, and the USFWS Critical Habitat Portal was queried to identify designated critical habitat in or adjacent to the study area. A query of the CNDDDB and NMFS California Species List Tool provided a list of known occurrences for special-status species within the Seaside, Spreckels, Chualar, Mount Carmel, Carmel Valley, Rana Creek, Big Sur, Ventana Cones, and Chews Ridge, California, U.S. Geological Survey (USGS) 7.5-minute quadrangles. Lastly, the CNPS database was queried to identify special-status plant species with the potential to occur in the aforementioned USGS quadrangles. Raw data from the database queries are provided in Appendix B, *Biological Resources*.

FIELD INVESTIGATION

An aquatic resources delineation and reconnaissance-level habitat assessment was conducted by HDR biologists Kristin Smith and Leslie Parker on November 3, 2022, by Michael Perkins on March 16, 2023, and by Ian Cain and Jillian White on April 4, 2023.

Aquatic Resources Delineation

The delineation used the Routine Determination Method as described in Part IV, Section D, of the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), hereafter called the Corps Manual. The Corps Manual was used in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0*, hereafter referred to as the Supplement (Environmental Laboratory 2008), and the USACE regulatory guidance letter regarding *Ordinary High Water Mark Identification* (2005). For areas where the Corps Manual and the Supplement differ, the Supplement was followed.

Environmental Setting

This section describes the regional and local environmental setting with regard to biological resources. The 82.0-acre BSA was defined by a 300-foot buffer around the 26.7-acre project footprint, as shown on Figure 3 (Aquatic and Biological Resources Study Area). The project area footprint, consistent with the project area considered in other resource sections of this CEQA document, encompasses all of the elements of the proposed project as described in Section 2.4, *Proposed Project*, including the proposed outlet structure, access roads, staging areas, temporary work areas, proposed valve array, and removal of the existing valve array. The project area consists of 15.9 acres of the open water reservoir, 8.2 acres of upland vegetation communities (described below), 2.1 acres of disturbed areas (such as existing roads and the dam), 0.1 acre of perennial stream channel, and 0.5 acre of riparian vegetation (described below). The BSA then, for the purpose of this analysis, includes the project area plus the aforementioned 300-foot buffer.

REGIONAL SETTING

The proposed project is located along the Central California Coast ecological section of the California Coastal Chaparral Forest and Shrub ecological province (McNab et al. 2007). The climate is characterized by hot, dry summers and rainy, mild winters. The Central California Coast section includes the discontinuous coastal plains, low mountains, and interior valleys adjacent to the Pacific Ocean. Most of the coastal plains and interior valleys have been converted from sagebrush and grassland communities to urban use or irrigated agriculture. A riparian forest containing many broadleaf species grows along streams. Live oak or white oak woodland comprise sclerophyll forest on the hills and lower mountains. On slopes too dry to support oak woodland or oak forest, much of the vegetation is scrub known as chaparral, which varies in composition with elevation and exposure (McNab et al. 2007).

LOCAL SETTING

The proposed project is located in the area surrounding Los Padres Dam, a portion of the Carmel River downstream of the dam, a portion of Los Padres Reservoir upstream of the dam, and immediately adjacent upland area consisting of undeveloped open space. The upland area is steeply sloped on both sides of the river and surrounding the reservoir and with vertically cut canyon walls and faces in some places along the river and reservoir. Elevation in the BSA ranges from a high of approximately 1,250 feet above mean sea level along slopes on the northern edge of the reservoir to a low of approximately 900 feet above mean sea level at the dam face.

The BSA falls within the Danish Creek-Carmel River watershed (Hydrologic Unit Code [HUC] 180600060102). The Carmel River flows northeast through the BSA downstream of Los Padres Dam before curving to the northwest, flowing through Carmel Valley, and draining into Carmel Bay approximately 25 river miles northwest of the BSA.

VEGETATION COMMUNITIES

Vegetation communities are assemblages of plant species that occur in the same area and are defined by species composition and relative abundance. The BSA is dominated by coast live oak woodland, pacific madrone-coast live oak woodland, white alder grove, California sagebrush - black sage scrub, coyote brush scrub, cattail marsh, needle grass – melic grass grassland, wild oats and annual brome grassland, disturbed/barren area, open water, and perennial channel (Figure 3). Each community is described below and is based on data collected in the field. Vegetation alliances described in *A Manual of California Vegetation – Second Edition* (Sawyer et al. 2009) and the California Wildlife Habitat Relationships System (CDFW 1988) were also used as references when describing these communities or land cover types. These descriptions include the dominant and commonly associated plant species found in each community or land cover type.

California Sagebrush - Black Sage Scrub Brush

California sagebrush - black sage scrub brush is found on hillsides to the southeast of the reservoir and the northwest of the reservoir spillway, and river. California sagebrush (*Artemisia californica*) co-dominates with black sagebrush (*Artemisia nova*). Shrub cover varies between very dense and sparse and is generally underlain by annual grassland.

Coast Live Oak Woodland

Coast live oak woodland is found on hillsides above the reservoir, spillway, and river. This community is dominated by coast live oak (*Quercus agrifolia*) in the tree layer. Pacific madrone (*Arbutus menziesii*) co-dominates in some areas and other tree associates include California bay

(*Umbellularia californica*) and California buckeye (*Aesculus californica*). The shrub layer is variable in density – common species include coyote brush (*Baccharis pilularis* ssp. *consanguinea*), western poison oak (*Toxicodendron diversilobum*), and toyon (*Heteromeles arbutifolia*).

Coyote Brush Scrub

Coyote brush scrub is found along the southern edge of the proposed staging area and bordering the northern edge of the dam face. Shrub cover varies between very dense and sparse. Common associates include orange monkeyflower and French broom (*Genista monspessulana*). Areas with more open shrub cover are underlain by annual grassland.

Creeping Wildrye Turf

One small patch of creeping wildrye turf is located within the proposed staging area. It is dominated by creeping wildrye (*Leymus triticoides*) and includes long-beaked filaree (*Erodium botrys*), and wild oats (*Avena* spp.).

Disturbed/Barren

This land cover type includes dirt roads and pullouts, the dam face, spillway, and a large landslide area on the western shore of the reservoir. These areas are largely unvegetated; however, patchy shrubs and herbaceous vegetation are present in some locations. Specifically, orange monkeyflower grows in the open areas between the large boulders making up the dam face. Some hardy species such as sand spurrey (*Spergularia* sp.), filaree, English plantain (*Plantago lanceolata*), and various annual grasses grow in the center of the roadways.

Disturbed Sand-Aster Field

This disturbed grassland occurs on the south side of the access road bisecting the proposed staging area. It is dominated by sand aster (*Corethrogyne filaginifolia*), naked buckwheat (*Eriogonum nudum*), long-beaked filaree, wild oats, and soft brome (*Bromus hordeaceus*).

Needle Grass – Melic Grass Grassland

This perennial grassland community occurs on the south side of the access road bisecting the proposed staging area. Due to the timing of field surveys (November and early spring), identifying species of the perennial grasses was not possible. This area is co-dominated by a mix of native perennial grasses and subshrubs, including needle grass (*Stipa* sp.), Melic grass (*Melica* sp.), filago-leaved sandaster (*Corethrogyne filaginifolia*) and Viper's sessileflower goldenaster (*Heterotheca sessiliflora* ssp. *echioides*).

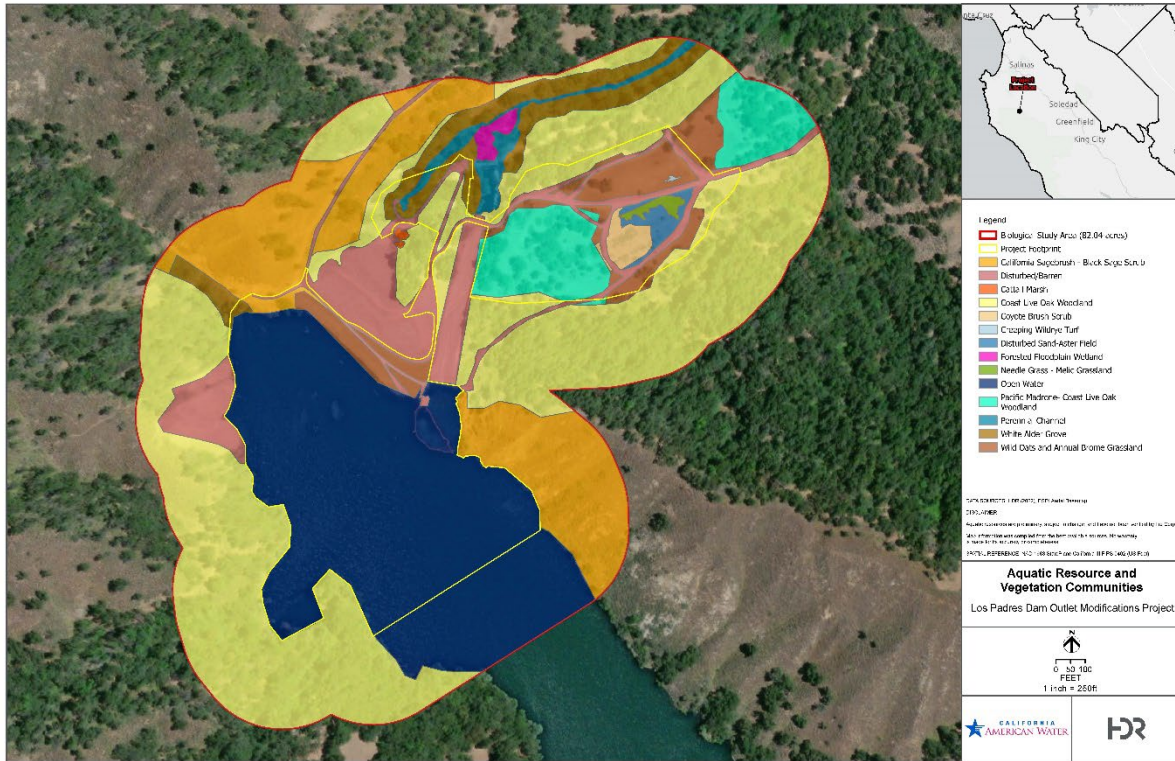
Pacific Madrone – Coast Live Oak Woodland

Pacific madrone – coast live oak woodland is found along the edges of the flat terrace above the Carmel River. This community has a similar species composition to coast live oak woodland, but Pacific madrone is found at a higher density and co-dominates with coast live oak throughout. In addition, the canopy is much more open, allowing for a denser herbaceous layer to proliferate. The herbaceous layer is made up of annual grassland species.

Wild Oats and Annual Brome Grassland

Annual grassland is found primarily along roadways and in open areas identified for project staging. It also fills in open areas along the reservoir when the water levels are low. This community is primarily non-native annual species such as wild oats, bromes (*Bromus* spp.), rattlesnake grass (*Briza maxima*), perennial ryegrass (*Festuca perennis*), and filarees (*Erodium* spp.). Native species occur in patchy distributions and include telegraph weed (*Heterotheca grandiflora*), common madia (*Madia elegans*), cocklebur (*Xanthium strumarium*), and vinegar weed (*Trichostema lanceolatum*).

Figure 3. Aquatic and Biological Resources Study Area



SPECIAL-STATUS NATURAL COMMUNITIES AND AQUATIC RESOURCES

Sensitive habitats included are those that are of special concern to resource agencies or those that are protected under CEQA, Sections 1600 to 1603 of the Fish and Game Code (FGC), and/or Sections 401 and 404 of the Clean Water Act (CWA).

Aquatic resources provide a variety of functions for plants and wildlife. Aquatic resources provide habitat, foraging, cover, migration, and movement corridors for both special-status and common species. In addition to habitat functions, these features provide physical conveyance of surface water flows capable of handling large storms. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

A delineation of aquatic resources, subject to verification by USACE, identified four aquatic resources in the BSA, including the perennial channel (Carmel River), open water (Los Padres Reservoir), cattail marsh at the base of the dam face, and white alder grove – riparian woodland along the Carmel River and in a patchy distribution around the reservoir, as shown in Figure 3.

The investigation of vegetation communities identified needle grass – melic grass grassland as a sensitive habitat in the BSA. This grassland occurs on the south side of the access road bisecting the proposed staging area.

Aquatic Resources

Cattail Marsh

Cattail marsh is found in one small 0.05-acre patch in a depression at the base of the dam face. It can be described as a very dense, near monoculture, of broad-leaved cattail (*Typha latifolia*). Other

species growing amongst the cattails and along the edges of the wetland include hairy sneezeweed (*Helenium puberulum*), iris-leaved rush, common rush (*Juncus effusus* ssp. *Effusus*), horsetail, flatsedge (*Cyperus eragrostis*), and fringed willowherb (*Epilobium ciliatum*). Standing water was present at the time of the survey.

Forested Floodplain Wetland

Forested floodplain wetland is found in one 0.28-acre patch in between and at the confluence of the Carmel River and its side channel from the dam outlet. It is dominated by white alder (*Alnus rhombifolia*). It also includes red willow (*Salix laevigata*) and black cottonwood (*Populus trichocarpa*) with low herbaceous cover and a predominately cobble substrate. Standing water was present at the time of the survey.

Open Water

The Los Padres Reservoir is mapped as open water. Due to the fluctuating water levels, the open water habitat varies between seasons and years. The bathtub ring around the water's edge is either bare soil or annual grassland, depending on how long the area is exposed.

Perennial Channel

Within the BSA, the Carmel River is a sinuous perennial channel that includes boulders with riffles and pools and mature riparian vegetation along its banks. It includes the river channel from the spillway and a confluence with a side channel from the low-level outlet. The upper extent is relatively incised while an active floodplain is generally intact along the lower extent.

White Alder Grove

White alder grove is found along the Carmel River and in patchy distributions around the reservoir. White alder is the dominant species along most of the river extent overlapping with the BSA. Associates in the canopy include red willow, Fremont's cottonwood, big-leaf maple (*Acer macrophylla*), California bay, and western sycamore (*Platanus racemosa*). In some areas, cottonwood and sycamore dominate; however, these were not mapped separately due to their patchy distribution and small stand size. The understory includes dense patches of shrubs such as western poison oak and both California and Himalayan blackberry (*Rubus ursinus* and *R. armeniacus*). Along the edge of the river, giant chain fern (*Woodwardia fimbriata*), horsetail (*Equisetum* sp.), and iris-leaved rush (*Juncus xiphioides*) are common. Other species observed in the herb layer include mugwort (*Artemisia douglasiana*), elk clover (*Aralia californica*), stinging nettle (*Urtica dioica*). Aquatic resources mapped during the delineation, including the river (perennial channel) and fringing floodplains are within this community type.

SPECIAL-STATUS SPECIES

Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area, or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies such as CDFW, USFWS, and private organizations such as CNPS. The degree to which a species is at risk of extinction is the determining factor in assigning a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

- listed, proposed, or candidates for listing under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.11 – listed; 61 Federal Register 7591, February 28, 1996 candidates)
- listed or proposed for listing under the California Endangered Species Act (FGC 1992 Section 2050 et seq.; 14 California Code of Regulations (CCR) Section 670.1 et seq.)
- designated Species of Special Concern by CDFW
- designated Fully Protected by CDFW (FGC Sections 3511, 4700, 5050, and 5515)
- species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380), including CNPS List California Rare Plant Rank 1B and 2

The results of the USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to be affected by project-related activities. Table 5 (Special-status Species with the Potential to Occur in the BSA) summarizes all special-status species identified in the database results and describes the habitat requirements for each species, providing conclusions regarding the potential for each species to be affected by project components. In cases where a determination was made that no suitable habitat for a given species is present in the BSA (Table 5), that species is not analyzed further in this document.

WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link otherwise fragmented acres of undisturbed area. Maintaining the continuity of established wildlife corridors is important to (1) sustain species with specific foraging requirements, (2) preserve a species' distribution potential, and (3) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Available data on wildlife corridors and linkages was accessed through the CDFW BIOS Viewer (2023a). Data reviewed included the following BIOS layers: Terrestrial Connectivity -ACE (ds2734), Essential Connectivity Areas (ds620), Natural Landscape Blocks (ds621), and Missing Linkages in California (ds420). The BSA is located within terrestrial connectivity rank 4, which indicates the area is a conservation planning linkage and essential connectivity area class 3, which indicates the area has intermediate level of permeability to wildlife. There is also a natural landscape block located immediately adjacent to the BSA to the west of Los Padres Reservoir. The Carmel River and the associated riparian corridor also function as a wildlife corridor through the Santa Lucia Mountains for a variety of species, including special status steelhead and California red-legged frog.

Table 5. Special Status Species with Potential to Occur in the Biological Study Area (BSA)

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
Plants							
<i>Abies bracteata</i>	bristlecone fir	—	—	1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, and riparian woodland. Elevation: 600–5,100 feet.	N	This species is detectable year round and would have been seen if present within the BSA.
<i>Agrostis blasdalei</i>	Blasdale's bent grass	—	—	1B.2	Coastal bluff scrub, coastal dunes, and coastal prairie. Elevation: 0–490 feet. Blooming period: May–July	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Allium hickmanii</i>	Hickman's onion	—	—	1B.2	Maritime chaparral, closed-cone coniferous forest, grassland, and coastal prairie and scrub. Elevation: 15–655 feet. Blooming period: March–May	N	The BSA is more than 300 feet outside the known elevation range of this species. There are no known occurrences of the species more than 5 miles from the coast in the southern coast ranges (CCH 2023).
<i>Arctostaphylos edmundsii</i>	Little Sur manzanita	—	—	1B.2	Sandy soils in coastal bluff scrub and chaparral. Elevation: 35-345 feet. Blooming period: Nov–May	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Arctostaphylos hookeri ssp. hookeri</i>	Hooker's manzanita	—	—	1B.2	Sandy soils in coastal scrub, cismontane woodland, chaparral, and closed-cone coniferous forest. Elevation: 195–1,760 feet. Blooming period January–June	N	There are no known occurrences of the species within 18 miles of the BSA or more than 5 miles from the coast within the Santa Lucia Range with the exception of one aberrant occurrence inland (CCH 2023).
<i>Arctostaphylos montereyensis</i>	Toro manzanita	—	—	1B.2	Sandy soils in maritime chaparral, cismontane woodland, and coastal scrub. Elevation: 100–2,395 feet. Blooming period: February–March	Y	Suitable habitat present.
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	—	—	1B.1	Sandy soils in chaparral. Elevation: 100–2,495 feet. Blooming period: December–March	Y	Suitable habitat present.
<i>Arctostaphylos pumila</i>	sandmat manzanita	—	—	1B.2	Sandy soils in openings of coastal scrub and dunes, maritime chaparral, cismontane woodland, and closed-cone coniferous forest. Elevation: 10–675 feet. Blooming period: February–May	Y	Suitable habitat present.
<i>Calyptridium parryi var. hesseae</i>	Santa Cruz Mountains pussypaws	—	—	1B.1	Sandy and gravelly soils in openings of chaparral and cismontane woodland. Elevation: 1,000–5,020 feet. Blooming period: May–August	Y	Suitable habitat present.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Carex obispoensis</i>	San Luis Obispo sedge	—	—	1B.2	Often found on serpentine or gabbro seeps, or on clay soils in closed-coned coniferous forest, chaparral, coastal prairie, coastal scrub, and grassland. Elevation: 32–2,689 feet. Blooming period: April–June	N	There are no known occurrences of the species within 40 miles of the BSA that are more than 4 miles from the coast (CCH 2023).
<i>Carlquistia muirii</i>	Muir's tarplant	—	—	1B.3	Granitic soils in montane chaparral, lower and upper montane coniferous forests. Elevation: 3,608–8,202 feet. Blooming period: July–October	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	—	—	1B.1	Alkaline soils in grassland. Elevation: 0–755 feet. Blooming period: May–November	Y	Suitable habitat present.
<i>Chorizanthe minutiflora</i>	Fort Ord spineflower	—	—	1B.2	Openings and sandy soil in maritime chaparral and coastal scrub. Elevation: 180-490 feet. Blooming period, April-July.	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	FT	—	1B.2	Sandy soils in maritime chaparral, cismontane woodland, coastal dunes and scrub, and grassland. Elevation 15–1,475 feet. Blooming period: April–August	N	There are no known occurrences of the species within 15 miles of the BSA or more than 3 miles from the coast within the Santa Lucia Range in the past 100 years (CCH 2023).
<i>Cirsium occidentale</i> var. <i>compactum</i>	compact cobwebby thistle	—	—	1B.2	Chaparral, coastal dunes, coastal prairie, and coastal scrub. Elevation: 15–490 feet. Blooming period: April–June	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Clarkia jolonensis</i>	Jolon clarkia	—	—	1B.2	Chaparral, Cismontane woodland, coastal scrub, and riparian woodland. Elevation: 65-2,165 feet. Blooming period: April–June	Y	Suitable habitat present.
<i>Collinsia multicolor</i>	San Francisco collinsia	—	—	1B.2	Sometimes in serpentine soils in coastal scrub and closed-cone coniferous forest. Elevation: 95–820 feet. Blooming period: February–May	Y	Suitable habitat present.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	—	SE	1B.1	Sandy soils in disturbed areas of coastal scrub and dunes, cismontane woodland, maritime chaparral, and closed-cone coniferous forest. Elevation: 0–1,690 feet. Blooming period: April–October	Y	Suitable habitat present.
<i>Dacryophyllum falcifolium</i>	Tear drop moss	—	—	1B.3	Carbonate found in North Coast coniferous forest. Elevation:50-900 feet.	N	Carbonates are not a constituent component of the soils of the BSA.
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	—	—	1B.2	Coastal scrub, mesic soils in cismontane woodland, and openings of chaparral. Elevation: 635–3,595 feet. Blooming period: April–May	Y	Suitable habitat present.

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<i>Delphinium hutchinsoniae</i>	Hutchinson's Larkspur	—	—	1B.2	Broadleafed upland forest, chaparral, coastal prairie and coastal scrub. Elevation:0-1,400. Blooming period: March–June	Y	Suitable habitat present.
<i>Delphinium umbracolorum</i>	umbrella larkspur	—	—	1B.3	Chaparral and cismontane woodland. Elevation: 1,312–5,249 feet. Blooming period: April–June	N	The BSA is more than 200 feet outside the known elevation range of this species. Additionally, there are no known occurrences within 65 miles in the past 35 years (CCH 2023).
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	—	—	1B.1	Openings and sandy soils in Closed-cone coniferous forest, maritime chaparral, coastal dunes and coastal scrub. Elevation:20-900 feet. Blooming period: July–October	N	There are no known occurrences of the species within 15 miles of the BSA or more than 3 miles from the coast within the Santa Lucia Range over 300 feet elevation (CCH 2023).
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	—	—	1B.3	Sandy soils and burned areas, in chaparral and valley and foothill grassland. Elevation: 300-3,200 feet. Blooming period: Apr, Aug, Sep, May-Jun	Y	Suitable habitat present.
<i>Erysimum ammophilum</i>	sand-loving wallflower	—	—	1B.2	Sandy, openings in maritime chaparral, coastal dunes, coastal scrub. Elevation: 0–197 feet. Blooming period: February–June	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Fritillaria falcata</i>	talus fritillary	—	—	1B.2	Serpentine soils that are often in talus in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 980–5,005 feet. Blooming period: March–May	Y	Suitable habitat present.
<i>Fritillaria liliacea</i>	fragrant fritillary	—	—	1B.2	Often in serpentine soils in cismontane woodland, grassland, coastal prairie and scrub. Elevation: 5–1,345 feet. Blooming period: February–April	N	There are no known occurrences of the species more than 1 mile from the coast in the Santa Lucia Range. No known occurrences within the Santa Lucia range in the past 80 years (CCH 2023).
<i>Galium californicum ssp. lucense</i>	Cone Peak bedstraw	—	—	1B.3	Rocky or serpentinite soil in broadleafed upland forest, chaparral, cismontane woodland and lower montane coniferous forest. Elevation: 400-5,000 feet. Blooming period: March-September	Y	Suitable habitat present.
<i>Galium clementis</i>	Santa Lucia bedstraw	—	—	1B.3	Rocky, granitic, or serpentine soils found in lower and upper montane coniferous forests. Elevation:3,700-5,900 feet. Blooming period: April-July	N	The BSA is more than 500 feet outside the known elevation range of this species.

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<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	FE	ST	1B.2	Sandy soil in openings of maritime chaparral, cismontane woodland, coastal dunes and coastal scrub. Elevation: 0-150 feet. Blooming period: April-June	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	—	—	1B.1	Sandy or gravelly soils in openings of maritime chaparral, coastal dunes and scrub, and closed-cone coniferous forest. Elevation: 30-655 feet. Blooming period: April-September	N	The BSA is more than 300 feet outside the known elevation range of this species.
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE	—	1B.1	Mesic soils in vernal pools, grassland, alkaline playas, and cismontane woodland. Elevation: 0-1,540 feet. Blooming period: March-June	N	There are no known occurrences of the species within 15 miles of the BSA or more than 5 miles from the coast within the Santa Lucia Range (CCH 2023).
<i>Malacothamnus palmeri</i> var. <i>involutus</i>	Carmel Valley bush-mallow	—	—	1B.2	Chaparral, coastal scrub, and cismontane woodland. Elevation: 100-3,610 feet. Blooming period: April-October	Y	Suitable habitat present.
<i>Malacothamnus palmeri</i> var. <i>lucianus</i>	Arroyo Seco bush-mallow	—	—	1B.2	Chaparral, cismontane woodland, meadows, and seeps. Elevation: 15-3,000 feet. Blooming period: April-Aug.	Y	Suitable habitat present.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	—	—	1B.2	Coastal scrub and rocky chaparral. Elevation: 80-3,400 feet. Blooming period: (March) June-December	Y	Suitable habitat present.
<i>Meconella oregana</i>	Oregon meconella	—	—	1B.1	Coastal scrub and prairie. Elevation: 820-2,035 feet. Blooming period: March-April	Y	Suitable habitat present and known occurrence within 3 miles of the BSA (CDFW 2023a).
<i>Microseris paludosa</i>	marsh microseris	—	—	1B.2	Grassland, coastal scrub, cismontane woodland, and closed-cone coniferous forest. Elevation: 15-1,165 feet. Blooming period: April-July	N	There are no known occurrences of the species within 20 miles of the BSA or more than 3 miles from the coast within the Santa Lucia Range over 500 feet elevation (CCH 2023).
<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	—	—	1B.2	Sandy soils in chaparral, coastal dunes and scrub, and ponderosa pine sandhill forests. Elevation: 0-985 feet. Blooming period: April-September	N	There are no known occurrences of the species within 15 miles of the BSA or more than 3 miles from the coast within the Santa Lucia Range over 500 feet elevation (CCH 2023).

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<i>Pedicularis dudleyi</i>	Dudley's lousewort	—	SR	1B.2	Maritime chaparral, cismontane woodland, grassland, and north coast coniferous forest. Elevation: 195–2,955 feet. Blooming period: April–June	Y	Suitable habitat present.
<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	San Benito pentacheata	—	—	1B.2	Cismontane woodland and grassland. Elevation: 1,575–2,805 feet. Blooming period: March–May	N	The BSA is more than 500 feet outside the known elevation range of this species.
<i>Pinus radiata</i>	Monterey pine	—	—	1B.1	Cismontane woodland and closed-cone coniferous forest. Elevation: 80–605 feet. Cone production: Variable	N	The BSA is more than 300 feet outside the known elevation range of this species.
<i>Piperia yadonii</i>	Yadon's rein orchid	FE	—	1B.1	Sandy soil in coastal bluff scrub, closed-cone coniferous forest and maritime chaparral. Elevation: 35–1,675 feet. Blooming period: (February)May–August	N	The species is not known to occur more than 5 miles from the coast at elevations over 300 feet in the southern coast ranges (CCH 2023).
<i>Plagiobothrys uncinatus</i>	hooked popcornflower	—	—	1B.2	Sandy soils in grassland, cismontane woodland, and chaparral. Elevation: 980–2,495 feet. Blooming period: April–May	Y	Suitable habitat present and known occurrence within a 0.5 mile of the BSA (CDFW 2023a).
<i>Rosa pinetorum</i>	pine rose	—	—	1B.2	Closed-cone coniferous forests and cismontane woodlands. Elevation: 5–3,100 feet. Blooming Period: May– July	Y	Suitable habitat present.
<i>Sanicula maritima</i>	adobe sanicle	—	SR	1B.1	Clay and serpentine soils in chaparral, coastal prairie, meadows, seeps, and grassland. Elevation: 95–785 feet. Blooming period: February–May	N	No known occurrence of the species within 50 miles of the BSA and no known occurrences more than 2 miles from the coast within 90 miles of the BSA (CCH 2023).
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	—	—	1B.2	Sometimes in serpentine soils in openings of broadleafed upland and closed-cone coniferous forests, chaparral, coastal prairie and scrub, and grassland. Elevation: 30–1,640 feet. Blooming period: April–May	N	The only known occurrence of the species within 45 miles or in the vicinity of the Santa Lucia Range is over 100 years old and within 1 mile of the coast (CCH 2023).
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	—	—	1B.1	Gravelly soils and margins in broadleafed upland forest, cismontane woodland, and coastal prairie. Elevation: 345–2,000 feet. Blooming period: April–October	Y	Suitable habitat present.
<i>Trifolium polyodon</i>	Pacific Grove clover	—	SR	1B.1	Mesic and sometimes granitic soils in meadows, seeps, grasslands, coastal prairie, and closed-cone coniferous forest. Elevation: 15–1,395 feet. Blooming period: April–July	Y	Suitable habitat present.

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Invertebrates							
<i>Bombus occidentalis</i>	western bumble bee	—	SCE	—	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Typically nests underground in abandoned rodent burrows, such as old squirrel or other animal nests, and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nest sites may depend on rodent abundance (Xerces 2014).	Y	There are open grassy areas, chaparral and shrub areas, and small mammal burrows for nesting in the BSA.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	—	—	Found only in vernal pools and vernal pool-like habitats. Never found in riverine, marine, or other permanent water bodies. Can be found in a variety of pool types; however, this species trends towards smaller pools (<0.05 acre). Distributed throughout the Central Valley and coast ranges of California (USFWS 2005).	N	No vernal pools occur in the BSA; therefore, there is no potential for the species to occur.
<i>Danaus plexippus</i> (pop. 1)	monarch butterfly (California overwintering population)	FC	—	—	Overwinters along the coast from Mendocino County south into Baja California in wind-protected groves of gum (<i>Eucalyptus</i> spp.), Monterey pine (<i>Pinus radiata</i>), or Monterey cypress (<i>Hesperocyparis macrocarpa</i>) with nectar and water sources nearby. In western North America monarchs migrate from coastal California toward the Rockies and Pacific Northwest and lay eggs while migrating from overwintering sites. During the breeding season eggs are laid on obligate milkweed host plant (primarily <i>Asclepias</i> spp.) which then supports larval feeding. A diversity of blooming nectar resources is needed for foraging throughout their migration routes and breeding grounds (spring through fall). (USFWS 2020).	Y	The species is not known to overwinter in the BSA and there are no groves of gum, pine, or cypress trees present for overwintering. However, milkweed was observed in the BSA which provides suitable habitat for oviposition and larval feeding.
<i>Euphilotes enoptes smithi</i>	Smith's blue	FE	—	—	Found only in Monterey and Santa Cruz Counties. Known primarily from coastal dune habitats, but also recorded in chaparral, scrub, and grassland. Required host plants are coast buckwheat (<i>Eriogonum latifolium</i>) and dune buckwheat (<i>Eriogonum parvifolium</i>) (USFWS 2006a).	N	BSA is outside the known range of the species.

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<i>Euphydryas editha bayensis</i>	Bay checkerspot	FT	—	—	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. All currently occupied habitats occur on serpentine or serpentine-like grasslands that support at least two of the larval host plants: California plantain (<i>Plantago erecta</i>), dense flower owl's-clover (<i>Castilleja densiflora</i>), and purple owl's clover (<i>Castilleja exserta</i>) (USFWS 2009).	N	BSA is outside the known range of the species.
Fish							
<i>Acipenser medirostris</i>	green sturgeon (southern DPS)	FT	SSC	—	Spawning occurs primarily in the Sacramento River, but those that spawn in the Feather and Yuba Rivers are also part of the southern distinct population segment (DPS). Oceanic waters, bays, and estuaries during non-spawning season. Enters San Francisco Bay late winter through early spring, and spawn occurs from April through early July. Spawn in cool sections of river mainstems in deep pools containing small to medium-sized gravel, cobble, or boulder substrate (NMFS 2015).	N	BSA is outside the known species range.
<i>Entosphenus tridentatus</i>	Pacific lamprey	—	SSC	—	Cold, clear water for spawning and incubation. Peak spawning appears to be closely tied to water temperatures that are suitable for early development, but can occur at temperatures above 72°F. Adults use gravel areas to build nests, while ammocoetes need soft sediments in which to burrow during rearing. Nests are generally associated with cover, including gravel and cobble substrates, vegetation and woody debris. Ammocoetes burrow into larger substrates as they grow. Ammocoetes also need detritus that produces algae for food and habitats with slow or moderately slow water velocities, such as low gradient riffles, pool tailouts and lateral scour pools (CDFW 2015).	Y	The removal of the San Clemente Dam in 2015 encouraged Pacific lamprey to begin recolonizing the Carmel River. Suitable habitat is present and they have been observed in the project area.

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<i>Oncorhynchus mykiss irideus</i> (pop. 9)	steelhead (south-central California coast DPS) and Critical Habitat	FT	—	—	Includes naturally spawned anadromous steelhead originating below natural and man-made impassable barriers from the Pajaro River to (but not including) the Santa Maria River. Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NOAA 2019).	Y	Known to occur in Carmel River within BSA (CDFW 2023a).
<i>Lavinia exilicanda harengus</i>	Monterey Hitch	—	SSC	—	Can occupy a wide variety of habitats but most abundant in lowland areas with small reservoirs or large pools. Widely distributed in the Pajaro and Salina river systems (CDFW 2015).	N	The BSA is outside the known species range.
Amphibians							
<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT	ST	—	Lives in vacant or mammal-occupied burrows, occasionally other underground retreats, throughout most of the year. Found in grassland, savanna, or open woodland habitats. Breeds in temporary and permanent ponds and in streams. Large tracts of upland habitat, preferable with multiple breeding ponds, are necessary for the species to persist. Appears to be absent in waters containing predatory game fish (USFWS 2017b). Breed in ephemeral ponds but sometimes also breed in slow streams and semi-permanent waters, including cattle ponds. Typical upland habitat associations include grassland, oak savanna, edges of mixed woodland, and lower elevation coniferous forest (Nafis 2023)	Y	A suitable breeding pond is located within 1.7 miles of the BSA and suitable upland habitat with small mammal burrows is present within the BSA. There is a known occurrence within 3 miles (CDFW 2023a). However, dispersal barriers such as steep canyon slopes likely preclude this species from occurring in the BSA.

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<i>Rana boylei</i> pop. 6	foothill yellow-legged frog	FCE	SE	—	Generally found in shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel. Eggs have been found at depths to 34 inches in water velocities of 0 - 0.69 feet per second and at most 40 feet from shore. Maximum water temperature for breeding is 79oF and 48 to 70oF is the preferred range. Tadpoles avoid areas below 55oF and prefer temperatures between 62oF and 72.oF (Thomson et al. 2016).	N	There are no known occurrences of the species north of Fort Hunter Liggett (30 miles to the south of the BSA) or within the Caramel River watershed since 1975 (CDFW 2023a).
<i>Rana draytonii</i>	California red-legged frog and Critical Habitat	FT	SSC	—	Ponds/streams in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover in lowlands or foothills. Breeding habitat includes permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. From sea level to 5,000 feet (Nafis 2023).	Y	This species is known to occur in the BSA (CDFW 2023a). The BSA is located within critical habitat (USFWS 2023b).
<i>Taricha torosa</i>	Coast Range newt	—	SSC	—	Ranges along the coast from Monterey to Ventura County and Los Angeles to San Diego County with some occurrences in southwestern Riverside County. The population north of Ventura generally occurs in mesic forests on hilly or mountainous terrain. Populations around and south of Ventura generally occur in drier oak, chaparral, and grassland habitats. Specifically, the southern population uses permanent streams for breeding, and occasionally seasonal streams free of non-native fish (Thomson et al. 2016).	Y	Suitable habitat is present and known occurrences of the species within Los Padres Reservoir.

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Reptiles							
<i>Anniella pulchra</i>	northern California legless lizard	—	SSC	—	Generally found in habitats with a relatively sparse amount of vegetation including coastal sand dunes, chaparral, pine-oak woodland, desert scrub, grassland, and riparian zones. Specifically, requires sandy to loose loamy substrates suitable for burrowing, and avoids areas with gravel or larger sized substrates and those with greater than 10% clay content. Also tends to avoid non-native grasslands and other non-native dominated herbaceous communities (Thomson et al. 2016). Occurs in leaf litter under trees and bushes in sunny areas and dunes stabilized with brush lupine and mock heather often indicate suitable habitat (Nafis 2023).	Y	Suitable chaparral, pine-oak woodland, and riparian habitat and sandy loam soil are present in the BSA.
<i>Emys marmorata</i>	western pond turtle	—	SSC	—	Found in a wide variety of habitats throughout California, but associated with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams. Occurs throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. (CDFW 2018b). Upland habitat that is at least moderately undisturbed is required for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016).	Y	Suitable habitat is present in Los Padres Reservoir, the outlet side channel, and adjacent uplands. Known occurrences of the species within the reservoir.
<i>Phrynosoma blainvillii</i>	coast horned lizard	—	SSC	—	Generally occurs in sage scrub, dunes, alluvial scrub, annual grassland, chaparral, oak, riparian, and Joshua tree woodland, coniferous forest, and saltbush scrub. Needs loose, fine soils for burrowing, open areas for basking, and dense foliage for cover. Negatively associated with Argentine ants (<i>Linepithema humi</i>) (Thomson et al. 2016).	Y	Suitable sage scrub, chaparral, oak woodland, and riparian habitat and sandy loam soil are present in the BSA.

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<i>Thamnophis hammondi</i>	two-striped garter snake	—	SSC	—	Ranges in cismontane southern California with some occurrences in Monterey and San Luis Obispo Counties and southern San Benito County. Generally found in or near permanent and intermittent freshwater streams, creeks, and pools, as well as stock ponds and other artificial aquatic habitats bordered by dense vegetation. Associated habitat includes willow, oak woodlands, chaparral, brushland and coniferous forest from sea level to 8,000 feet elevation (Thomson et al. 2016).	Y	There are freshwater stream and artificial aquatic habitats bordered by dense vegetation, as well as oak woodland, chaparral, and brushland habitats in the BSA.
Birds							
<i>Agelaius tricolor</i>	tricolored blackbird	—	ST, SSC	—	Preferred nesting habitat includes cattails, bulrushes, Himalayan blackberry, and agricultural silage. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 30 feet or more wide but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails (CWHR Program Staff 2008a).	N	There are no emergent wetlands or dense stands of Himalayan blackberry or other thorny thickets near the aquatic habitats in the BSA, so there is not likely to be a nesting colony in the BSA. Furthermore, there are no large open grassy areas in the BSA where the species would be likely to forage.
<i>Ammodramus savannarum</i>	grasshopper sparrow	—	SSC	—	Nests in a variety of grassland habitats throughout much of the Central Valley, Coast Range Mountains, and the Inland Empire region. Prefers short to middle-height, moderately open grasslands with scattered shrubs. Avoids areas with high shrub cover (Shuford and Gardali 2008).	N	There are no suitable open grassland habitats in the BSA.
<i>Aquila chrysaetos</i>	golden eagle	BGEPA	FP	—	Uncommon resident in hills and mountains throughout California, and an uncommon migrant and winter resident in the Central Valley and Mojave Desert. Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops. (Polite et al. 1990a)	Y	There is mountainous terrain with cliffs and rock outcrops within the BSA, and there are known occurrences of the species within the BSA (eBird 2022).

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<i>Athene cunicularia</i>	burrowing owl	—	SSC	—	Resident in much of the state in open, dry grasslands and various desert habitats. Requires open areas with mammal burrows; especially those of California ground squirrel (<i>Otospermophilus beecheyi</i>) Inhabits rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other open human disturbed lands such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CWHR Program Staff 1999).	N	There are no suitable open grassland habitats in the BSA.
<i>Buteo swainsoni</i>	Swainson's hawk	—	ST	—	Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Increasingly also nests in sparse stands of gum trees (<i>Eucalyptus</i> spp.) and Australian pines (<i>Casuarina equisetifolia</i>) and often forage along roadsides and grassy highway medians. Breeding resident in the Central Valley, Klamath Basin, Northeastern Plateau, and in juniper-sagebrush flats of Lassen County. (CWHR Program Staff 2006).	N	The BSA is not within the known nesting range of the species (primarily the Central Valley). There is a low potential for the species to occur in the BSA during migration as it is an uncommon migrant in Monterey County.
<i>Charadrius nivosus</i>	western snowy plover	FT	SSC	—	Coastal populations nest on sandy or gravelly dune-backed beaches, sand spits, and on estuarine salt pans and lagoons (USFWS 2005). Inland populations nest along barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, braided river channels, agricultural wastewater ponds, and salt evaporation ponds (Shuford and Gardali 2008). Inland nesting occurs at Salton Sea, Mono Lake, and isolated sites on the shores of alkali lakes in northeastern California, the Central Valley, and southeastern deserts (CWHR Program Staff 2008b).	N	The edges of the reservoir and river within the BSA do not provide suitable open gravelly shores for the inland breeding population of this species to nest or be likely to occur during migration.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Circus hudsonius</i>	northern harrier	—	SSC	—	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats, and desert sinks (Shuford and Gardali 2008).	N	There is no suitable nesting habitat (dense, tall vegetation in marshes, wet meadows, grasslands, etc.) in the BSA. There is potential for the species to occur foraging in the shrubland and brushy margins of aquatic habitats in the BSA, especially during migration.
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FT	—	—	Has declined drastically in California due primarily to loss of habitat. Requires riparian woodland with dense cover; primarily old-growth cottonwood (<i>Populus spp.</i>) forests with willow (<i>Salix spp.</i>) understory, but will also nest in overgrown orchards adjacent to streams and dense thickets alongside marshes. Persists in small numbers along the Sacramento River between Red Bluff and Colusa, the Feather River between Yuba City and the Bear River, Owens Valley, the Kern River Valley, the Colorado River Valley, the Santa Ana River near Prado Basin, and the San Luis Rey River in northern San Diego County (USFWS 2021).	N	The BSA is not within the known range of the species. Only known to nest in very few locations in the state, including along the upper Sacramento River and in the Lower Kern River Valley. In Monterey County only very rarely encountered during migration.
<i>Cypseloides niger</i>	black swift	—	SSC	—	Breeding sites are very specific: behind or beside permanent or semi-permanent waterfalls, on perpendicular cliffs near water and in sea caves. Breeds very locally in the Sierra Nevada and Cascade Ranges, the San Gabriel, San Bernardino, and San Jacinto Mountains, and in coastal bluffs and mountains from San Mateo County south to San Luis Obispo County (Shuford and Gardali 2008).	N	There are no suitable cliffs with waterfalls for the species to nest in within the BSA. The species is likely only a rarely encountered migrant through the BSA.
<i>Elanus leucurus</i>	white-tailed kite	—	FP	—	Fairly common resident of the Central Valley, coast, and Coast Range Mountains. Nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands. Often seen hover foraging over roadsides or grassy highway medians (CWHR Program Staff 2005).	Y	There is oak riparian habitat in the BSA which is potentially suitable for the species to nest in, and there is potential for the species to forage in the shrubland and riparian habitats in the BSA.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE	—	Uncommon to rare summer resident in the southern Sierra Nevada Range, the Lower Kern River Valley, along the Santa Margarita River, and the upper San Luis Rey River. Prefers dense riparian forests with willow (<i>Salix spp.</i>) component and scrub habitats associated with arroyos, washes, rivers, lakes, and reservoirs. Has declined drastically as much of its preferred willow habitat has been taken over by invasive tamarisk (<i>Tamarix spp.</i>), though does now sometimes use tamarisk for nesting and foraging in the absence of native vegetation (USFWS 2002).	N	The BSA is not within the known range of this subspecies. Other subspecies of willow flycatcher are known only as uncommon migrants through Monterey County.
<i>Falco peregrinus anatum</i>	American peregrine falcon	—	FP	—	Breeds near wetlands, lakes, rivers, or other waters on cliffs, banks, dunes or mounds, mostly in woodland, forest, and coastal habitats. Nest is a scrape on a depression or ledge in an open site. May use man-made structures (such as bridges, skyscrapers, or electrical towers), large snags, or trees for nesting (Polite et al. 1990b).	Y	The cliffs above the wooded canyons surrounding the reservoir and river in the BSA provide suitable nesting and foraging habitat for this species.
<i>Gymnogyps californianus</i>	California condor	FE	SE, FP	—	Formerly ranged across much of North America, but over the course of the 20th Century, disappeared over nearly its entire range. Dwindled to such small numbers that by the 1980's, all remaining birds were removed from the wild to a captive rearing program. In the 1990's, began being re-released, and now the species has re-established in the Coast Range Mountains to Big Sur and Pinnacles National Park. Nests in cavities located on steep rock formations or in the burned out hollows of old-growth coast redwoods or giant sequoias. Less commonly uses cliff ledges or large old nests of other bird species. Nesting habitat is used year round by breeding pairs. Forages in open terrain of foothill grassland and oak savanna habitats, and at coastal sites in central California. (USFWS 2013).	N	Although there is potential for the species to pass over or through the BSA, there are no known nesting sites within 10 miles of the BSA and no suitable steep rock formations or large trees for nesting are present within the BSA. The species is still expanding its range from reintroduction sites and individuals are closely tracked. A nesting pair within the vicinity of the BSA would have been documented.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Icteria virens</i>	yellow-breasted chat	—	SSC	—	Nests in early-successional riparian habitats with a well-developed shrub layer and an open canopy. Restricted to narrow borders of streams, creeks, sloughs, and rivers. Often nest in dense thickets of blackberry (<i>Rubus spp.</i>) and willow (<i>Salix spp.</i>) (Shuford and Gardali 2008).	Y	Potential to occur in the BSA in riparian habitat along Carmel River.
<i>Lanius ludovicianus</i>	loggerhead shrike	—	SSC	—	Shrublands and open woodlands with a fair amount of grass cover and areas of bare ground. Requires tall shrubs or trees, fences, or power lines for hunting perches and territorial advertisement. Also requires open areas of short grasses, forbs, or bare ground for hunting, large shrubs or trees for nest placement, and thorny vegetation or barbed wire fences for impaling prey. Ranges across most of the state, but absent from the highest mountains and the northwest forests and coast (Shuford and Gardali 2008).	Y	Potential to nest in shrublands and open woodlands in BSA. However, the mountainous terrain and limited amount of open grassy areas for foraging diminishes the suitability of the BSA for this species.
<i>Setophaga petechia</i>	yellow warbler	—	SSC	—	Usually found in riparian deciduous habitats in summer: cottonwoods (<i>Populus spp.</i>), willows (<i>Salix spp.</i>), alders (<i>Alnus spp.</i>), and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open coniferous forests (CWHR Program Staff 2005).	Y	There is open canopy riparian woodland along the Carmel River in the BSA. However, the lack of cottonwood and willow component diminishes the suitability of the BSA as nesting habitat for this species. The species is known to at least occur in the BSA during migration.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Strix occidentalis</i>	California spotted owl (Coastal-Southern DPS)	FCE	SSC	—	Nest in mature, multi-layer forest with complex structure, larger trees (greater than 24 inches diameter at breast height [dbh]), high canopy cover, and large amounts of woody debris. Found in riparian/hardwood forests and woodlands, live oak/big cone fir forests, and redwood/California laurel forests. Use cavities, broken-tops, platform nests, or old raptor nests of other species. Will nest in smaller trees when utilizing platform or old raptor nests. Areas with canopy cover greater than 70 percent are optimal for nest sites, but occupancy sharply declines when canopy cover is less than 40 percent. The presence of trees over 157ft tall and high density of large trees are other good indicators of high-quality habitat. The primary prey item is woodrats (<i>Neotoma</i> spp.) (USFWS 2023d).	Y	Oak woodlands and riparian forest in the BSA provide suitable nesting habitat for the species due to the presence of large trees, dense canopy cover, and woody debris. However, the lack of multi-layered canopy and coniferous component to the woodlands diminishes the suitability of the BSA as habitat. The BSA is within the northeastern end of the Coastal-Southern DPS range. The most recent occurrence within 5 miles is from 2006 to the southeast. Additionally, there are over twenty occurrences from between the 1960's and 1990's between 4 and 5 miles away to the southwest, south, and southeast (CDFW 2023d).
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE	SE	—	Once occupied much of the Central Valley, but has disappeared from most its former range, and is now restricted to southern California from southern Inyo and Monterey Counties south through the South Coast and Inland Empire regions. Obligate riparian breeder, favoring cottonwood (<i>Populus</i> spp.), willow (<i>Salix</i> spp.), and oak (<i>Quercus</i> spp.) woodlands, and mule fat (<i>Baccharis salicifolia</i>) scrub along watercourses (USFWS 2006b).	N	The BSA is not within the known range of the species. In recent decades, the species has started reclaiming parts of its former range it has been long-absent from (especially in the San Joaquin Valley), but it still remains only a rare visitor to Monterey County, usually during fall migration.
Mammals							
<i>Antrozous pallidus</i>	pallid bat	—	SSC	—	Ranges across nearly all of California except for high elevation portions of the Sierra Nevada Mountains and Del Norte, western Siskiyou, Humboldt, and northern Mendocino Counties. Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings (Harris et al. 1990).	Y	There are shrublands, woodlands, and rocky crevices in the BSA which provide potentially suitable roosting habitat, and the reservoir and riparian corridor provide suitable foraging habitat.

Scientific Name	Common Name	Federal Status ¹	State Status ¹	CNPS ¹	General Habitat Characteristics ²	Potential to Affect	Rationale
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	—	SSC	—	Distribution is strongly correlated with the availability of caves and cave-like roosting habitat, including abandoned mines. Also have been reported to utilize buildings, bridges, rock crevices, and hollow trees as roost sites (Western Bat Working Group 2018).	Y	The rocky cliffs, the dam and associated structures in the BSA provide potentially suitable roosting habitat, and the reservoir and riparian corridor provide suitable foraging habitat.
<i>Lasiurus blossevillii</i>	western red bat	—	SSC	—	Ranges across the Central Valley, as well as the coast and Coast Range mountains from Mendocino County south, and east across the Los Angeles area into the Inland Empire region. Occurs in most habitats except desert and alpine areas. Roosts in trees, sometimes shrubs, and typically at the margins of habitats (Alley et al. 1990).	Y	There are shrublands and woodlands in the BSA provide potentially suitable roosting habitat, and the reservoir and riparian corridor provide suitable foraging habitat.
<i>Neotoma macrotis luciana</i>	Monterey dusky-footed woodrat	—	SSC	—	Chaparral and forest habitats of moderate canopy and moderate to dense understory in the central California coast ranges (CWHR Program Staff 2008c).	Y	The chaparral and oak woodland in the BSA provides suitable habitat for this subspecies.
<i>Sorex ornatus salarius</i>	Monterey ornate shrew	—	SSC	—	Museum records are from the vicinity of the mouth of the Pajaro River. Endemic to the riparian, wetland, and upland terrestrial communities in the vicinity of the Salinas River Delta (Bolster 1998).	N	The BSA is not within the known range of the subspecies (endemic to the Salinas River Delta).
<i>Taxidea taxus</i>	American badger	—	SSC	—	Ranges across nearly all of California except northernmost Humboldt and Del Norte Counties. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils (Ahlborn and White 1990).	Y	Open shrubland, grassland, and woodland in the BSA provides suitable habitat for the species.

1. Referred to CDFW 2023b for plant species listing status and CDFW 2023c for wildlife species listing status

2. Referred to CNPS 2023 and Jepson Flora Project 2023 for plant species general habitat characteristics.

Key	
Federal and State Status	
(FC) Federal Candidate	(SCE) State Candidate Endangered
(FE) Federally Endangered	(SCT) State Candidate Threatened
(FT) Federally Threatened	(SE) State Endangered
(FD) Federally Delisted	(SR) State Rare
(FCE) Proposed Endangered	(SSC) State Species of Special Concern
	(ST) State Threatened
	(FP) Fully Protected



CNPS Rare Plant Rank
<i>Rareness Ranks</i>
(1A) Presumed Extinct in California
(1B) Rare, Threatened, or Endangered in California and Elsewhere
(2) Rare, Threatened, or Endangered in California, but More Common Elsewhere
(3) More Species Information Needed
(4) Limited Distribution
<i>Threat Ranks</i>
(0.1) Seriously threatened in California
(0.2) Fairly threatened in California
(0.3) Not very threatened in California

Impact Analysis

The BSA was analyzed for impacts on biological resources (Figure 3). The impact analysis was based on the project description; biological and regional setting; and federal, state, and local regulatory requirements regarding impacts on biological resources. In addition, the impact analysis used information from the literature review, field investigations, and habitat mapping. As described in Section 2.4, *Proposed Project*, apart from realigning approximately 250 feet of the access road on the east side of Bailey Bridge in an upland area, the proposed project largely consists of replacing existing infrastructure and using existing access roads, and temporary disturbance areas would be restored following construction.

Where information about the presence of a special-status species is unknown, but suitable habitat is present, the impact analysis takes a conservative approach by inferring the presence of special-status species within the 82.0-acre BSA. Impacts on specific biological resources are identified and avoidance, minimization, and/or mitigation measures are provided below.

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. Based on the results of the literature review and habitat assessment, several special-status plant and wildlife species have the potential to occur in the vicinity of the BSA. Direct and indirect project-related impacts on special-status species may include mortality, habitat loss or modification, and reduced nesting success. Impacts on special-status species identified below are considered potentially significant and would require mitigation.

Special-status Plant Species. Twenty-two special-status plant species have the potential to occur in the BSA (Table 5). None of these plant species are federally listed, proposed, or candidate species. One of these plant species is state endangered (seaside bird's-beak) and two plant species are state rare (Dudley's lousewort and Pacific Grove clove). All special-status plant species have a California Rare Plant Rank assigned by the CNPS and CDFW. None of these plant species were observed in the project footprint; however, a comprehensive focused survey during peak flowering periods for special-status plant species was not conducted. The BSA provides suitable habitat for special-status plants in the following vegetation communities: California sagebrush - black sage scrub, coast live oak woodland, coyote brush scrub, needle grass – melic grass grassland, Pacific madrone – coast live oak woodland, wild oats and annual brome grassland, and white alder grove.

If special-status plants are present within or adjacent to project disturbance areas, individuals may be affected by disturbance, loss, or degradation of habitat. These impacts are considered potentially significant and would require mitigation. Implementation of mitigation measures **MMBIO1, MMBIO2, MMBIO-3, MMBIO-4, and MMBIO-5** (described under *Mitigation Measures*) would reduce impacts on special-status plant species to less than significant levels.

Special-status Invertebrates

Two special-status invertebrate species have the potential to occur in the BSA: monarch butterfly and western bumble bee. Monarch butterfly is a federal candidate that has the potential to use milkweed in the BSA. Western bumble bee is a state candidate endangered species that has the

potential to occur in open grassy areas, chaparral and other shrub areas, and use small mammal burrows for nesting in the BSA.

If monarch butterfly or western bumble bee are present within or adjacent to project disturbance areas, impacts on these species could occur from disturbance, loss, or degradation of habitat. These potential impacts are considered significant and would require mitigation. Implementation of mitigation measures **MMBIO1**, **MMBIO2**, **MMBIO-3**, **MMBIO-4**, and **MMBIO-5** (described under *Mitigation Measures*) would reduce impacts on special-status invertebrate species to less than significant levels.

Special-status Fish

Two special-status fish species have the potential to occur in the BSA: steelhead and Pacific lamprey. Steelhead (south-central California coast DPS) is federally threatened. Steelhead is known to occur in the BSA in the reservoir and below the dam in the Carmel River. The segment of the Carmel River is federally designated critical habitat for steelhead. Additionally, the Carmel River is recognized as providing essential habitat functions for steelhead and the NMFS South-Central California Steelhead Recovery Plan identifies the Carmel River population as a Core 1 population. The Pacific lamprey is a California Species of Special Concern (SSC) with suitable habitat in the BSA.

In-water work and adjacent construction activities could result in significant impacts on special-status fish due to sedimentation, construction noise, and inadvertent chemical releases. As described in Section 3.3-X. *Hydrology and Water Quality*, the potential to increase erosion and sedimentation through construction activities in and around the reservoir would be reduced through implementation of several BMPs. BMPs described in Section 2, *Project Description*, and Section 3.3-X. *Hydrology and Water Quality*, that would reduce potential significant impacts include:

- installation of a turbidity curtain
- isolation of construction areas from flowing water
- sediment and erosion controls as required under the SWPPP
- watering of all active terrestrial construction areas as required to meet air quality standards
- temporary and permanent stabilization measures including revegetation

NMFS has indicated that the proposed project fits within the scope of impacts that are already covered in the programmatic biological opinion for the Memorandum of Agreement between Cal-Am, NMFS, and the California Coastal Conservancy. Potential impacts on special-status fish would be reduced to a less than significant level through implementation of a combination of measures, including the BMPs described in Section 2, *Project Description*, and Section 3.3-X. *Hydrology and Water Quality*, mitigation measures discussed for special-status plants (**MM-BIO-3**, **MM-BIO-4**, and **MM-BIO-5**), and mitigation measures **MM-BIO-6**, **MM-BIO-7**, and **MM-BIO-8** (described under *Mitigation Measures*).

Special-status Amphibians and Reptiles

Three special-status amphibian species (California red-legged frog, California tiger salamander, and coast range newt) and four special-status reptile species (northern California legless lizard, western pond turtle, coast horned lizard, and two-striped garter snake) have the potential to occur in the BSA.

California red-legged frog is federally threatened, an SSC, and is known to occur in the BSA. Additionally, the BSA is located within federally designated critical habitat for this species. Both aquatic and upland communities in the BSA provide suitable habitat.

California tiger salamander is federally and state threatened. It is known to occur within the upper Carmel Valley; however, steep terrain between the BSA and potentially suitable breeding habitat 1.2 miles to the northeast acts as a barrier to dispersal into suitable upland habitat in the BSA.

Coast range newt is an SSC. Suitable habitat is present in the BSA and there are known occurrences of this species within Los Padres Reservoir.

None of the special-status reptile species are federally or state listed, but all four species are SSCs. Upland communities and riparian habitat in the BSA provide suitable habitat for northern California legless lizard and coast horned lizard. Western pond turtle is known to occur within Los Padres Reservoir and adjacent upland habitat may be used for nesting and overwintering. Aquatic areas, riparian habitat, and upland communities provide suitable habitat for two-striped garter snake.

Potential impacts on special-status amphibians and reptiles are considered significant and would require mitigation. Conservation measures proposed to avoid take of California red-legged frog will be presented in a biological assessment for the proposed project. Through consultation with USFWS, USFWS may adopt or revise proposed measures or include additional conservation measures. BMPs and mitigation measures described in this document that pertain to California red-legged frog are consistent with anticipated conservation measures in the biological assessment. If USFWS revises or adds conservation measures during consultation, such measures will be incorporated into project requirements.

Implementation of a combination of measures, including BMPs described above for special-status fish already proposed or required for the project, mitigation measures discussed for special-status plants (**MMBIO-3**, **MMBIO-4**, and **MMBIO-5**) and special-status fish (**MMBIO-7**), and mitigation measures **MMBIO-9**, **MM-BIO-10**, and **MM-BIO-11** (described under *Mitigation Measures*) would reduce impacts on special-status amphibians and reptiles to less than significant levels.

Special-status Birds

Three state Fully Protected bird species (golden eagle, white-tailed kite, and American peregrine falcon), one federal candidate endangered bird species (California spotted owl Coastal-Southern distinct population segment [DPS]), and three SSC bird species (yellow-breasted chat, loggerhead shrike, and yellow warbler) have the potential to occur in the BSA. Golden eagle is also federally protected under the Bald and Golden Eagle Protection Act. There is nesting and foraging habitat within the BSA for all seven special-status bird species, although foraging habitat is considered marginal for loggerhead shrike and riparian nesting habitat is considered marginal for yellow warbler. Additionally, all native breeding birds, regardless of their listing status, are protected under California FGC Section 3503 and all migratory bird species are federally protected under the Migratory Bird Treaty Act.

Potential project impacts on foraging habitat are not considered significant because they would be minor and temporary. However, potential project impacts on nesting birds could be significant through direct habitat removal and disturbance to active nests. These potential impacts are considered significant and would require mitigation. Implementation of a combination of

measures including BMPs already proposed or required for the project, mitigation measures discussed for special-status plants (**MM-BIO-2**, **MM-BIO-3**, **MM-BIO-4**, and **MM-BIO-5**), and mitigation measures **MM-BIO-12**, **MM-BIO-13**, and **MM-BIO-14** (described under *Mitigation Measures*) would reduce impacts on special-status bird species to less than significant levels.

Special-status Mammals

Five SSC mammal species have the potential to occur in the BSA: pallid bat, Townsend's big-eared bat, western red bat, Monterey dusky-footed woodrat, and American badger. None of these mammal species are federally or state listed, proposed, or candidate species. Monterey dusky-footed woodrat occurs in chaparral and forest habitats in the central California coast ranges, while the other mammal species are widely distributed. Direct habitat impacts and disturbance from project construction could affect these special-status mammals, but these impacts would be minimal and largely temporary. Accordingly, no mitigation measures are required for special-status mammals.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. Sensitive habitats include (1) areas of special concern to resource agencies, (2) areas protected under CEQA, (3) areas designated as sensitive natural communities by CDFW, (4) areas outlined in FGC Section 1600, (5) areas regulated under CWA Sections 401 and 404, and (6) areas protected under local regulations and policies. The BSA contains riparian habitat, aquatic resources, and needle grass–melic grass grassland that are each considered sensitive natural communities. Other communities in the BSA are not considered sensitive natural communities; however, they may provide suitable habitat for special-status plant or wildlife species. Impacts and appropriate mitigation are addressed in the discussion related to topic a) above.

Project-related impacts on aquatic resources have not been quantified; however, they are expected to be minor. Specifically, there is approximately 0.6 acre of riparian habitat (white alder grove) within the project footprint that could be temporarily impacted to provide access for construction equipment along existing access roads and work areas to replace the valve array and water supply branch. The 2.5-acre equipment materials staging and laydown area encompasses one patch of needle grass–melic grass grassland that occupies approximately 0.2 acre. These potential impacts are considered significant and would require mitigation. Implementation of a combination of measures including BMPs already proposed or required for the project (installation of a turbidity curtain, isolation of construction areas from flowing water, sediment and erosion controls as required under the SWPPP, watering of all active terrestrial construction areas, and temporary and permanent stabilization measures, including revegetation), mitigation measures discussed above for special-status plants (**MM-BIO-1**, **MM-BIO-2**, **MM-BIO-3**, **MM-BIO-4**, and **MM-BIO-5**) and special-status fish (**MM-BIO-7**), and mitigation measures **MM-BIO-15**, **MM-BIO-16**, and **MM-BIO-17** (described under *Mitigation Measures*) would reduce impacts on riparian habitat and other sensitive natural communities to a less than significant level. Mitigation measure **MM-BIO-1** would include a preconstruction survey to identify the plants in the needle grass–melic grass grassland to species to evaluate whether it should be considered a sensitive natural community, then avoiding disturbance to this grassland if feasible.

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. Two wetland areas were delineated within the BSA; however, both are outside of the project footprint. Therefore, no impacts on wetlands would occur and no mitigation is required.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Less than Significant with Mitigation Incorporated. Fish and wildlife corridors are segments of suitable habitat that provide connectivity between larger areas of suitable habitat, allowing species to disperse through otherwise unsuitable areas. On a broader level, corridors may also function as avenues along which wide-ranging animals can travel, plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters, and threatened species can be replenished from other areas. In the project region, corridors often consist of riparian areas along streams, rivers, or other natural features. In addition, the rivers and streams themselves may serve as migration corridors for fish and other aquatic species.

The Carmel River and the associated riparian corridor function as a wildlife corridor through the Santa Lucia Mountains for a variety of species including special status steelhead and California red-legged frog. The proposed project would be limited to returning the flow through Los Padres Dam to its previous conditions and does not include any other improvements that would permanently change the permeability of the Carmel River riparian corridor. Direct habitat impacts and disturbance could affect movement during construction. These potential impacts are considered significant and would require mitigation. Implementation of a combination of measures including BMPs already proposed or required for the project (installation of a turbidity curtain, isolation of construction areas from flowing water, sediment and erosion controls as required under the SWPPP, watering of all active terrestrial construction areas, and temporary and permanent stabilization measures including revegetation) and mitigation measures for special-status plants (**MM-BIO-1**, **MM-BIO-2**, **MM-BIO-3**, **MM-BIO-4**, and **MM-BIO-5**), special-status fish (**MM-BIO-6**, **MM-BIO-7**, and **MM-BIO-8**), special-status amphibians and reptiles (**MM-BIO-9**, **MM-BIO-10**, and **MM-BIO-11**), and sensitive habitats (**MM-BIO-17**) (described under *Mitigation Measures*) would reduce impacts on fish and wildlife movement to less than significant levels.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated. Riparian vegetation is protected under the MPWMD's Carmel River Rules and Regulations and would need to be restored at a minimum 1:1 replacement for each tree removed, as directed by the regulating agency. Additionally, Monterey County Ordinance Title 16.60, Preservation of Oak and Other Protected Trees, may require a permit from the County for tree removal. These potential impacts to riparian vegetation and other trees are considered significant and would require mitigation. Implementation of mitigation measures for special-status plants (**MM-BIO-2** and **MM-BIO-5**), sensitive habitats (**MM-BIO-16** and **MM-BIO-17**) (described under *Mitigation Measures*) would reduce impacts on trees protected by local policies and ordinances to a level less than significant.

- g) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project area is not located within or adjacent to an area managed under an adopted Natural Community Conservation Plan, Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with the provisions of any of these plans and no mitigation is required.

Mitigation Measures

MM-BIO-1: PRECONSTRUCTION PLANT SURVEYS AND AVOIDANCE

A qualified botanist shall be retained to perform focused special-status plant species surveys, including plants associated with special-status wildlife (such as milkweed), in areas of suitable habitat in or adjacent to (within 100 feet, where appropriate) the proposed disturbance areas during the appropriate flowering period prior to vegetation clearing or grubbing. The surveys shall be conducted in accordance with the USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996); the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). If any special-status species are observed during the special-status plant surveys, the location of the individual plant or population will be recorded with a global positioning system (GPS) device for mapping purposes. If special-status plants are identified within proposed disturbance areas, boundaries of disturbance areas will be modified to avoid impacted individual special-status plants, if feasible. If project-related impacts on special-status plants in the project area are unavoidable, then consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures. Measures that may be implemented if a special-status plant is observed include establishing a no-disturbance buffer around locations of individuals or a population, protection with barrier fencing, salvage or seed collection, and additional monitoring requirements.

MM-BIO-2: MINIMIZE FOOTPRINT IN SENSITIVE HABITATS

During project development, the work areas shall be reduced to the smallest possible footprint feasible in areas that provide potentially suitable habitat for special-status plants and wildlife, including, but not limited to aquatic resources and the following vegetation communities: California sagebrush - black sage scrub, coast live oak woodland, coyote brush scrub, needle grass – melic grass grassland, Pacific madrone – coast live oak woodland, wild oats and annual brome grassland, and white alder grove. All areas to be avoided during construction activities would be fenced and/or flagged as close to the construction limits as feasible.

MM-BIO-3: WORKER ENVIRONMENTAL AWARENESS TRAINING

The contractor will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training shall be provided to all construction personnel to brief them on the locations of sensitive biological resources, the need to avoid impacts on biological resources (e.g., plants, wildlife, and aquatic resources), and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the personnel shall be required to receive the mandatory training before starting work.

MM-BIO-4: MONITORING VEGETATION DISTURBANCE AND CLEARING

Prior to vegetation disturbance and clearing activities, the contractor will delineate the limits of disturbance or clearing and a biologist shall confirm that delineated limits are in accordance with project plans. Upon completion of vegetation disturbance and clearing activities, a biologist shall confirm the work is restricted to limits of disturbance.

MM-BIO-5: RESTORATION OF TEMPORARILY DISTURBED AREAS

All exposed and/or disturbed areas resulting from construction activities shall be returned to their original contour and grade and restored using native seeds local to the project area, preferentially within (but not exclusive to) the same HUC-6 boundary as the BSA. Species for the seed mix shall be selected based on site topography and hydrology. Milkweed will be incorporated where appropriate.

MM-BIO-6: IN-WATER WORK WINDOW

All in-water work associated with the proposed project shall be conducted between June 1 and September 30, the seasonal work window recommended by NMFS to minimize effects on steelhead. Extensions of that seasonal work window may be obtained from permitting agencies under compelling circumstances.

MM-BIO-7: ISOLATING INWATER WORK AREAS AND FISH RELOCATION

Construction isolation methods shall be implemented to enclose construction areas during in-water work. Isolation plans will describe methods for isolating the work area, removing fish located in the work area with minimal impacts, and identify the point of release for any captured fish. In addition to the reservoir work, these methods shall be implemented for work in the side channel to the Carmel River at the downstream end of the outlet works. A qualified biologist will monitor work within the side channel. Any brown trout captured will be euthanized. Monitoring construction and collecting and relocating any steelhead from work sites will be done by a qualified biologist in accordance with the programmatic biological opinion for the Memorandum of Agreement between Cal-Am, NMFS, and the California Coastal Conservancy.

MM-BIO-8: CONSTRUCTION HOURS

Drilling for the piles shall only occur during daylight hours. Restricted working hours will allow for relaxation periods and movement windows for special-status fish present in the project area.

MM-BIO-9: VISUAL ENCOUNTER SURVEY AND RELOCATION

Within 24 hours before beginning construction activities, a qualified biologist shall inspect the project site. Qualification requirements for a qualified biologist will be subject to approval by USFWS and CDFW. The monitoring biologist will be available during project activities. If a California red-legged frog or other federally listed species is encountered during construction activities, the monitoring biologist shall have the responsibility and authority to stop construction activities and notify USFWS within 24 hours. As negotiated with USFWS, work will not continue until the appropriate corrective action(s) have been taken. If state listed species are found within the survey area, a qualified biologist shall attempt to be move them at least 500 feet away from the project footprint to a location with similar habitat. If a turtle nest is found within the survey area, construction activities shall not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to

an appropriate location. Any egg relocation shall be conducted by a qualified biologist in coordination with CDFW.

MM-BIO-10: RELOCATING CALIFORNIA RED-LEGGED FROG

Prior to the start of work, areas will be identified by the qualified biologist and approved by USFWS as acceptable locations to which California red-legged frog may be relocated if encountered within a work area. Federally listed species shall not be removed from the work area or maintained in captivity overnight without prior notification and approval by the USFWS, unless the animal needs emergency medical assistance. In coordination with the USFWS, medical assistance may be provided to injured animals by a certified wildlife veterinarian familiar with amphibian care.

MM-BIO-11: DISEASE PREVENTION

To avoid the spread of diseases between work sites, the field work code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times. The USFWS-approved biologist or permitted person may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

MM-BIO-12: SCHEDULING VEGETATION DISTURBANCE OUTSIDE OF THE NESTING SEASON

Vegetation disturbance, including ground-disturbance of herbaceous or shrub vegetation, vegetation clearing, or tree-trimming, will be scheduled outside of the bird nesting season (February 1 to August 31) to the maximum extent feasible. If construction or other project activities are scheduled to occur during the bird breeding season, a qualified avian biologist shall conduct a pre-construction nesting-bird survey to avoid disturbing or destroying that active bird nests. These surveys are detailed in **MM-BIO-14** for raptors and **MM-BIO-15** for other bird species.

MM-BIO-13: PRECONSTRUCTION RAPTOR SURVEYS

If construction activities occur during the raptor nesting season (February 1 to August 31), surveys for raptor nests shall be conducted prior to the commencement of construction activities in and near the BSA in accordance with CDFW *Survey and Monitoring Protocols and Guidelines for Birds* (2023e). If active raptor nests are identified, nest buffers restricting construction activities shall be established through coordination with CDFW and USFWS and nest monitoring by a qualified avian biologist shall be conducted to avoid nest disturbance.

MM-BIO-14: PRECONSTRUCTION BIRD SURVEYS

If vegetation clearing or tree-trimming is necessary during the bird nesting season (generally March 1 to August 31), surveys for active bird nests shall be conducted by a qualified avian biologist within 14 days of construction initiation within a 50-foot buffer around vegetation disturbance areas. If active nest sites are identified in the survey areas, a no-disturbance buffer shall be established as determined by a qualified biologist based on the species and activities proposed in the vicinity of the nest.

MM-BIO-15: RESEEDING DISTURBED NEEDLE GRASS–MELIC GRASS GRASSLAND

If through implementation of mitigation measure **MM-BIO-1** patches of needle grass–melic grass grassland are confirmed to be present in the BSA and project disturbance cannot be avoided, temporarily impacted areas will be restored at a 1:1 ratio, as directed by the regulating agency, after

completion of the project. This restoration will be described in more detail in a site-specific habitat mitigation and monitoring plan, which will be written after focused surveys have confirmed needle grass–melic grass grassland is present and will be impacted.

MM-BIO-16: TREE INVENTORY

A preconstruction tree inventory will be conducted in proposed work areas where trees may need to be trimmed or removed. Survey attributes will include tree species, location, and diameter at breast height. The results of the survey will be documented in a technical memorandum.

MM-BIO-17: RIPARIAN HABITAT MINIMIZATION AND RESTORATION

In addition to mitigation measure **MM-BIO-1** to minimize disturbance footprints and mitigation measure **MM-BIO-5** to restore temporarily disturbed areas, riparian habitat impacts will be further minimized by trimming and removing vegetation only where necessary. Temporary construction areas are typically cleared and grubbed of all vegetation. Based on the nature and extent of proposed project activities within riparian habitat, trimming may be largely adequate for construction activities within riparian habitat. However, if temporary disturbance warrants revegetation, a riparian restoration plan will be implemented that will include restoring riparian habitat at a minimum 1:1 ratio (by both ground surface area and number of trees) with species identified from the tree inventory.

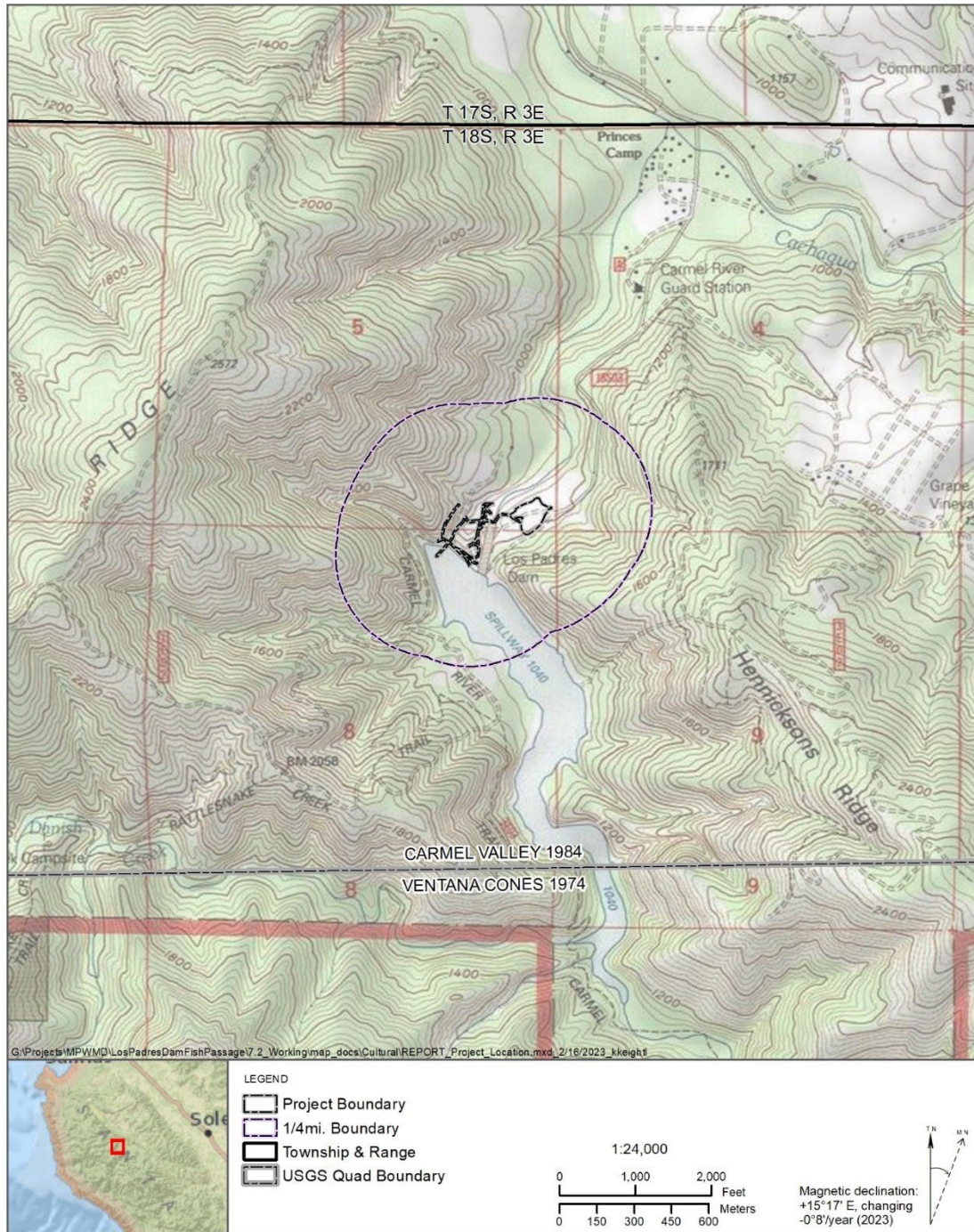


V. Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the environmental and regulatory setting for the cultural resources study area, it details efforts to identify cultural resources within and adjacent the proposed project footprint, and it discusses potential direct and indirect impacts and effects of the proposed project during construction and operation. The cultural resources study area encompasses the project area and a 0.25-mile buffer radius (see Figure 4).

Figure 4. Cultural Resources Study Area: Proposed project location and 0.25-mile buffer radius.



Environmental Setting

This section presents an overview of information on the local prehistory and history of the proposed project area and vicinity. Understanding local cultural history is critical in defining important local, state, and/or regional events, trends, or patterns in prehistory and history by which the significance of precontact and historical cultural resources may be evaluated and their significance may be established.

ARCHAEOLOGICAL CONTEXT

Fredrickson (1994:99-103), following Willey and Phillips (1958) divided the prehistory of central California into a series of cultural periods, reflecting an increasing degree of cultural complexity through time. These cultural periods are described below.

Paleoindian

The Paleoindian Period includes the Pre-Clovis (pre13,500 Cal B.P.²) era during which a hypothesized coastal colonization route allowed people to enter California. At this time there are hints of occupation in alluvial basins. In the subsequent Clovis (13,500-10,500 Cal B.P.) era human populations spread within California. Hunting probably was emphasized and use of vegetal foods and milling technology likely. Resources were acquired by changing habitats. Ad hoc exchange probably occurred, and the basic social unit most likely was the extended family.

Archaic

The Archaic Period includes the Lower Archaic (10,500-7,500 Cal B.P.). At this time, Post-Pleistocene climatic changes cause lakes/wetlands to dry up. Milling technology became common and widespread, indicating a plant food emphasis. Hunting was greatly deemphasized. Most artifacts were manufactured from local materials. Ad hoc exchange continued. The basic social unit remained the extended family. During the Middle Archaic (7,500-2,500 Cal B.P.), climate, habitats, and resources were unstable. The economy became more diversified. The inception of more sedentary living along with population growth and expansion occurred. Technological and environmental factors were dominant themes. Little impact occurred from changes in exchange or social relationships. In the Upper Archaic (2,500-900 Cal B.P.) there was growth of sociopolitical complexity characterized by development of status distinctions based upon wealth. Shell beads became important, suggesting exchange and social status; Group-oriented religious organizations emerged, with the Kuksu religion possibly originating in central California at the end of this period. Greater complexity of exchange systems occurred, with evidence indicating regular, sustained exchanges between groups. Territorial boundaries between groups were not fully established.

Emergent

During the Emergent Period, the Lower Emergent (1,000-500 Cal B.P.) witnessed replacement of the dart and atlatl by the bow and arrow. Coastal maritime adaptations flourished. Territorial boundaries were well established. Distinctions in social status linked to wealth became more common. Regularized inter-group exchange included abundant, often diverse, materials. The Upper Emergent (500-150 Cal B.P.) is characterized by appearance of a “monetized” clam shell disk bead economy. More goods were moving farther in space. The growth of local specializations in production and exchange took place and there was an interpenetration of central and southern exchange systems.

² Before present (B.P.) is a time scale used in archaeology, geology, and other scientific disciplines to specify when events in the past occurred. Because the “present” time changes, standard practice is to use the year 1950 as the arbitrary origin of the age scale. “Cal” refers to calibrated. Uncorrected, or ‘conventional’ radiocarbon ages are calculated using an assumption that the concentration of naturally occurring radiocarbon in the atmosphere is constant. Calibration of these conventional ages to calendar years corrects for known minor variations over time in the concentration of atmospheric radiocarbon. This calibration also corrects for an error in the estimate of ‘half-life,’ or the rate at which radiocarbon decays. While the half-life of radiocarbon is now known to be slightly longer than was estimated when the technique was invented, laboratories continue to report radiocarbon dates using the older, less accurate value, hence the term ‘conventional.’ Because of this, uncalibrated dates earlier than about 2000 years before present (B.P.) tend to be substantially ‘younger’ than calibrated dates.

REGIONAL CULTURAL CHRONOLOGY

In contrast to the San Francisco Bay area, where U.C. Berkeley archaeologists conducted extensive research at bayshore shell middens in the early 20th century, the Monterey Bay area witnessed relatively little precontact archaeological research prior to 1970. Knowledge of the Monterey Bay archaeology and prehistory has increased significantly since 1970, as dozens of archaeological sites have been recorded and excavated in the Monterey Bay area, providing insights into the chronology of the region, as well as settlement patterns and subsistence information of Native American groups of the area.

The prehistory of the Monterey Bay area is categorized according to temporal periods. The T. Jones' (1993) period sequence, which integrates data from the central California coast, consists of the Paleoindian (9000- 6500 B.C.), Millingstone (6500-3500 B.C.), Early (3500-1000 B.C.), Early/Middle Transition (1000- 600 B.C.), Middle (600 B.C.-A.D. 1000), Middle/Late Transition (A.D. 1000-1200), Late (A.D. 1200-1500), Protohistoric (A.D. 1500-1769), and Historic (post A.D. 1769) periods.

Archaeological sites dating to the Paleoindian and Millingstone periods in the Monterey Bay area are rare, and the components are poorly defined. The landscape of the Monterey Bay area experience significant change during the Pleistocene/Holocene transition and Mid-Holocene. Such changes may have been deleterious to any Paleoindian population in the region, and substantial alterations in sediment formation process may have obfuscated potential Paleoindian signatures. However, sites from these periods have been identified north of Santa Cruz in Scotts Valley (CA-SCR-177) and at Elkhorn Slough (CA-MNT-229), and include crescent shaped flaked tools (crescents), long-stemmed projectile points, cobble/core tools, and milling slabs and handstones. Data from these early periods suggest occupation of the Monterey Bay area beginning as early as ca. 8000 B.C., and possibly earlier at the Scotts Valley site (Fenenga 1993:245-254). The earliest radiocarbon dates from MNT-1232/H, in Big Sur within the Landels Hill Big Creek Reserve, date to 4400 B.C. (Jones et al 2007). The Early and Early/Middle Transition periods (3500-600 B.C.) have been defined based on excavations at sites such as CA-MNT-387, -391, and CA-SCR-7, and includes assemblages containing thick rectangular, end-ground, and split Olivella beads; contracting-stemmed, squarestemmed, and side-notched projectile points; mortars and pestles; and handstones and millingslabs (Cartier 1993). Middle and Middle/Late Transition periods (600 B.C.-A.D. 1200) sites have been identified near Elkhorn Slough (CA-MNT-229) and near Salinas (CA-MNT-3). Sites from these periods include bowl and hopper mortars; long-stemmed, concave base, and side-notched projectile points. Archaeological evidence of the Late and Protohistoric periods (A.D. 1200-1769) is poorly represented in the Monterey Bay area. Sites dating to these periods include schist, clamshell, and abalone disc beads; small side-notched projectile points; hopper and bedrock mortars; millingslabs; pestles; and handstones.

For over a quarter century, Native American settlement and subsistence patterns in the Monterey Bay area have been understood in terms of a forager-collector model (Breschini and Haversat 1980; Dietz and Jackson 1981). This model, based on Binford's (1980) seminal ethnoarchaeological research, posits that, before 2,000 years ago, small mobile foraging groups characterized Monterey Bay area settlement. These foraging groups established temporary residential bases near seasonally available resource patches and gathered food daily on an "encounter" basis, with no storage of food. Archaeologically, residential "forager" bases should reflect seasonal usage and exploitation of resources and a wide variety of artifacts and features representing various social, economic, and ritual activities. Foragers were eventually displaced by "collectors" who occupied year-round or semipermanent residential sites who, unlike foragers, did not relocate residential sites to seasonal resource patches. Instead, groups would leave the residential base to establish

temporary sites where resources were collected, processed, stored, and returned to the village. The key distinction is that resources were moved to consumers in collector societies, while foragers followed resource patches as they became available. Breschini and Haversat (1980) have suggested that foragers represent Hokan groups, of which Esselen is an isolate (Golla 2007). Breschini and Haversat argue that Hokan groups to the north were later displaced by Penutian (ancestral Costanoan) groups, who practiced a collector settlement strategy.

More recently, however, the validity of Binford's (1980) forager-collector model for understanding the subsistence and settlement practices from the Monterey Bay area has been questioned (Jones 1992), and Native American settlement-subsistence patterns in the region are a research issue that future archaeological research may help to clarify. Ethnohistoric accounts from the Spanish missionaries suggest that Esselen, Ohlone, and Salinan of the region practiced a similar social structure based around small and seasonally mobile communities exploiting both marine (aquatic) and terrestrial resources (Jones et al 2007).

Archaeological excavations at CA-SCR-93/H by Breschini and Haversat (1981) identified a major Native American occupation site that contains artifacts, including olive snail (*Olivella*) beads, an abalone (*Haliotis*) shell ring, mussel (*Mytilus*) shellfish hooks, and ground and battered stone; subsistence related detritus including fragmentary land mammal and fish bones; and human bone. Breschini and Haversat (1981:15) obtained a radiocarbon date of 1260 B.C. from shell at the site. Bordeau's (1986) subsequent excavation at CA-SCR-93/H obtained radiocarbon dates which indicate the site was occupied from at least 1750 B.C. to A.D. 190, providing evidence of the earliest known occupation within the city's limits. Bordeau's research suggests the site contains evidence of early Hokan group occupation, prior to their displacement or absorption by Penutian (ancestral Ohlone) groups.

Historic Context

The earliest known European exploration of the Monterey Bay was a Spanish envoy mission led by Sebastián Vizcaíno in 1602. The purpose of the voyage was to survey the California coastline to locate feasible ports for shipping, and Vizcaíno had explicit instructions prohibiting the creation of settlements and interacting with local Native Americans. Finding the bay to be commodious, fertile, and extremely favorable for anchorage between Manila and Acapulco, Vizcaíno named the Bay "Monterey" after the Conde de Monterey, the present Viceroy in Mexico (Chapman 1920; Kyle 2002).

In an effort to prevent the establishment of English and Russian colonies in northern Alta California, Don Gaspar de Portolá, the Governor of Baja, embarked on a voyage in 1769 to establish military and religious control over the area. This overland expedition by Portolá marks the beginning of California's historic period, occurring just after King Carlos III of Spain installed the Franciscan Order to direct religious colonization in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, Padre-Presidente Franciscan Fr. Junípero Serra, founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823, including Mission San Carlos Borromeo de Carmelo (Kyle 2002; Lehmann 2000).

On their quest to locate the Monterey Bay from the 160-year-old accounts of Sebastián Vizcaíno, the Portolá expedition first reached the present-day territory of Santa Cruz on October 17, 1769. On this day, the Catholic calendar celebrates Saint Lawrence, so the large river the party camped alongside

was deemed the “San Lorenzo.” After mistakenly circumventing the Monterey Bay and reaching the San Francisco Bay, the expedition backtracked to San Diego. The following year on May 31, 1770, a second expedition was organized by Portolá resulting in a successful location of the Monterey Bay and the foundation of Mission San Carlos Borromeo de Carmelo. The mission was first established in Monterey next to the Presidio but was later relocated to Carmel by Father Serra in 1771 (City of Monterey 2023). It would be an additional 21 years before the Franciscan order would establish another mission in the area, Mission Santa Cruz (Koch 1973). Native Americans were forced to build the mission church and auxiliary structures from local resources, as well as cultivate agricultural crops for the mission occupants. The forced conversion of the local native population proved continuously problematic (Lehmann 2000).

Across California, the Spanish exploration and missionizing led to a rapid and major reduction in native populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate most aspects of the Native Americans’ traditional lifeways. Local groups forcibly brought to the mission were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup and Milliken with Brown 1994). The land taken by the Spanish was eventually repatriated to the native tribes, but the massive decline in the population as a result of disease, abandonment, and forced relocation meant that by the time of this effort, few potential recipients remained alive and in the general area (Lehmann 2000; Koch 1973).

The expansion of Spanish control in the region was not limited to the development of religious infrastructure. Portolá established the Presidio at Monterey as the capital of Alta California, enabling Spanish military control over the region (DLIFLC 2023a). In 1795, Spain called for the establishment of three self-governing pueblos in Alta California that would remain free from military and religious oversight. Villa de Branciforte was established in 1797 on the opposite bank of the San Lorenzo River from Mission Santa Cruz. The 40 initial settlers were not provided with the resources promised to them by Spain to build housing or cultivate the land, but instead made do with crude dwellings of their own design. Despite the Villa de Branciforte project being deemed a failure almost immediately by Spain, the population grew quickly in the initial years. By 1803, there were 107 enlisted inhabitants in Villa de Branciforte. However, the population mainly derived from former soldiers, artisans, and criminals who lacked the skills to farm and sustain themselves. By 1817, the population dwindled back to 52 as people followed new opportunities (Lehmann 2000; Koch 1973).

After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated its colonization efforts (Lehmann 2000; Koch 1973; Robinson 2012). Monterey maintained its position as the capital of Alta California for another 25 years (CNPS 2023).

Within days following the congressional declaration of war on Mexico in 1845, the secretary of the Navy began to communicate in secret with Commodore Sloat, commander of the U.S. Pacific Squadron, to capture the port of San Francisco and other coastal ports, which were known to be little defended (Bancroft 1882, 195). On Tuesday July 7, 1846, Sloat landed 250 marines and sailors at Monterrey who, under the command of CPT Mervine, raised the flag of the United States at the customs house and read Sloat’s official proclamation claiming Alta California for the United States (Bancroft 1882, 230-1). The Mexican–American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period. The new state of California recognized the ownership of lands in the state distributed under the Mexican Land Grants of the previous several decades (Cleland 2005; Waugh 2003; Koch 1973). As the gold rush was picking up steam in 1849, a

massive influx of people seeking gold steadily flooded the rural counties of California. The next several decades brought Euro-American homesteaders and small mining operations into the project area. Descendants of many of these early homesteaders still inhabit the Upper Carmel Valley (Salisbury and Rich 2014).

Ethnographic and Ethnohistoric Context

The following discussion is an ethnohistorical and ethnographic synthesis of the relationships that Esselen people have with the vicinity of the proposed project. Presented is a multivocality of complementary narrative traditions of both Euro-American settlers and Esselen people that enable understanding of historical moments, people-place relationships, and the cultural meanings attributed to and developed from them.

The ancestral territory of Esselen people that have lived and continue to live in the region since time immemorial encompasses the upper Carmel Valley and the rugged peaks and canyons of the Santa Lucia Mountains, including the Carmel River drainage, Salinas Valley on its eastern bounds, and Arroyo Seco River drainage and Junipero Serra Peak at its southern boundary (Kroeber 1925:544; Hester 1978:496-497; Breschini and Haversat 1994). Esselen traditional history orients contexts of space, time, and cultural order, informing the current Esselen world while making evident the historical and functional interconnectedness of place to Esselen culture. The Esselen traditional history of the beginning the world tells of the order of the world through the actions of Coyote following a great flood, as shared with Kroeber (1907):

The Beginning of the World

When this world was finished, the eagle, the humming-bird, and Coyote were standing on the top of [Pixchi]. When the water rose to their feet, the eagle, carrying the humming-bird and Coyote, flew to the Sierra de Gabilan. There they stood until the water went down. Then the eagle sent Coyote down the mountain to see if the world were dry. Coyote came back and said: "The whole world is dry." The eagle said to him: "Go and look in the river. See what there is there." Coyote came back and said: "There is a beautiful girl."

The eagle said: "She will be your wife in order that people may be raised again." He gave Coyote a digging implement of abalone shell and a digging stick. Coyote asked: "How will my children be raised?" The eagle would not say. He wanted to see if Coyote was wise enough to know. Coyote asked him again how these new people were to be raised from the girl. Then he said: "Well, I will make them right here in the knee." The eagle said: "No, that is not good." Then Coyote said: "Well then, here in the elbow." "No, that is not good" "In the eyebrow." "No, that is not good." "In the back of the neck." "No, that is not good either. None of these will be good." Then the humming-bird cried: "Yes, my brother, they are not good. This place will be good, here in the belly. Then Coyote was angry. He wanted to kill him. The eagle raised his wings and the humming-bird flew in his armpit. Coyote looked for him in vain.

Then the girl said: "What shall I do? How will I make my children?" The eagle said to Coyote: "Go and marry her. She will be your wife." Then Coyote went off with this girl. He said to her: "Louse me." Then the girl found a woodtick on him. She was afraid and threw it away. Then Coyote seized her. He said: "Look for it, look for it! Take it! Eat it! Eat my louse!" Then the girl put it in her mouth. "Swallow it, swallow it!" he said. Then she swallowed it and became pregnant. Then she was afraid. She ran away. She ran

through thorns. Coyote ran after her. He called to her: "Do not run through that brush." He made a good road for her. But she said: "I do not like this road."

Then Coyote made a road with flowers on each side. Perhaps the girl would stop to take a flower. She said. "I am not used to going between flowers." Then Coyote said: "There is no help for it. I cannot stop her." So she ran to the ocean. Coyote was close to her. Just as he was going to take hold of her, she threw herself into the water and the waves came up between them as she turned to a sand flea (or shrimp: camaron). Coyote, diving after her, struck only the sand. He said: "I wanted to clasp my wife but took hold of the sand. My wife is gone."

Traditional histories, including the story of the beginning of the world included above, make evident the historical and functional interconnectedness of place to Esselen culture. Since time immemorial, Esselen people have maintained an unbreakable connection to the land/waterscape of *Xasáuan*, *Echilat*, *Ensen*, among other villages, and the network of settlements, places of ceremonial practice, resource procurement, and power (Breschini et al. 1992; Eidsness and Jackson 1999; McCarthy 1999; Lavery 2010).

Esselen connections to place, tradition, and identity were significantly transformed – but not extinguished – by Spanish missionization beginning in the late 18th century (Milliken 1981, 1990; Milliken and Breschini 1993). As described by the Esselen Tribe of Monterey County (2018):

This was the beginning of a transformation of the Esselen culture, as the people were gathered up and taken in to three missions: Mission Carmel, San Antonio Mission and the Soledad Mission. These missions were strategically placed in a geographical triangle around the Santa Lucia Mountains, the ancient homeland of the Esselen's. The missionaries were here to save the souls of the heathens, as they called us. In this way they hoped to take the land for the Spanish king, Carols III. This had severe consequences for the Esselen and other tribes that called these mountains their home. There were four other tribes that were also affected by the missionary's efforts for salvation.

The first baptism of an Esselen individual is documented as a headman named *Pach-hepas* from *Xasauan* (Milliken 1990:33 [San Carlos baptism #350, Fr. Serra]). Other records of Mission San Carlos orient places of birth for Esselen lineages from *Echilat* and *Ensen* until the secularization period of the lands and waters (Lavery 2010: 14, 114). The high mortality rates accompanying the mission system drastically impacted the Esselen community with swift violence – the introduction of foreign diseases, strenuous labor practices, drastic changes in diet, familial isolation – and as a result Esselen people adapted to more discrete cultural practices, refuge, avoidance, language alternation, and secrecy (Cook 1940; McCarthy 1999; Lavery 2010). In words of the Esselen Tribe of Monterey County, "[t]hankfully, some of the captured Esselen survived this tragedy and continued to survive until the Spanish Missions fell into disuse after the Mexican Revolution" (Esselen Tribe of Monterey County 2018).

Esselen culture, identity, and connection to place persevered through the "salvage anthropology" phase of the early 20th century when anthropologists who were unable to gain knowledge first-hand from Esselen people falsely interpreted secrecy and avoidance as cultural and real extinction (Kroeber 1925; McCarthy 1999; Lavery 2010). Such interpretation resulted in decades of slow violence through the settler colonial erasure and dispossession of Esselen people, traditional history, culture, and connections to place. This colonialism included U.S. federal unrecognition and federal

neglect, associated lack of and denial of access to lands and property, racialization, and systematic and legalized disenfranchisement (Lavery 2010; Rubin 2022).

The perseverance of Esselen people and their culture, identity, and connection to place is evident today in numerous ways, including via the establishment and efforts of the Esselen Tribe and Ohlone/Costanoan-Esselen Nation (OCEN) as political, cultural, and environmental stewardship entities. OCEN “represents over 600 enrolled tribal members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission (Carmel) and/or Costanoan Mission Indian descent from at least 19 villages from a contiguous region surrounding Monterey Bay” (OCEN 2012). In the words of the Esselen Tribe (2018):

The Esselen Tribe of Monterey County is first and foremost a Tribal Group working toward continuing cultural traditions and preserving the cultural heritage of the historic tribes that are located within Monterey County. The Esselen Tribe of Monterey County is also registered as a Non-Profit Organization and was founded with the goal of continuing cultural traditions and preserving the cultural heritage of the historic tribes that are located within Monterey County, along with protecting and preserving the recognized and unrecognized sacred lands and archeological sites.

It needs to be noted that though the name of the organization/group is Esselen Tribe of Monterey County, the efforts of the organization are not solely dedicated to the Esselen Tribe, but encompass protection and preservation of the Esselen, Rumsen, Chalone, Sureño, Chunchunes and Guatcharrone people, which includes but is not limited to the villages of Achasta, Chalon, Echilat, Ensen, Excelen, Esslenajan, Ixchenta, Jojopan, Kuchun, Pachepas, Sargenta-Ruc, Soccoronda, & Tucutnut, all which are located within sacred pre-historic and historic tribal lands of Monterey County, California.

LITERATURE SEARCH

To gather existing, relevant, and reasonably available information regarding cultural resources in the proposed project and vicinity, MPWMD requested a record search from the Northwest Information Center (NWIC) of the California Historical Resources Information System at California State University (CSU), Sonoma in Rohnert Park. The data gathering area for the records search is the cultural resources study area. The record search was conducted during December 2022, with additional information provided by NWIC in February 2023, including a review of cultural resources records, previously conducted cultural resources investigations, the NRHP (or National Register), the California Register of Historic Resources, *California State Historic Landmarks* (CDPR 1996), *California Inventory of Historic Resources* (CDPR 1976), the California Points of Historic Interest listing (<http://ohp.parks.ca.gov/listedresources/>), the Directory of Properties in the Historic Property Data File (OHP current computer list dated 3-20-2014), and the Archaeological Determinations of Eligibility (ADOE) (OHP current computer list dated 4-04-2012), the *Survey of Surveys* (CDPR 1989), and other pertinent historic data available at the NWIC for Monterey County. Additional background research included review of historic maps, the County of Monterey Resource Management Agency, Planning Division, Archaeological Sensitivity Zones interactive map, and a request for a search of the Native American Heritage Commission’s Sacred Lands File.

The results of the records search are provided below and include summaries of the previously conducted cultural resources investigations, the previously documented cultural resources, along with their NRHP eligibility determinations if any have been made, and historic features identified on historic maps within the cultural resources study area.

PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The record search identified 15 previous cultural resource investigations within the 0.25-mile buffer around the proposed project area, all of which are located within or cross the proposed project area (Table 6). The investigations occurred between 1950 and 2017, and were conducted prior to a variety of different undertakings, including cultural resource investigations for the New Los Padres Dam and Reservoir Project, general archaeological, historical, and ethnographic contexts, and cultural resources assessment following forest fires. The previous investigations inventoried cultural resources throughout the cultural resources study area through literature research, archaeological survey, ethnographic study and interviews, and subsurface archaeological exploration at specific known cultural resource locations. The previous investigations covered the entirety of the project area, though many of these studies were not completed to current (2022) professional standards.

Table 6. Previous Studies in the Project Area and within 0.25-miles of the Project Area

Count	Author	Year	NWIC Report #	Report Name and Description	Within Project Area (Yes/No)
1	Winzler & Kelly Consulting Engineers	1976	S-000848	<i>A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources.</i> Provides a context for the understanding and interpretation of the historic and archaeological sites recorded within 17 coastal and bay area counties.	Yes
2	Gary S. Breschini and Trudy Haversat	1978	S-002164	<i>The Monterey County Archaeological Resource Project, A Project-Specific Research Design.</i> Unknown.	Yes
3	Roy Meadows, Roy Martin, and Ann Fisher	1950	S-003453	<i>Notes on the Carmel Indians; and Southern Costanoan-Esselen Notes.</i> Ethnographic notes of the Carmel, and Southern Costanoan-Esselen.	Yes
4	Rob Edwards, Pat Hickman, and Gary Breschini	1974	S-001974	<i>Assessment of the Impact on the Cultural Resources of the Proposed San Clemente Dam, Upper Carmel Valley, Monterey County, California.</i> Assesses cultural resource potential.	Yes
5	Donald M. Howard	1968	S-005550	<i>Archaeological Investigations of the Monterey Big Sur Area.</i> Assessing data concerning the archaeology of the Monterey Coast and adjacent areas.	Yes
6	Gary S. Breschini and Trudy Haversat	1989	S-010945	<i>Cultural Resources Literature Study and Mitigation Recommendations for Phase II of the New San Clemente Project EIR/EIS, Carmel Valley, Monterey.</i> Investigation of four areas in the Carmel Valley including New Los Padres Reservoir. Recommendations include adequacy of previously cultural resources survey.	Yes
7	Gary S. Breschini, Anna Runnings, and Trudy Haversat	1992	S-014438	<i>Cultural Resources Reconnaissance of the New Los Padres Dam and Reservoir Project, Carmel Valley, Monterey County, California.</i> Field reconnaissance of New Los Padres Dam Reservoir area. Resulted in 22 cultural resources.	Yes

Count	Author	Year	NWIC Report #	Report Name and Description	Within Project Area (Yes/No)
8	Breschini, Gary S. and Trudy Haversat, Clinton Blount, Robert O. Gibson, Thomas L. Jackson, Jay H. King, Randal Milliken, Lester A. Ross, Anna L. Runnings, Kent Seavey, Charles R. Smith, and Roderick Sprague	1993	S-014438a	<i>Phase II Cultural Resources Investigations for the New Los Padres Dam and Reservoir Project, Carmel Valley, Monterey County, California.</i> Archaeological and ethnographic investigations resulted in recommendation for 20 of 22 archaeological properties and seven traditional cultural properties are eligible for inclusion in the NRHP, and that the archaeological properties be included within a single National Register district - <i>Xasáuan</i> Archaeological District.	Yes
9	Janet P. Eidness and Robert J. Jackson	1999	S-021871	<i>Final Summary Report on the Cultural Properties Inventory and Determination and Eligibility for Listing on the National Register of Historic Places for the New Los Padres Dam and Reservoir Project, Monterey County, California.</i> Archaeological inventory survey resulting in 20 archaeological sites, one historic structure, two historic buildings, and 13 TCPs.	Yes
10	Helen McCarthy	1999	S-021872	<i>Final Identification and Evaluation of Traditional Esselen Cultural Properties for the New Los Padres (Carmel River) Dam and Reservoir Project.</i> Traditional cultural properties inventory resulting in identification and evaluation of 15 TCP sites.	Yes
11	Donna L. Gillette	2003	S-030204	<i>The Distribution and Antiquity of the California Pecked Curvilinear Nucleated (PCN) Rock Art Tradition.</i> Examination of geographic distribution of PCN rock art tradition.	Yes
12	Randall Milliken, Jerome King, and Patricia Mikkelsen	2006	S-032596	<i>The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways.</i> Project to reconstruct the landscape distribution of the rancherias mentioned in registers of twelve missions.	Yes
13	Melinda Salisbury and William Rich	2014	S-046487	<i>A Cultural Resources Investigation of the California Department of Fish and Wildlife, Steelhead Spawning Gravel Enhancement Project (#HI-49), Monterey County, California.</i> Archaeological investigation resulting in identification of three bedrock mortar sites.	Yes
14	Sarah L. Izzi and Justin Wisely	2017	S-048926	<i>Cultural Resources Support for the Soberanes Fires, Monterey County, California.</i> Cultural resources support following the Soberanes Fire. Assisted in avoidance and impact minimization to cultural resources.	Yes
15	Donald Scott Crull	1997	S-048927	<i>The Economy and Archaeology of European-made Glass Beads and Manufactured Goods Used in First Contact Situations in Oregon, California and Washington.</i> Examination of the role played by European-made glass beads and other manufactured goods in Native American populations.	Yes

Previously Recorded Cultural Resources

The County of Monterey Resource Management Agency, Planning Division, Archaeological Sensitivity Zones interactive map identifies the entire cultural resources study area as having “high

archaeological sensitivity”.³ The literature search also reflects a high sensitivity for cultural resources, including properties of traditional religious and cultural importance to Native Americans. The records search conducted with NWIC identified seven previously documented cultural resources within the cultural resources study area.

Pursuant to CCR Section 15120(d)), environmental documents must not include information about the location of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act. Pursuant to PRC Sections 5097.9 and 5097.993, Native American graves, cemeteries, and sacred places and records of Native American places, features, and objects are also exempt from disclosure. Furthermore, PRC Section 21082.3(c)(1) states:

Any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with subdivision (r) of Section 6254 of, and Section 6254.10 of, the Government Code, and subdivision (d) of Section 15120 of Title 14 of the California Code of Regulations, without the prior consent of the tribe that provided the information.

As describing and/or listing properties of traditional religious and cultural importance to Native Americans may violate the legal protections stated here, detailed information about cultural resources included here is limited. Confidential information pertaining to the cultural resources within the proposed project area is provided under separate cover that is not available to the public (Dunnigan et al. 2023).

Of the seven cultural resources within the cultural resources study area, one is the Los Padres Dam (P-27-002170), originally constructed between 1948 and 1949 and found not eligible for listing in the NRHP. The other six resources include components that have been recorded archaeologically and ethnographically as interrelated properties of a historic district that is eligible for listing in the NRHP for significance under criteria A and D. These six resources include the district itself plus five sites that contribute to the significance of the district overall. Of the five contributing elements that overlap the cultural resources study area, three are also recognized as individually eligible for listing in the NRHP under Criterion A. Non-contributing elements of the historic district within the cultural resources study area include structural remains of “Martin’s Fishing Camp” and the structural remains associated with a 1930s summer cabin; both of these resources are not individually eligible for listing in the NRHP. This information represents data provided by NWIC for the December 2022 records search. Review of the records data revealed additional documentation of the district, its contributing elements, and their eligibility for the NRHP, was not thoroughly incorporated into the NWIC data system. As such, NWIC is in the process of finalizing an updated records search report with information recently received from the Office of Historic Preservation (Much, 2023).

Of the seven previously recorded cultural resources discussed above, four are within or overlapping the proposed project area, including the Los Padres Dam (P-27-2170), the historic district and two contributing elements of the district. The Los Padres Dam does not meet the definition of historical resource pursuant to §15064.5. However, the historic district and its two contributing elements have been documented as historically significant, eligible for listing in the NRHP (PRC Section

³ Accessed December 2022: <https://montereyco.maps.arcgis.com/apps/webappviewer/index.html?id=90ca28af371c482bac6ff01dd914fccf>

5024.1[d][1]), and retain integrity. The historic district also meets California Register of Historical Resources (CRHR) criteria 1 and 3. The contributing elements of the historic district are also eligible individually under Criterion A, meeting CRHR criterion 1. Therefore, the historic district and its two contributing elements meet the definition of historical resources pursuant to §15064.5.

REGULATORY SETTING

The following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.⁴

National Historic Preservation Act

Under the National Historic Preservation Act (NHPA) Section 106 process as outlined at 36 CFR § 800.16(l)(1), “historic properties” are defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the [NRHP] [... and] includes properties of traditional religious and cultural importance to an Indian tribe.”⁴ For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 CFR Part 60.4.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four following criteria for inclusion on the NRHP.

- Criterion A, Association with events that have made a significant contribution to the broad patterns of history;
- Criterion B, Association with the lives of persons significant in the past;
- Criterion C, Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D, History of yielding, or the potential to yield, information important in prehistory or history.

If a cultural resources professional meeting the Secretary of Interior’s Qualification Standards determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met (36 CFR Part 60.4(g)).

Traditional Cultural Properties and Traditional Cultural Landscapes

National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (Bulletin 15; CNPS 1997) states that information and guidance on traditional cultural values and their associations to historic properties should be sought from National Register Bulletin 38, *National Register Guidelines for Evaluating and Documenting Traditional Cultural Properties* (Bulletin 38;

⁴ Information and findings of this Initial Study are also meant to assist USACE achieve compliance responsibilities under the National Environmental Policy Act of 1969, the Archaeological Resources Protection Act of 1974 (16 U.S.C. Code [U.S.C.] 470), the American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996 and 1996a), the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001), Executive Order 11593 (Protection and Enhancement of the Cultural Environment) of 1971 (16 U.S.C. 470), the American Antiquities Act of 1906, and Executive Order 13007 (Indian Sacred Sites) of 1996.

Parker and King 1998). Anthropologists Patricia Parker and Tom King coined the term “traditional cultural properties” (or TCPs) in Bulletin 38 to account for historic properties and cultural places that were often overlooked and not adequately considered during NHPA Section 106 review, but that may be eligible for listing on the NRHP because of their “association[s] with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1998:1).

Bulletin 38 explains that to be eligible for listing on the NRHP, a TCP—like any historic property—must correspond to an eligible NRHP “property type,” retain “integrity,” be at least 50 years old, and meet at least one of the four evaluation criteria (36 CFR 60.4):

- A. associated with historic events that have made a significant contribution to the broad patterns of our history;
- B. associated with the lives of people significant in our past;
- C. embody distinctive characteristics of a class, time period, traditional master builder artisan, method of construction, artistic quality, form of architecture, etc.; and/or
- D. have yielded or may be likely to yield information important in history and/or prehistory.

An identification, evaluation, or designation of TCP status is an expression of a form of significance; it is not, on its own, an NRHP eligible property type. Every eligible NRHP property type—object, site, structure, building, historic district (CNPS 1997; Parker and King 1998)—potentially may hold or convey the status of a TCP. In the specific context of this investigation, the term TCP is interchangeable with that of PTRCIs, or “properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization,” a term added to the NHPA in a 1992 amendment as clarification of their NRHP eligibility (36 CFR 800.16(l)(1); see King 2003:35).

Another designation similar to TCPs that serve as expressions of significance rather than NRHP property types, and which should be identified, evaluated, and assessed through the same considerations, professional standards, methods, and sensibilities as TCPs (Advisory Council on Historic Preservation [ACHP] 2012:2), are Native American traditional cultural landscapes, or TCLs. Guidance from the ACHP (2012:4) states that “[t]here is no single defining feature or set of features that comprise” these interrelated and inter-functional geographical areas of significance. Instead:

Such places could be comprised of natural features such as mountains, caves, plateaus, and outcroppings; water courses and bodies such as rivers, streams, lakes, bays, and inlets; views and view sheds from them, including the overlook or similar locations; vegetation that contributes to its significance; and, manmade features including archaeological sites; buildings and structures; circulation features such as trails; land use patterns; evidence of cultural traditions, such as petroglyphs and evidence of burial practices; and markers or monuments, such as cairns, sleeping circles, and geoglyphs [ACHP 2012:4].

The ACHP stresses “that the size of such properties or the potential challenges in the management of them should not be considerations in the evaluation of their significance” (ACHP 2012:2a).

Bulletin 38 explains that when identifying and evaluating TCPs (and therefore TCLs, per the cited ACHP guidance), the word “our” in NRHP eligibility criteria refers to the communities for whom a given historic property or TCP is traditionally important (Parker and King 1998:12-13). In this context, Bulletin 38 underscores that “[i]t is vital to evaluate properties thought to have traditional cultural significance from the standpoint of those who may ascribe such significance to them, whatever one’s

own perception of them, based on one's own cultural values, may be" (Parker and King 1998:4). Stipulations outlined at 36 CFR 800.4(c)(1) thus are elemental to adhere to in TCP and TCL identification, as they require agency officials to acknowledge "that Indian tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them." Such acknowledgment is especially imperative according to the ACHP, who stress in their historic preservation guidance that:

There are very different views [between agencies and Native American tribes] on the treatment of effects to traditional cultural landscapes. Non-native people tend to think in a linear fashion while native peoples tend to think cyclically. This difference in world view affects not only whether or not the significance of sacred places is understood but also how such places should be treated. These places are part of living communities and are their actual history (ACHP 2011:2).

Regarding integrity, Bulletin 15 describes this as "the ability of a property to convey its significance" (CNPS 1997:44) and identifies seven aspects that can define integrity in meeting NRHP eligibility criteria. They are: location, design, setting, materials, workmanship, feeling, and association (36 CFR 800.5(a)(1); CNPS 1997:44). Bulletin 15 notes that "[t]he retention of specific aspects of integrity is paramount for a property to convey its significance. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant" (CNPS 1997:44).

Bulletin 38 elaborates on the seven different aspects of integrity outlined in Bulletin 15 under the collective heading of "Integrity of Condition," and clarifies that when considering these seven aspects, "the integrity of a possible traditional cultural property must be considered with reference to the views of traditional practitioners; if its integrity has not been lost in their eyes, it probably has sufficient integrity to justify further evaluation" (Parker and King 1998:12). Bulletin 38 reiterates that NRHP eligibility requires a property be a tangible location and retain integrity, the latter of which Bulletin 38 describes as continuity of cultural practice, values, and/or beliefs with a place (i.e., integrity of association), and broadly intact place conditions that support or provide capacities for significant cultural relationships and associations to endure (i.e., integrity of condition; Parker and King 1998: 10).

Bulletin 38 further emphasizes that fundamental to TCP (or TCL) eligibility identification and evaluation is an understanding that tangible properties, places, or landscapes require attention to the *intangible* characteristics and relations that render them culturally significant. This is to say, "TCPs are as much about places that can be felt as they are feelings about places" (Curti and Moreno 2014:4). As directed by Bulletin 38 guidance:

The National Register lists, and [Section] 106 requires review of effects on, tangible cultural resources—that is, historic properties. However, the attributes that give such properties significance, such as their association with historical events, often are intangible in nature. Such attributes cannot be ignored in evaluating and managing historic properties; properties and their intangible attributes of significance must be considered together (Parker and King 1998:3).

In this context, it necessary to consider how tangible properties, places, and/or landscapes may relate to and be defined by intangible attributes that have not, to date, been adequately accounted for and considered. As stipulated at 36 CFR 800.4(c)(1):

The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously

determined eligible or ineligible. The agency official shall acknowledge that Indian tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

If a property that has TCP/TCL significance is evaluated as eligible or potentially eligible for listing on the NRHP, it becomes the responsibility of the lead agency to assess whether the proposed project actions and activities would have an adverse effect on it.

California Register of Historical Resources: Public Resources Code Section 5024

The term historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of PRC (PRC Section 5020.1[j]).

Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1[k]);
2. A local survey conducted pursuant to PRC Section 5024.1(g); or
3. The property is listed in or eligible for listing in the NRHP (PRC Section 5024.1[d][1]).

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR, which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria.

It is associated with events that have made a significant contribution to the broad patterns of the following.

1. California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or may be likely to yield, information important in prehistory or history (CCR 14 Section 4852).

To be considered a historical resource for the purpose of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Therefore, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (CCR 14 Section 4852[c]).

Unique Archeological Resources

The PRC also requires the lead agency to determine whether or not a project would have a significant effect on unique archaeological resources (PRC Section 21083.2[a]).

The PRC defines a unique archaeological resource as follows.

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
 - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
 - Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
 - Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

Discovery of Human Remains - California Health and Safety Code Section 7050.5

California Health and Safety Code (CHSC) Section 7050.5 requires that construction or excavation on non-federal lands be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native Heritage Commission (NAHC). Any person who knowingly “mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [PRC]” (CHSC Section 7050.5(a)).

Of particular note to cultural resources is subsection (c). After notification, NAHC would follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants (MLD), if possible, and recommendations for treatment of the remains. The MLD would have 24 hours after notification by the NAHC to make their recommendation (PRC Section 5097.98). In addition, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC Section 5097.99).

Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 25 U.S.C. 3001)

Under the Native American Graves Protection and Repatriation Act (NAGPRA) (25 United States Code [U.S.C.] 3001) and implementing regulations 43 CFR Part 10, federal agencies are responsible for protecting Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on lands under the agencies jurisdiction. All human remains and potential human remains must be treated with respect and dignity at all times.

California Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act (CALNAGPRA) of 2001 (CHSC 8010 – 8030) provides a state policy consistent with the provisions of NAGPRA (25 U.S.C. Sec. 3001 et seq.) to ensure that “all California Indian human remains and cultural items be treated with dignity and respect” and provide California tribes with a mechanism to file claims for repatriation of human remains and cultural items.

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC 5097.94, the NAHC has authority and duty to “identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands” and has the power and duty to make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are

located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

County of Monterey General Plan

The *2010 Monterey County General Plan* (Monterey County 2010a) includes a Conservation and Open Space Element to guide “the County in long-term conservation and preservation of open space lands and natural resources” (Monterey County 2010:C/OS-1). Regarding cultural resources, Chapter 3 - Conservation and Open Space Element of the general plan established Goal OS-6: “encourage the conservation and identification of the County’s archaeological resources” along with six implementing policies. The implementing policies account for identification and protection of important representative and unique archaeological sites and features (OS-6.1); compilation of archaeological data (OS-6.2), new development in areas of moderate or high archaeological sensitivity (OS-6.3); waiving of archaeological survey for development in low sensitivity zones (OS-6.4); establishment of policies and procedures to encourage development to avoid impacts to sensitive archeological sites (OS-6.5); and encouragement of efforts “to improve the public’s recognition of the County’s cultural heritage and the citizen’s responsibilities for archaeological or cultural resource preservation” (OS-6.6; Monterey County 2010:C/OS-15).

The general plan also established Goal OS-8 to “encourage the conservation and identification of the County’s Native Californian cultural sites, sacred places, and burial sites” (Monterey County 2010:C/OS-16), along with eight implementing policies. The implementing policies provide for identification and protection of unique burial sites including preservation in place to the greatest extent possible and as permitted by law (OS-8.1); compilation of burial site information (OS-8.2); limitations on development sites where known burials or cemeteries are located (OS-8.3); establishment of policies and procedures to encourage development to avoid impacts to burial sites (OS-8.4); encouragement of efforts “to improve the public’s recognition of the County’s cultural heritage and the citizen’s responsibilities for burial site preservation,” including establishment of a Native Californian Advisory Panel (OS-8.5); and consultation consistent with state preservation law with Tribal representatives during any general plan amendment, master plan, community plan, or specific plan (OS-8.6). The final implementing policy (OS-8.7) identifies OCEN as a designated Most Likely Descendent group and that implementation plans for the general plan shall include designation of OCEN as “the clearinghouse group for the coordination of data recovery monitoring and the disposition of human remains in Monterey County” and establishment of the technical advisory committee pursuant to OS-8.5 (Monterey County 2010:C/OS-17-18).

Impact Analysis

- a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Previous studies conducted within the cultural resources study area have identified three tribal cultural resources (TCRs) that also meet the definition of historical resource pursuant to §15064.5. Direct and indirect impacts of the proposed project to the TCRs, and associated tribal practices that occur at these places could include disturbances from light, sound, smell, or other temporary to long-term changes implemented during proposed work, including brush clearing, earth disturbance, and vehicle traffic. The TCRs discussed here include a district comprised of archaeological sites and other tribal resource types, trail/waterway, and plant gathering areas. These resources are not discussed in further detail in consideration of their status as TCRs. However, careful analysis of the location and nature of these resources indicate that surface expressions of these TCRs are found throughout the broader Carmel River region. The tribes

have not confirmed that any expression of these resources is present within the project area. Accordingly, it's unlikely that the proposed project would cause any impacts to historical resources. The project proponent will continue to communicate and collaborate with tribal organizations through project implementation.

As a BMP, prior to ground disturbance, associated tribal organizations will be contacted to confirm there are no sensitive resources within the project area.

- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Based on an archaeological survey of the full project area in January 2023, no archaeological resources were identified within the proposed project area; therefore, the proposed project would not be expected to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. Previous investigations have not identified archaeological resources within the proposed project area; therefore, the proposed project is not likely to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. Work proposed is within previously disturbed areas and the likelihood of discovery of archaeological resources is considered low. Therefore, there would be **no expected impact** to archaeological resources and no mitigation would be required.

- c. Disturb any human remains, including those interred outside of dedicated cemeteries?

No human remains have been found on site during multiple surveys carried out since 1948 (see New Los Padres Dam and Carmel River Dam EIRs). Therefore, **no impact** would be expected to affect human remains and no mitigation would be required.

Mitigation Measures

None required.

VI. Energy

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Pacific Gas & Electric Company (PG&E) provides electricity and natural gas service to the project area. The 2010 *Monterey County General Plan's* Conservation/Open Space Element includes Goal OS-9 promotes efficient energy use (County of Monterey 2010a). This goal focuses on sustainable land use development, use of renewable energy resources, and transportation energy reduction.

Impact Analysis

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The proposed project would result in the temporary consumption of energy during construction activities. During construction, the proposed project would use minimal energy in the form of transportation fuel (e.g. gasoline and diesel) for vehicle trips and heavy construction equipment. Energy use during operation of the proposed project would be substantially different from the energy use under existing conditions. The recent rockslides in the project area that caused blockages in the existing lower outlet have required the use of diesel pumps, and associated refueling trips, to clear water over the dam. As a result of the proposed project, diesel fuel use would decrease compared to post-project conditions because the temporary pumping would no longer be required. Therefore, energy consumption during both project construction and operation would not be considered wasteful, inefficient, or unnecessary. **No impact** would occur, and no mitigation is required.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would be consistent with the applicable energy-related goals and policies in the 2010 *Monterey County General Plan* (Monterey County 2010a). As described in criteria (a), energy consumption would be reduced compared to operation of the interim measures in the existing condition and the proposed project would restore use of the outlet resulting in a long term sustainable solution. Therefore, the proposed project would not conflict with a state or local plan for renewable energy or energy efficiency, resulting in **no impact**. No mitigation is required.

Mitigation Measures

None required.

VII. Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The proposed project is located in the California Coast Ranges geomorphic province. Monterey County is one of the most seismically active regions in California. The San Andreas Fault is an active transform fault between the Pacific and North American tectonic plates and traverses the eastern portion of the county, making nearby areas susceptible to seismic hazards such as strong

ground shaking, liquefaction, and earthquake-induced landslides. The area is underlain by the Franciscan Complex and Salinian block marine rock deposits. In addition, erosion hazards are present due to soil types in the area (Monterey County Planning and Building Inspection Department 2008).

Soils in the vicinity of the proposed project and the Los Padres Reservoir include the Cieneba-Rock outcrop complex with 50 to 75 percent slopes, the Sheridan coarse sandy loam with 30 to 75 percent slopes, the Rock outcrop-Xerorthents association with 30 to 75 percent slopes, the Sur-Junipero complex, stony Fluvents, and dissected Xerorthents (NRCS 2019).

The proposed project is located less than 1 mile southwest of the Cachagua fault, a quaternary fault of undifferentiated age; approximately 3 miles southwest of the Tularcitos fault, a late quaternary fault with displacement in the past 700,000 years; and approximately 3 miles northwest of the Miller Creek fault, a late quaternary fault with displacement in the past 700,000 years. The proposed project is located approximately 30 miles southwest of the San Andreas fault, a historically active fault at which displacement has occurred within the past 200 years (DOC 2015).

Impact Analysis

- a-i) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The proposed project is located in an area that is unevaluated for Alquist-Priolo Earthquake Fault Zones (DOC 2021a). The faults in the immediate vicinity of the proposed project are quaternary in age and have not been active in the past 11,700 years and fault rupture would be unlikely (DOC 2015). Further, because the proposed project would be designed to meet DSOD seismic safety standards, work to install a new outlet in the reservoir and to place a pipeline along the base of Los Padres Dam would not be expected to alter the seismic safety of the dam and therefore would not cause loss or harm to workers related to the rupture of the Cachagua, Tularcitos, or Miller Creek faults (the nearest faults to the site). Potential for a fault rupture of a known fault in the area does exist and could pose threats to workers in the area during construction, however the likelihood is low given the inactivity of faults in the immediate vicinity. Therefore, the proposed project would have the potential for effect; however, that impact would be considered **less than significant** as it relates to the risk from loss, injury or death involving the rupture of a known fault. No mitigation is required.

- a-ii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Strong seismic ground shaking?

As stated in impact question a-i) above, the proposed project is located in an area with known seismic activity and quaternary faults; however, these faults have not been active in the past 11,700 years (DOC 2015). Strong seismic shaking is the perceived level of shaking caused by seismic activity. The proposed project is located in an area with ground shaking hazards designated as relatively low by the California Geological Survey (California Geological Survey 2016). The area is distant from known, active faults and will experience lower levels of shaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking (California Geological Survey 2016). As such, workers would be unlikely to encounter seismic activity during construction that could cause loss, injury, or death involving strong seismic ground shaking in

proximity to dam structures or steep slopes. Therefore, the proposed project would have **less-than-significant** impacts resulting from loss, injury, or death involving storing seismic ground shaking. No mitigation is required.

- a-iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Seismic-related ground failure, including liquefaction?

As stated in impact question a-i) above, the proposed project is located in an area with known seismic activity and quaternary faults. The Carmel River and floodplains in the alluvial basins of Monterey County are areas with the highest potential for liquefaction (Monterey County Planning and Building Inspection Department 2008) due to the presence of recently deposited sand and silt in areas with high groundwater levels. The web soil survey shows sandy soils surrounding the proposed project area (NRCS 2019). However, the area surrounding the proposed project is designated as having relatively low liquefaction susceptibility (Monterey County Planning and Building Inspection Department 2008). As such, workers would be unlikely to encounter seismic-related ground failure, including liquefaction in the proposed project. Liquefaction would not be anticipated to impact operation of the Los Padres Dam because the dam foundation would not be altered. Therefore, the proposed project would have **less-than-significant** impacts resulting from loss, injury, or death involving seismic-related ground failure, including liquefaction. No mitigation is required.

- a-iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Landslides?

As stated in impact question a-i) above, the proposed project is located in an area with known seismic activity and quaternary faults. Additionally, a series of landslides in the proposed project area were the cause of blockages in the outlet structure of the dam, requiring the repairs planned in the proposed project. As such, workers would be subject to the potential for seismic activity during construction that could cause loss, injury, or death involving landslides. Although construction work would be limited and temporary, and construction improvements would be engineered to reduce the risk of landslide hazards and dam failure, the proposed project would have the **potential to cause significant impacts** from loss, injury, or death related to landslides and mitigation is required. The proposed project would Implement **MM-GEO-1** (described below under *Mitigation Measures*) to reduce landslide hazards and related risks to crews during construction. **With the implementation of MM-GEO-1, impacts would be reduced to a less-than-significant level.**

- b) The proposed project would include ground disturbance during construction activities anticipated to be greater than 1 acre. As required by the California Construction Stormwater General Permit (Adopted Order 2009-0009-DWQ (As amended by 2010-0014-DWQ and 2012-0006-DWQ)), the proposed project would develop a SWPPP and be required to implement BMPs to reduce erosion of soil due to construction activity, prevent transport and sedimentation of material off site, and abide by good housekeeping procedures to reduce construction related pollutants from entering receiving waters. The SWPPP would include plans for work during qualifying storm events and require all disturbed areas to be stabilized at the completion of construction. Therefore, the proposed project would not result in substantial soil erosion or the loss of topsoil and impacts would be **less than significant**. No mitigation is required.
- c) The proposed project is located in a seismically active area in Monterey County, and the potential exists for landslides, lateral spreading, subsidence, liquefaction, and collapse. However, the Los Padres Dam was originally designed and constructed to be stable in seismic

hazards. Landslides later occurred that inundated and thereby reduced the capacity of the outlet in the dam necessitating the need for the proposed project and relocation of the outlet to better avoid landslide hazards. Proposed project work would be designed to DSOD seismic safety standards and project work is not expected to reduce stability of the surrounding geologic units or soils. Further, improvements constructed under the proposed project would not alter the foundation of the dam or involve major subsurface excavation in the reservoir or on reservoir slopes that would create instability, landslides, or liquefaction in surrounding geologic and soil units beyond existing conditions. The proposed project does not involve groundwater extraction or other activities that would cause subsidence or collapse, and as such impacts are not anticipated. Therefore, the proposed project would have a **less-than-significant impact** related to unstable geologic units or soils that could potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. No mitigation is required.

- d) Expansive soils shrink and swell depending on moisture level as the clay minerals in these soils expand and contract. The proposed project is located in an area composed primarily of rocky outcrops and sandy loam soils (NRCS 2019). Additionally, work outside the reservoir would be confined to existing roads made of road base material. Because soils in the proposed project area are not composed of clay minerals, expansive soils would not be a concern in construction areas. Therefore, the proposed project would have **no impact** related to substantial direct or indirect risk to life or property in expansive soils. No mitigation is required.
- e) No septic tanks or alternative wastewater disposal systems are planned as part of the proposed project. Therefore, the proposed project would have **no impact** related to soils incapable of supporting septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. No mitigation is required.
- f) No known features have been described in previous surveys carried out at this site for the New Los Padres Reservoir Project and the Carmel River Dam Project (Pacific Crest Engineering 2023). Further, the proposed project is primarily located in marine deposits, which have the potential to contain fossils. However, marine deposits generally contain common fossils; therefore, they would not be anticipated to contain unique deposits. Additionally, subsurface work associated with the proposed project would only include minor grading and would not include any major excavation. Therefore, the proposed project would have a **less-than-significant impact** related to the destruction of a unique paleontological resource or geologic feature. No mitigation is required.

Mitigation Measures

MM-GEO-1: LANDSLIDE REDUCTION MEASURES

During construction, slope stabilization would be installed on all disturbed slopes and vegetation removal would be minimized as required by the project SWPPP. Worker parking and construction staging would be prohibited in areas downslope of steep slopes (slopes 15 percent or greater) at all times during construction. Vehicles and equipment would only be parked on engineered roadways during and 2 weeks after rain events of 0.5 inches or greater (bound by 48-hour dry periods at the beginning and end of rain events). As part of worker awareness training, the contractor would educate workers on potential exposure to landslide hazards in the area and emergency response protocols prior to work on site. The contractor would further institute a warning system to alert workers and halt work during times of landslide hazards. Landslide occurrences and protocols would be documented in the inspection reports and included in regular project team meetings.

VIII. Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Human-produced greenhouse gas (GHG) emissions are created primarily by the burning of fossil fuels for energy. These anthropogenic GHG emissions are widely accepted in the scientific community as contributing to climate change. Because GHGs (primarily carbon dioxide, methane, and nitrous oxide) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. Consequently, GHG emissions that contribute to climate change have a worldwide cumulative impact (climate change) rather than the type of local or regional project-specific impact typically associated with criteria pollutants. The California Global Warming Solutions Act of 2006 (Assembly Bill 32) established a comprehensive program of regulatory and market mechanisms to achieve reductions in GHGs that are quantifiable, real, and cost-effective. The act directs responsibility for monitoring and reducing GHG emissions to the CARB. Among the most significant components of the act is the requirement to reduce carbon emissions in California to 1990 levels by 2020. The state achieved this goal by 2016. Senate Bill 32 and *California’s 2017 Climate Change Scoping Plan* (CARB 2017) set a new GHG reduction target for 40 percent below 1990 levels by 2030. The *2022 Scoping for Achieving Carbon Neutrality* (2022 Scoping Plan; CARB 2022) was adopted by CARB in November 2022 and outlines a pathway to reaching carbon neutrality by 2045.

As stated in *Section III Air Quality*, MBARD has adopted CEQA air quality guidance that includes quantitative thresholds of significance and has recommended mitigation measures for criteria air pollutants. However, MBARD has not established thresholds of significance for GHGs. Although GHG thresholds of significance are being studied and discussed at numerous agencies throughout California, few agencies have, to date, adopted thresholds. The San Luis Obispo County Air Pollution Control District (SLOCAPCD) developed an Interim CEQA GHG Guidance in 2021, which stated that while the bright line and service population GHG thresholds for residential and commercial projects are out of date and should not be used, the 10,000 metric tons of carbon dioxide equivalent per year (MTCO₂e/year) GHG threshold for stationary (industrial) sources was in line with Executive Order S-3-05 (80 percent below 1990 levels by 2050) and it would still be applicable to stationary sources (SLOCAPCD 2021). The Bay Area Air Quality Management District (BAAQMD) most recently adopted *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* in April 2022. These CEQA thresholds apply to land use projects to demonstrate that they have incorporated design elements that would ensure the project would do its “fair share” of achieving California’s long term climate goals. For those land use projects

for which the design elements would not be relevant, then the project must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b) (BAAQMD 2022). The BAAQMD has not yet determined an appropriate stationary source threshold or construction-related threshold (BAAQMD 2022).

As of the preparation of this document, MBARD has not defined CEQA GHG significance thresholds for stationary sources, land use, or construction. For the purposes of this analysis, GHG emissions will be disclosed for informational purposes and compared to the 10,000 MTCO₂e/year threshold for reference only. Monterey County is currently developing a qualified Community Climate Action and Adaptation Plan (Monterey County 2023). Since Monterey County's guidance is not final at the time of this publication, the proposed project will be evaluated for consistency with SB 32 and 2022 Scoping Plan.

Impact Analysis

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project would generate GHG emissions during construction from the following: use of construction equipment, truck trips associated with hauling of construction materials including export of existing ground and debris, and vehicle trips associated with commute of construction workers. Construction GHG emissions from the proposed project have been estimated based on the construction schedule, phasing, labor, and equipment projections presented in the project description. The project-specific data was populated into the CalEEMod version 2020.4.0. The CalEEMod inputs, assumptions, and outputs are presented in Appendix X. Total construction GHG emissions from the proposed project are estimated to be approximately 958 MT CO₂e. Amortized over the 30-year lifetime of the proposed project, construction GHG emissions would be approximately 32 MTCO₂e/year. The proposed project's GHG emissions during construction would be well below the 10,000 MTCO₂e/year reference threshold considered for this analysis. Therefore, impacts during construction would be **less than significant** and no mitigation would be required.

Once construction is complete, operation and maintenance of the Los Padres Dam and Reservoir would be similar to existing conditions before blockage of the outlet. No change or additional operations or maintenance activities are anticipated. As the proposed project would restore the original purpose and function of the existing lower-level outlet, interim measures would no longer be required, which would eliminate the need for emission intensive activities like pumping or siphoning resulting in a beneficial reduction in emissions from the current operations. As a result, the proposed project would not generate any additional GHG emissions during operations and would presumably result in a reduction of GHG emissions. Therefore, there would be **no impact** to GHG emissions during operations and no mitigation would be required. No mitigation is required.

- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed under a) above, the proposed project's construction GHG emissions would not exceed the reference threshold. As previously described, the proposed project would not generate additional GHG emissions compared to existing conditions. As a result, the proposed project would not conflict with the State's goals of reducing GHG emission to 40 percent reduction below 1990 levels by 2030 as noted in SB 32 and achieving carbon neutrality by 2045 as noted in the 2022 Scoping Plan. Further, the proposed project does not include components

that would conflict with implementation of the qualified Community Climate Action and Adaptation Plan. Therefore, the proposed project would not conflict with any state or regional GHG emission reduction goals, resulting in **no impact**. No mitigation would be required.

Mitigation Measures

None required.

IX. Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The need for the proposed project is the result of landslide activity on the northern end of the valley at the head of the Los Padres Dam Reservoir. There is ongoing risk of additional landslide activity that presents a hazard to individuals traversing the area.

There are no hazardous materials on the site of the project location. The only anticipated hazardous material associated with the proposed project is fuel used for vehicles, the barge, and heavy machinery necessary to complete project.

Impact Analysis

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The only hazardous material delivered to and used on the site would be fuel; therefore, impacts are anticipated to be **less than significant**. No mitigation is required.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Applicant would be required to follow safety protocol for fueling equipment on site and have equipment and materials for dealing with hazardous emergency situations; therefore, impacts are anticipated to be **less than significant**. No mitigation is required.

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

There are no schools within ¼-mile of the construction site; therefore, there are **no anticipated impacts**. No mitigation is required.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The project site is not listed on the Department of Toxic Substances Control list; therefore, there are **no anticipated impacts**. No mitigation is required.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Nearest public airport is 16 miles (Monterey) from the project area; therefore, there are **no anticipated impacts**. No mitigation is required.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction activities associated with the project would not interfere with adopted emergency evacuations plans associated with a potential dam break. A safety plan that includes an evacuation plan shall be required of the construction contractor. All established protocols for emergency procedures would apply and be executed accordingly. No mitigation is required.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

According to the California Department of Forestry and Fire Protection (CAL FIRE), the proposed project is located in a State Responsibility Area (SRA) and is classified as a Very High Fire Hazard Severity Zone (FHSZ) (CAL FIRE 2023a). During construction, the proposed project would involve the use of flammable materials, tools, vehicles, and equipment capable of generating a spark and igniting a wildfire. Project construction activities could temporarily expose workers to hazards associated with being in areas with very high wildfire risks. Therefore, impacts would be significant. To minimize the impacts related to exacerbated wildfire risk, mitigation measure **MM-HAZ-1** would be implemented. **With the implementation of MM-HAZ-1, impacts would be reduced to a less-than-significant level.**

Mitigation Measures

MM-HAZ-1: FIRE PREVENTION MEASURES

Specific fire prevention measures would be incorporated into project construction documents and implemented during construction activities. The fire prevention measures include, but are not limited to the following: fire extinguishers or other approved fire suppressants shall be available at all times, fire prevention and suppression drills shall be performed daily, flammable materials shall be properly stored, temporary electrical equipment shall be properly installed, dust-collecting apparatus on power equipment shall be used, dry grass shall be cut low or removed from staging areas, and workers shall be prohibited from smoking on-site.

With the implementation of **MM-HAZ-1**, impacts related to wildfire risks would be reduced to a less-than-significant level.

X. Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project encompasses work within the Los Padres Reservoir and immediately downstream of the reservoir dam. The dam regulates flows out of the reservoir through a siphon, bypass pump, and a system of valves connected to an underground pipe that allows conveyance between the reservoir and the Carmel River. As such, the natural hydrology of the Carmel River and watershed is heavily altered by the dam and conveyance system. The flow out of the reservoir is regulated by in-stream flow requirements. The proposed project would improve drainage capabilities from the outlet pipe to the fish ladder and Carmel River. This will also improve the reservoir's ability

to release water during flood conditions. The proposed project is covered by the Water control Plan for the Central Coastal Basin, which governs water quality in the basin (Regional Water Quality Control Board Central Coast Region 2019). The proposed project is located in Flood Zone A and Flood Zone X (FEMA 2009). No sustainable groundwater management plan exists for the basin for this proposed project.

Impact Analysis

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project would not violate any water quality standards or waste discharge requirements. Construction of the proposed project has the potential to increase erosion and sedimentation through construction activities in and around the reservoir. These activities could include vehicle and equipment use, material staging and stockpiling, and disturbance of soil and sediment. As required by the California Construction Stormwater General Permit (Adopted Order 2009-0009-DWQ (As amended by 2010-0014-DWQ and 2012-0006-DWQ)) the proposed project would develop a SWPPP. BMPs would be required to be implemented as part of the project SWPPP to reduce impacts from erosion and sedimentation on the Carmel River. BMPs would be implemented in the following areas of construction to reduce impacts to water quality due to construction activities:

- Reservoir work: Pile driving and construction operations in the reservoir have the potential to disturb sediment, which would reduce water quality of released water during construction. To reduce this risk, BMPs would be implemented such as vacuuming rock shavings and collecting wash water that would result from the drilling process for removal and disposal of off site. A turbidity curtain would also be implemented upstream of the dam crest during construction to filter water leaving the construction area and reduce siltation downstream.
- Flow control valve structure: Construction of the new flow control valve structure and demolition of the existing structure could disturb soils and increase sediment influx to the Carmel River. However, the project SWPPP would require demolished materials, excavated soils, construction materials, and any concrete wash water to be removed and disposed of off site. To reduce siltation in the river, the construction area would be isolated from any flowing water and a silt fence would be installed in the river downstream of the construction area. During construction, nuisance water from the isolated construction area would be removed where excavation occurs to avoid runoff into waterways. By reducing runoff into waterways, sedimentation would be avoided to reduce impacts to water quality. BMPs would remain in place until restoration efforts, including seeding and planting, are completed to stabilize soils after construction.
- Addition of new pipe: Construction of the new pipe from the valve structure to the fish ladder pipe network could disturb soils and increase siltation from surface runoff. To reduce siltation impacts, a silt fence would be installed downslope of disturbed areas to prevent unanticipated redistribution of materials beyond the construction limits. Post construction, soils would be stabilized by industry standard compaction and fill practices as well as seeding and planting of disturbed areas. Any excess of cut material or excessive fill would be removed and hauled away from site to the nearest landfill.

Once construction is completed, no further potential impacts to sedimentation or water quality would occur. After the proposed project is constructed, it is possible less sediment would travel

through the new inlet structure as the new inlet inflow will be located away from landslide debris. As such, turbidity downstream of the dam would be decreased and water quality would be improved. Therefore, proposed modifications in the reservoir and adjacent to the Carmel River would **not cause significant impact** to water quality and the impact as it relates to water quality standards or waste discharge requirements with the implementation of the aforementioned BMPs would be less than significant. No mitigation is required.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed project would not affect groundwater supplies or interfere with groundwater recharge. The long-term effects of the proposed project, nor the construction activities would interrupt release of water into the Carmel River Alluvial Aquifer. During construction, a newly constructed siphon and a temporary diesel-powered pump would convey water for the necessary in-stream flow requirements from the reservoir. Therefore, the proposed project would have **no impact** on groundwater recharge or supply and would not impede sustainable groundwater management in the basin. No mitigation is required.

- c-i) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off-site;

The proposed project would not alter the existing drainage pattern on site, although siltation could occur during construction. However, with the implementation of a SWPPP as discussed in the project description and in impact question a) above, BMPs such as silt fences and turbidity curtains around work areas would reduce siltation impacts downstream of the construction work. Therefore, modifications in the reservoir and adjacent to the Carmel River would not cause significant erosion and siltation and the impact related to substantial erosion or siltation would be **less than significant**. No mitigation is required.

- c-ii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

The proposed project would not affect surface runoff from the original operational state of the facility. The proposed project would increase conveyance through the inlet from its current reduced capacity due to landslides clogging the pipe. The new inlet structure would restore the conveyance through the 30-inch diameter pipe to its original capacity to regulate in-stream flow and fish passage requirements. Surface runoff from the new paved access road to Bailey bridge would be directed into appropriately designed stormwater drainage systems. Therefore, the proposed project would have **no impact** on surface runoff in a manner which would result in flooding. No mitigation is required.

- c-iii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

The proposed project would not cause significant land alterations that would exceed the capacity of existing stormwater systems and would not increase additional sources of polluted runoff.

Therefore, there would be **no impact** on the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. No mitigation is required.

- c-iv) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: impede or redirect flood flows?

The proposed project is located in an area designated as Flood Zone A and X by the Federal Emergency Management Agency (FEMA) (FEMA 2009). Flood Zone A has a 1 percent annual chance of flooding and Flood Zone X is determined to be outside the 0.2 percent annual chance flood zone. The proposed project would not impede or redirect flood flows. Rather, the proposed project would restore the original design capacity of the low-level outlet and improve the reservoir's ability to release water if needed during flood conditions. No negative influence or interruption of releases would occur as part of this proposed project nor throughout construction. Therefore, there would be **no impact** to the direction of floodwaters. No mitigation is required.

- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The proposed project would not increase the risk of releasing pollutants into the Carmel River due to project inundation once the project is constructed. Flooding could occur during construction which increases the risk of releasing pollutants during this phase of the project. A tsunami is not a risk because the location 93- is outside of a tsunami hazard zone, so this risk remains unchanged due to the proposed project (California Department of Conservation 2019). A seiche or any flooding caused by hydrologic events could cause inundation in the proposed project extents and increase the risk of the release of pollutants into the Carmel River. A portion of the proposed project falls within a FEMA floodplain Zone A based on flood insurance rate map (FIRM) 0653C0545G (FEMA 2009b) and the project is near the San Andreas Fault, which could cause a seiche to occur following a fault movement (AGI 2022). BMPs as outlined in the SWPPP would minimize impacts during construction if a seiche or flood event were to occur. Therefore, the proposed project would not significantly increase the risk of pollutants due to project inundation and the potential impact related to flood hazard, tsunami, seiche zones, or inundation would be **less than significant**. No mitigation is required.

- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would not conflict with the implementation of the Water Quality Control Plan for the Central Coastal Basin (Regional Water Quality Control Board Central Coast Region 2019) during construction and no sustainable groundwater management plan exists for the area. Based on the Water Quality Control Plan, the Los Padres Reservoir falls under a variety of beneficial use designations. The Los Padres Reservoir provides municipal and domestic water supply, groundwater recharge, recreation opportunities, fishing, freshwater replenishment, cold and warm water ecosystems, wildlife habitat, fish migration and spawning waters, and navigable waters. The Carmel River includes all of the beneficial uses included in the Los Padres Reservoir, excluding navigable waters. In addition, the Carmel River offers agricultural supply, industrial service supply, preservation of biological habitats of special significance, and supports habitats for the survival and successful maintenance of rare, threatened, or endangered species.

The Carmel River water quality objectives are as follows in milligrams per liter (mg/L):

- Total Dissolved Solids: 200
- Chlorine: 20

- Sulfate: 50
- Boron: 0.2
- Sodium: 20

Returning the inlet pipe to its original capacity by moving it away from landslide debris and hazards would not impair the beneficial uses of the Carmel River downstream of the dam. Instead, the proposed project would be beneficial to these aspects of the system. During construction, the SWPPP would help to reduce any potential impacts from construction to water quality objectives. Sediment and erosion controls would reduce potential impacts to total dissolved solids. Chlorine, sulfate, boron, and sodium would be managed through good housekeeping BMPs. Therefore, the proposed project would not conflict with the Water Quality Control Plan or a sustainable groundwater management plan for the area and **no impact** would occur. No mitigation is required.

Mitigation Measures

None required.

XI. Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Per the 2010 Monterey County General Plan, Cachagua Land Use Plan, the lands encompassed by the project are zoned for Resource Conservation (Monterey County 2010a). The nearby rural area of Cachagua includes commercial and residential, low-density zoning. To the north of Cachagua, along the Carmel River, are areas zoned for farmland (40- to 160-acre minimums).

Impact Analysis

a) Physically divide an established community?

As proposed, all work is planned to take place on property owned by the Applicant. Therefore, there is **no impact** to an established community. No mitigation is required.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed activities and mitigation efforts would not conflict with the Cachagua Land Use Plan. However, applicant will need permits from local, state, and federal entities in support to ensure compliance with federal, state, and local laws, policies, and regulations. **Less than significant impact** is anticipated; no mitigation is required.

Mitigation Measures

None required.

XII. Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Historic mineral production in Monterey County included sand and gravel mining for construction materials, mining for industrial materials (diatomite, clay, quartz, and dimension stone) and metallic minerals (chromite, placer gold, manganese, mercury, platinum, and silver). The primary mineral commodities currently mined in Monterey County are sand, gravel, and petroleum. No mines are located within 15 miles of the proposed project area (Google 2023). Soils in the vicinity of the proposed project and the Los Padres Reservoir include the Cieneba-Rock outcrop complex with 50 to 75 percent slopes, the Sheridan coarse sandy loam with 30 to 75 percent slopes, the Rock outcrop-Xerorthents association with 30 to 75 percent slopes, the Sur-Junipero complex, stony Fluvents, and dissected Xerorthents (NRCS 2019).

The Surface Mining and Reclamation Act (SMARA) of 1975 required the initiation by the State Geologist of mineral land classifications in order to identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses, which would preclude mineral extraction. Classification of land within the State of California takes place according to established Mineral Resource Zones (MRZs) to designate lands that contain mineral deposits. Lands designated MRZ-2 are to be protected, as feasible, from land uses that would eliminate their future availability. Throughout California, only construction-grade aggregate minerals are classified by the State Geologist. The classifications used by the state to define MRZs are as follows:

- MRZ-1: Applies to areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists of their presence.
- MRZ-2: Applies to areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists of their presence.
- MRZ-3: Applies to areas containing mineral deposits, the significance of which is undetermined and cannot be evaluated.
- MRZ-4: Applies to areas where available information is inadequate for assignment to any other zone (i.e., where there is not enough information available to determine the presence or absence of mineral deposits).

The proposed project is located in an area of Monterey County not classified in a MRZ (DOC 2021b).

Impact Analysis

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

While sand is present in the proposed project area (NRCS 2019), the proposed project is not located in an MRZ defined by the California State Geologist (DOC 2021b) and no known mines or mineral resources are located in the vicinity of the proposed project according to Monterey County (Monterey County Planning and Building Inspection Department 2008). Therefore, the proposed project would have **no impact** on the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No mitigation is required.

- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

There are no known mineral resource recovery sites in the vicinity of the proposed project area (Google 2023, Monterey County Planning and Building Inspection Department 2008). Therefore, the proposed project would have **no impact** on the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No mitigation is required.

Mitigation Measures

None required.

XIII. Noise

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

PRINCIPLES OF NOISE

Noise is defined as unwanted sound and is comprised of small fluctuations in air pressure. Because the range of pressures that can cause audible sounds is large, sound is measured on a logarithmic scale in decibels (dB).

A young, healthy human’s range of hearing is between 20 and 20,000 hertz (Hz) and is most sensitive between 500 and 4,000 Hz. To align with this selective sensitivity, the A-weighted scale (dBA) was developed and is frequently used for community noise assessments. The A-weighting scale puts more emphasis or “weight” on frequencies that humans hear well, and less emphasis or “weight” on frequencies we do not hear well (primarily low frequency noise). Typically, a noise increase of 3 dB is considered “barely perceptible” to humans.

A common metric to describe long-term noise levels is the equivalent noise level (L_{eq}). The L_{eq} is a single sound level representing all the varying sound energy over a specified period (e.g., 1 hour).

Another common metric used to evaluate community response to noise is the day-night average sound level (L_{dn}). The L_{dn} is the A-weighted sound level over a 24-hour period with a 10 dB penalty imposed on sounds that occur between 10 PM and 7 AM. The nighttime penalty accounts for the additional nuisance or annoyance associated with nighttime noise events.

Another common community noise metric used in California is the Community Noise Equivalent Level (CNEL), which is the A-weighted sound level over a 24-hour period with a 10 dB penalty imposed on sounds that occur between 10 PM and 7 AM and a 5 dB penalty imposed on sounds that occur between 7 PM and 10 PM.

REGULATORY SETTING

The Monterey County Code of Ordinances (Chapter 10.60 – Noise Control, Monterey County 2022) sets the following noise limits within unincorporated areas of the County:

At any time of the day, it is prohibited within the unincorporated area of the County of Monterey to operate, assist in operating, allow, or cause to be operated any machine, mechanism, device, or contrivance which produces a noise level that exceeds eighty-five (85) dBA measured fifty (50) feet therefrom. The prohibition in this Section shall not apply to aircraft nor to any such machine, mechanism, device or contrivance that is operated in excess of two thousand five hundred (2,500) feet from any occupied dwelling unit.

It is prohibited within the unincorporated area of the County of Monterey to make, assist in making, allow, continue, create, or cause to be made any loud and unreasonable sound any day of the week from 9:00 p.m. to 7:00 a.m. the following morning.

According to the ordinance, a “loud and unreasonable sound” is defined for nighttime hours as a sound that is plainly audible, or exceeds 45 dBA L_{eq} , or 65 dBA L_{max} .

The 2010 Monterey County General Plan (Monterey County 2010) includes a discussion on noise hazards, defining acceptable noise exposure (as L_{dn} or CNEL) based on land use category. The general plan contains the following policies related to noise from construction projects:

S-7.8. All discretionary projects that propose to use heavy construction equipment that has the potential to create vibrations that could cause structural damage to adjacent structures within 100 feet shall be required to submit a pre-construction vibration study prior to the approval of a building permit. Projects shall be required to incorporate specified measures and monitoring identified to reduce impacts. Pile driving or blasting are illustrative of the type of equipment that could be subject to this policy.

S-7.9. No construction activities pursuant to a County permit that exceed “acceptable” levels listed in Policy S-7.1 shall be allowed within 500 feet of a noise sensitive land use during the evening hours of Monday through Saturday, or anytime on Sunday or holidays, prior to completion of a noise mitigation study. Noise protection measures, in the event of any identified impact, may include but not be limited to:

- *Constructing temporary barriers, or*
- *Using quieter equipment than normal.*

S-7.10. Construction projects shall include the following standard noise protection measures:

- *Construction shall occur only during times allowed by ordinance/code unless such limits are waived for public convenience; Monterey County General Plan Safety Element October 26, 2010 Page S-19*
- *All equipment shall have properly operating mufflers; and*
- *Lay-down yards and semi-stationary equipment such as pumps or generators shall be located as far from noise-sensitive land uses as practical.*

According to the general plan, “acceptable” levels are generally in the 50-60 dBA L_{dn} /CNEL range for residential land uses.

In absence of a daytime noise ordinance for construction activities greater than 2,500 feet from an occupied dwelling unit, the following thresholds of significance from the *Draft Environmental Impact Report for the Monterey County 2007 General Plan* (Monterey County 2008) were used:

Noise from construction activity is considered significant if it would:

- *Result in a 10 dB increase at an occupied dwelling unit during daytime hours (7:00 a.m. to 10:00 p.m.)*
- *Result in any increase at an occupied dwelling unit during nighttime hours (10:00 p.m. to 7:00 a.m.)*

Additionally, in absence of a quantitative vibration ordinance for construction activities, the following thresholds of significance based on human annoyance were used:

Noise from construction activity is considered significant if it would:

- *Exceed 0.01 in/sec peak particle velocity (PPV) at a vibration-sensitive receptor. According to the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual, this is the threshold for perception of continuous ground-borne vibration for humans (Caltrans 2020).*

LOCAL SETTING

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects (for example, sleep disturbance or annoyance), as well as uses where quiet is an essential element of their intended purpose. Residences are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and also due to the potential for sleep interference. Other land uses typically considered sensitive to noise include hospitals, convalescent facilities, parks, auditoriums, amphitheaters, public meeting rooms, motels, hotels, churches, schools, libraries, and other uses where low interior noise levels are essential. The proposed project site is located generally in a remote area, away from residential or commercial development. The nearest noise-sensitive receptors to the proposed project site are residences in the Cachagua Community and the Cachagua Community Park, located approximately 4,000 feet to the north.

Existing noise exposure at noise-sensitive receptors was estimated using methods developed by the USEPA and published in Table 4-17 “Estimating Existing Noise Exposure for General Assessment” from the Federal Transit Administration’s (FTA) *Transit Noise and Vibration Assessment Manual*, September 2018 edition (FTA 2018). Based on population density information obtained from the U.S. Census Bureau, existing daytime and day-night ambient noise levels in the Cachagua Community are expected to be approximately 50 dBA.

Impact Analysis

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction noise will only occur during daytime hours and construction equipment will operate more than 2,500 feet from occupied dwellings. Therefore, the noise limits in Monterey County Code of Ordinances Chapter 10.60 – Noise control would not apply to this project.

The project does not propose to perform construction activities within 500 feet of a noise sensitive land use. Therefore, the General Plan Policy S-7.9 would not apply to this project.

The project proposes to incorporate the following standard construction procedures:

- Construction activities are proposed to only occur during daytime hours;
- All equipment will have properly operating mufflers; and
- Proposed lay-down yards and semi-stationary equipment are located far from noise-sensitive land-uses.

Therefore, the proposed project would be compliant with General Plan Policy S-7.10.

The project team performed a construction noise analysis using Cadna-A three-dimensional environmental noise modeling software. The analysis evaluated the noise emissions from project construction equipment propagated to the nearby noise-sensitive receptors for each phase of construction: 1) Site Prep and Access Improvements, and 2) Relocation of Upstream Entrance & Replacement of Outlet Valves. Table 7 shows the proposed equipment to be used during each phase of construction, reference source sound levels for each equipment type, equipment sound levels propagated to the receptors, and significance determination of project construction noise.

Table 7. Proposed Construction Equipment

Equipment	Construction Phase	Quantity	Hours of Operation	Sound Level of One Unit at 50 feet (dBA) ^(a)	Maximum Sound Level of One Unit at Receptor (dBA)	Significance Threshold (dBA) ^(b)	Impact Status
Dump trucks	This equipment will be used in all phases of construction.	3	5	91	33	N/A	N/A
Service vehicle		3	6	91	33	N/A	N/A
Support vehicle		2	6	91	33	N/A	N/A
Tracked excavator		2	8	91	33	N/A	N/A
Wheeled backhoe		1	5	86	28	N/A	N/A
Wheeled loader		1	5	91	33	N/A	N/A
Paver	Site Prep & Access Improvements	1	8	90	32	N/A	N/A
Roller		1	8	88	30	N/A	N/A
Phase 1 Total				102	44	60	None
Land Crane	Relocation of Upstream Entrance & Replacement of Outlet Valves	1	8	95	37	N/A	N/A
Marine Crane		1	6	93	36	N/A	N/A
Phase 2 Total				103	46	60	None

Notes:

- (a) Construction equipment reference noise levels are from Federal Highway Administration (FHWA) Highway Construction Noise Handbook, (FHWA 2006)
- (b) The significance threshold of 60 dBA is based on the estimated existing noise level (50 dBA) and the maximum allowable increase due to construction noise (10 dBA). Noise emissions from all simultaneously operating equipment in each phase of construction, propagated to the nearest noise-sensitive receptor, are compared with the significance threshold. Therefore, total noise levels during each phase are compared to the significance



Equipment	Construction Phase	Quantity	Hours of Operation	Sound Level of One Unit at 50 feet (dBA) ^(a)	Maximum Sound Level of One Unit at Receptor (dBA)	Significance Threshold (dBA) ^(b)	Impact Status
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thresholds to determine impact level rather than noise levels from individual equipment being compared with the significance threshold.

Abbreviations: dBA=A-weighted decibel scale

The construction noise model also incorporated a digital terrain model, thereby accounting for terrain features in the path of sound propagating away from construction equipment. The noise model calculated the resulting construction noise levels at the nearest noise-sensitive receptors, and compared those results with the maximum allowable construction noise level (an increase of 10 dBA over the existing noise level [estimated to be 50 dBA]). Analysis results indicate that noise from construction activities is projected to reach 46 dBA at the nearest receiver. When added to the existing noise level, this has the potential to increase overall average hourly noise levels by approximately 1.5 dBA while the loudest pieces of equipment are in use (46 dBA + 50 dBA = 51.5 dBA). This temporarily increase noise levels at the nearest residences is less than the threshold of significance, which is a 10 dBA increase above existing as stated in the *Draft Environmental Impact Report for the Monterey County 2007 General Plan* (Monterey County 2008).

For context, an increase in noise levels of 3 dBA in an ideal listening environment (i.e., in an audiology booth with headphones on) is considered to be barely perceivable to a person with undamaged, average hearing senses. The outdoor soundscape is not an ideal listening environment, and many outdoor noises would provide partial masking making a 3 dBA increase less perceivable. Therefore, the projected increase of less than 3 dBA due to construction activities may be barely perceivable to some people under certain conditions.

On that basis, daytime construction noise is not projected to cause an impact at the nearest residences. Use of loud construction equipment is not anticipated to occur before 7 AM or after 9 PM on any day of the week; therefore, the proposed project would not cause a temporary noise increase at receptors during nighttime hours. Therefore, there are **no nighttime noise impacts**.

Construction activities at the proposed project site would result in increased traffic volumes along Cachagua Road and Nason Road, due to worker commuting and construction deliveries. The increased traffic volume would result in higher noise levels near the roadway while worker and delivery vehicles are passing by, but these are expected to be infrequent occurrences (two trips per day for workers and less frequent for deliveries) and short in duration. Therefore, noise from construction traffic would not result in substantial temporary increased noise levels in excess of applicable standards at noise-sensitive receptors. On that basis, noise impacts are **less than significant**.

The proposed project would not result in any changes to operation that would affect operational noise emissions from the proposed project site. Therefore, no permanent noise level increases are expected as a result of the proposed project and operation of the **proposed project will not cause noise impacts**.

Analysis results indicate that the project is **not expected to cause noise or vibration impacts at the noise- and vibration-sensitive receptors (residences) closest to the areas where work will occur**; therefore, noise and vibration mitigation measures are not required.

In summary, noise impacts are not projected to occur. Work would be fully compliant with local and regional noise ordinances. There would be no nighttime, traffic related, or operational noise impacts expected from the proposed project.

b) Generation of excessive groundborne vibration or groundborne noise levels?

The project does not propose to operate heavy construction equipment that produces ground-borne vibration within 100 feet of any residence; therefore, General Plan Policy S-7.8 would not apply to the project.

The project team conducted a vibration assessment for comparison of project related vibration levels to human annoyance thresholds based on methodology from Caltrans' *Transportation and Construction Vibration Guidance Manual (2020)*. Table 8 shows vibration velocity reference levels, results of the vibration assessment, and significance determination for each construction phase.

Table 8. Construction Equipment Vibration Assessment

Equipment	Construction Phase	Quantity	Hours of Operation	PPV of One Unit at 25 feet (in/sec) ^(a)	PPV of One Unit at Receptor (in/sec)	Significance Threshold (dBA) ^(a)	Impact Status
Dump trucks	This equipment is used throughout all phases of construction activity.	3	3	0.076	0.000	N/A ^(b)	N/A
Service vehicle		3	3	N/A	N/A	N/A	N/A
Support vehicle		2	2	N/A	N/A	N/A	N/A
Tracked excavator		2	2	0.089	0.000	N/A	N/A
Wheeled backhoe		1	1	0.089	0.000	N/A	N/A
Wheeled loader		1	1	0.089	0.000	N/A	N/A
Paver	Site Prep & Access Improvements	1	8	N/A	N/A	N/A	N/A
Roller		1	1	0.21	0.001	N/A	N/A
Phase 1 Maximum				0.21	0.001	0.01	None
Land Crane	Relocation of Upstream Entrance & Replacement of Outlet Valves	1	1	N/A	N/A	N/A	N/A
Marine Crane		1	1	0.089 ^(c)	0.000	N/A	N/A
Phase 2 Maximum				0.089	0.000	0.01	None

Notes:

(a)Source: Caltrans 2020

(b) N/A = not expected to substantially contribute to ground-borne vibration levels

(c) Vibration from Marine Crane due to pile-socket drilling activities

Abbreviations: in/sec=inches per second; dBA=A-weighted decibel scale; N/A=not applicable; PPV=peak particle velocity

The roller has the highest reference vibration level during Phase 1 while the marine crane has the highest level during Phase 2. Using conservative propagation assumptions, ground-borne vibration PPV levels from rollers and the marine crane could be perceptible within approximately 400 and 180 feet, respectively, of the equipment. The vibration-sensitive receptor nearest to the proposed construction area is approximately 4,000 feet to the north. At this distance, vibration levels from all of the proposed construction equipment would not be perceptible.

Construction-related traffic will drive past residences while traveling on Cachagua Road and Nason Road. The combination of low speeds, and the pneumatic tires and suspension systems on those vehicles minimize the potential for traffic-induced ground-borne vibration levels to approach or exceed recognized thresholds for cosmetic or structural damage to buildings. Thus, the proposed project would have **no impacts** related to ground-borne noise or vibration levels.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project site is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport or public use airport; therefore, there would be **no impact** related to exposure of residents or workers to excessive airport noise.

Mitigation Measures

None required.

XIV. Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Upper Carmel Valley is a rural area that is sparsely populated. The 2021 U.S. Census Bureau estimates Monterey County, as a whole, saw a slight decrease in population (0.4 percent) from 439,035 residents to 437,325 residents. The county had a median household income of \$82,013 and a poverty rate of 11.6 percent (U.S. Census Bureau 2021). The rural community of Cachagua is the closest community to the project site.

Impact Analysis

- a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

The project is not anticipated to affect population growth either directly or indirectly; therefore, there are **no impacts** associated with the proposed project. No mitigation is required.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

There are no components of the proposed project that would affect housing; therefore, there are **no impacts** associated with the proposed project. No mitigation is required.

Mitigation Measures

None required.

XV. Public Services

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Upper Carmel Valley is served by Cachagua Fire Protection District located in Upper Carmel Valley, California. The district was created in 1993 and covers approximately 110 square miles, serving 1,000 community residents (Cachagua Fire Protection District 2022).

The Monterey County Sheriff’s office provides police protection services. The Coastal Station (Monterey) covers the unincorporated areas that include Carmel Valley in addition to other areas within the county (Monterey County Sheriff’s Office ND).

Kindergarten through 12th grade primary education is provided by the Carmel Unified School District. The district is comprised of three elementary schools, one middle school, and one high school. The district provides additional education resources for adults and in the form of a continuation high school (Carmel Unified School District 2022). The closest school to the project site is Tularcitos Elementary School, located 11.6 miles from Los Padres Dam.

Monterey Peninsula Regional Park District provides local parks, open space, and recreational opportunities. The Cachagua Community Park, a 14-acre park is located in the Cachagua area of the Upper Carmel Valley. It is the closest park to the project area (Monterey Peninsula Regional Park District 2022).

Cal-Am provides water utility service. The project location is encompassed entirely on lands and facilities operated by the Cal Am.

Impact Analysis

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts,

in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a-i) Fire Protection?

There would be no change to the use, capacity or access to the site during or after construction. Access to the site would be ensured through an alternative route to the valley. Therefore, **no anticipated impacts** to fire protection services as a result of the proposed project. No mitigation is required.

a-ii) Police Protection?

There would be no change to the use, capacity, or access to the site during or after construction; therefore, **no anticipated impacts** to police protection as a result of the proposed project. No mitigation is required.

a-iii) Schools?

The project would not result in additional permanent employment that would result in population increase in the area. Therefore, there are **no impacts** to schools as a result of the proposed project. No mitigation is required.

a-iv) Parks?

There are **no anticipated impacts** to parks as a result of the proposed project. No mitigation is required.

a-v) Other public facilities?

Completion of the proposed project would improve the functionality of the Los Padres Dam and Reservoir outlet structures. The proposed project would improve the material quality of facilities established to support local steelhead stocks. This project is not growth inducing and would operate as it always has. Therefore, there are **no anticipated impacts** to human water utility access, quality, or quantity as a result of the proposed actions. No mitigation is required.

Mitigation Measures

None required.

XVI. Recreation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Recreational opportunities in the Upper Carmel Valley can be found in two distinct forms. The first are the local parks provided for by the Monterey Peninsula Parks District, the second is the U.S. Forest Service.

The 14-acre park in the Cachagua area is the park closest to the project. Trails that provide access to Forest Service lands include Carmel River, Rattlesnake, and Big Pines trails. Currently, access to those trails from the Upper Carmel Valley is closed as a result of the active landslide hazards that have resulted in the impacts to the Los Padres Dam and Reservoir outlet works. The trails, when open, provide users bountiful and unconfined outdoor recreational opportunities on Forest Service lands, including hiking, backpacking, camping, hunting, and fishing.

The Carmel River provides recreational freshwater fishing opportunities above the Los Padres Dam beginning the last Saturday in April through November 15. The CDFW has established daily bag and position limits for specific species in the river. The river immediately below Los Padres Dam is closed to fishing year-round, although the river below Robles del Rio is opened periodically to fishing when the flow conditions allow. The river above the dam is open from the last Saturday in April through November 15 (CDFW 2020).

Impact Analysis

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Activities related to the proposed project are limited to repair and replacement of the outlet works of the Los Padres Dam and Reservoir. There are no components of the project that would increase recreational activity or otherwise degrade existing recreational opportunities or facilities. No mitigation is required.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Recreational boating and fishing in the reservoir work area would be temporarily suspended during construction; however, other areas of the reservoir would remain accessible accounting for necessary safety protocols for onsite staff, construction crews, and the recreating public. No mitigation is required.

Mitigation Measures

None required.

XVII. Transportation

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Los Padres Dam is located approximately 20 miles south of Monterey. Monterey County is the lead jurisdiction in the project area and there is a special district of the Greater Carmel Valley Area that is within the Monterey County jurisdiction. It is regionally accessible through US-101, Highway 1, and Highway 68. Local accessibility is from Carmel Valley Road, Cachagua Road, Tassajara Road, and Nason Road.

The majority of construction traffic would use Carmel Valley Road to access the construction site. Cachagua Road is a mountainous road with grades and tight turns. Large heavy vehicles would most likely use Tassajara Road as an alternative as there is an easier path compared to Cachagua Road. Carmel Valley Road has a Carmel Valley Traffic Improvement Program that has been established by the *Carmel Valley Master Plan* (Monterey County 2010b) and adopted by the 2010 Monterey County General Plan (Monterey County 2010a). Thus, Carmel Valley Road segment operations were evaluated to determine the increase in construction traffic.

The Transportation Agency for Monterey County reports traffic count data for Carmel Valley Road in the *Carmel Valley Master Plan Annual Volume Report* (Monterey County 2021a), which was used in the analysis. The recorded average daily traffic (ADT) for Carmel Valley Road in 2021 is displayed in Table 9. The construction traffic is temporary with all construction activities expected to be completed in one year and half.

Table 9. Carmel Valley Road Average Daily Traffic (ADT) and ADT Thresholds

Segment	2021 ADT	ADT Threshold
Ford Road to Laureles Grade	11,000	11,600
Laureles Grade to Robinson Canyon Road	11,780	12,750

Impact Analysis

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed project would not cause a long-term impact to any plans or ordinances. The 2010 Monterey County General Plan (Monterey County 2010a) amended the Carmel Valley Master Plan (Monterey County 2010b) as Chapter 9.B. The Carmel Valley Master Plan provides an ADT threshold for segments evaluated along Carmel Valley Road. The 2021 Annual Report provided the volume and threshold requirements for two segments along Carmel Valley Road. The construction has two phases with the first phase being site preparation and access improvements and then second phase relocation of the upstream entrance and replacement of outlet valves. Phase 1 is expected to take 78 days and Phase 2 is expected to take 155 days. The construction traffic can be broken into equipment delivery, workforce commute, and hauling trucks. The equipment delivery is assumed to be one time at the beginning of construction and one time at the end of construction. The workforce commute would happen five days a week. The hauling trucks would only operate during the construction activities involving demolition and hauling of materials. It is assumed these activities would take place over 25 construction days. The equipment delivery is assumed to require 15 vehicles per day. The workforce would be 13 vehicles arriving in the morning and 13 vehicles departing in the evening for 26 total vehicles a day. The hauling trucks would be 25 arriving and 25 departing throughout the day for a total of 50 vehicles in a day. Two conservative scenarios were considered for traffic volume:

- Construction Scenario 1 is when the equipment delivery and workforce come to the site on the same day.
- Construction Scenario 2 is when the workforce and hauling activities come to the side on the same day.

Table 10 shows the construction scenarios ADT. As shown, the increase in volume due to construction activities is expected to be less than 100 vehicles per day and under the ADT.

Table 10. Construction Carmel Valley Road Average Daily Traffic (ADT) and ADT Thresholds

Segment	2021 ADT	Construction Scenario 1 ADT	Construction Scenario 2 ADT	ADT Threshold
Ford Road to Laureles Grade	11,000	11,041	11,076	11,600
Laureles Grade to Robinson Canyon Road	11,780	11,821	11,856	12,750

The ADT will not exceed the thresholds with the construction traffic; therefore, the impact would be **less than significant**. No mitigation is required.

- b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines section 15064.3, subdivision (b) refers to the requirements of analyzing impacts as they relate to vehicle miles traveled (VMT). The proposed project would not cause a long-term increase in VMT. The construction activity would cause a marginal VMT increase in the area while construction occurred. The construction workforce is expected to travel 25 miles every day. The equipment and hauling activities are expected to travel 75 miles total to the site and Johnson Canyon Sanitary Landfill. Since the combination of construction workforce and hauling activities is expected to under 100 trips per day, the VMT impact would be **less than significant**. No mitigation is required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project would not change geometric design features or require incompatible uses. Off-road trucks would deliver sediment loads only from the dams to temporary laydown areas and highway trucks would deliver sediments from laydown areas to the disposal sites to avoid any incompatible uses of both types of trucks. An access road to the Los Padres Dam would be redesigned geometrically to allow for better access for hauling trucks. Thus, the proposed project would have **no impact**. No mitigation is required.

d) Result in inadequate emergency access?

The proposed project would not result in inadequate emergency access. The construction activities would not intentionally cause any roadway closures or detours to impact the existing emergency access. In the event of unforeseen emergencies or road blockages along Cachagua Road, an alternative route using Tassajara Road is identified and will be mapped for construction crew and emergency personnel awareness as part of project startup, training and coordination communications. The alternative route will allow for emergency access during construction. Thus, the proposed project would have **no impact**. No mitigation is required.

Mitigation Measures

None required.

XVIII. Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the environmental and regulatory setting for the tribal cultural resources study area, it details efforts to identify cultural resources within and adjacent the project footprint, and it discusses potential direct and indirect impacts and effects of the proposed project during construction and operation. The cultural resources study area encompasses the project area and a 0.25-mile buffer radius (see Figure 4).

Environmental Setting

The proposed project area is situated within the ancestral territory of the Esselen people that have lived – and continue to live – in the region since time immemorial. The historical homeland of the Esselen people is the upper Carmel Valley and the rugged peaks and canyons of the Santa Lucia Mountains. Archaeological, ethnographic, and historic-era context presented in Section 3.3-V. *Cultural Resources* provides relevant information to the understanding of tribal cultural resources (TCRs) as cultural and historical resources. As evidenced in the context and records search discussed above in Section 3.3-V. *Cultural Resources*, the proposed project area is overlapped by and in the vicinity of several broadly delineated cultural and historical resources located throughout the region, that hold significance to California Native American tribes.

A brief summary of the pre-contact, ethnographic, and historic-era context excerpted from the cultural resources inventory report prepared for the proposed project (Dunnigan et al. 2023), is presented above in Section 3.3-V. *Cultural Resources*. As summarized and discussed above in Section 3.3-V. *Cultural Resources*, indigenous people have undergone centuries of racial, ethnic, and cultural adversity in their homelands, yet continue to maintain traditional, religious, and cultural connections with the environment. Today, tribal organizations and culturally affiliated groups maintain connections with the area surrounding the proposed project, including Esselen Tribe of Monterey County and OCEN. These indigenous organizations and others maintain stewardship of

their culture – inclusive of its language, epistemologies, histories, and traditions – in the vicinity of the proposed project area through cultural educational programs, public education programs, cultural ceremonies, religious practices, ecological heritage, and consultation with local, state, and federal agencies, among other actions.

Because describing and/or listing properties of traditional religious and cultural importance to Native Americans is limited by regulations discussed in this document, detailed information about cultural resources is restricted. Confidential information pertaining to the cultural resources within the proposed project area is provided under separate cover that is not available to the public (Dunnigan et al. 2023). Additionally, and as discussed above, a historic district and two contributing elements of the district are within and/or overlap the proposed project area and meet the definition of historical resource pursuant to §15064.5 and historic property pursuant to 36 CFR § 800.16(l)(1). These resources have been documented in various ethnographic and cultural resources studies (Breschini et al. 1992; Breschini et al. 1993; Eidsness and Jackson 1999; McCarthy 1999). However, careful analysis of the location and nature of these resources indicates that surface expressions of these TCRs are found throughout the broader Carmel River region. The tribes have not confirmed that any expression of these resources is present within the project area.

REGULATORY FRAMEWORK

The regulations, plans, and policies discussed above in Section 3.3-V. *Cultural Resources* are relevant to the discussion of TCRs, providing definitions and regulatory context for the impact discussion that follows further below.

Tribal Cultural Resources

As defined at PRC § 21074(a), a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe, and is either: (A) on or eligible for the CRHR or (B) included in a local register of historical resources. A TCR may also be a resource determined by the lead agency, at its discretion and with substantial evidence, pursuant to CRHR criteria for a historical resource (PRC 5024.1(c)). TCRs are similar to TCPs in their characteristics, identification, and treatment, and may include a cultural landscape for which the size and scope are geographically defined. Additionally, as defined at PRC § 21074(c), a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC § 21074(a).

Under the CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1)
- Is associated with the lives of persons important in our past (Criterion 2)
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3)

- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4)

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR §15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

1. Identify cultural resources in the proposed project area
2. Evaluate resources against the CRHR criteria of significance (listed above)
3. Evaluate the impacts of the proposed project on all cultural/tribal resources
4. Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency

The PRC establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC 21084.2). To help determine whether a project may have such an effect, PRC 21080.3.1 requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.

Assembly Bill 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to Assembly Bill 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). Assembly Bill 52 recognizes that “...tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated...” and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as “the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.”

A proposed project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

As such, MPWMD is committed to working together with tribes and consultation efforts with California Native American tribes as described.

METHOD OF ANALYSIS

Identification of Tribal Cultural Resources

As discussed above, the historic district and its two contributing elements that are within/overlap the proposed project area meet the definition of historical resource pursuant to §15064.5 and historic property pursuant to 36 CFR § 800.16(l)(1). The cultural value of each of these historical resources to a California Native American tribe has been documented in ethnographic and cultural resources studies pursuant to various regulatory requirements over the years (Breschini et al. 1992; Breschini et al. 1993; Eidsness and Jackson 1999; McCarthy 1999). Accordingly, these resources meet the definition of TRC pursuant to PRC § 21074.

As part of background research for the proposed project, MPWMD requested a search of the NAHC's Sacred Lands file on November 21, 2022. In response sent December 6, 2022, the NAHC reported that the search is positive, recommending that MPWMD contact the Indian Canyon Mutsun Band of Costanoan for more information. Correspondence with Indian Canyon Mutsun Band of Costanoan is in progress.

Tribal Consultation

In accordance with PRC 21080.3.1(b), Ohlone/Costanoan-Esselen Nation provided MPWMD a formal request for notification and information on proposed projects for which MPWMD will serve as lead agency under CEQA in a letter dated June 28, 2015. To date, no other California Native American Tribes have requested notification from MPWMD pursuant to PRC 21080.3.1(b). Accordingly, MPWMD provided formal notification of the opportunity to consult on the proposed project (PRC 21080.3.1(d)). Additionally, the NAHC indicated that in response to a query of its Sacred Lands File, that MPWMD should contact Indian Canyon Mutsun Band of Costanoan to discuss potential cultural resources within the vicinity of the proposed project. MPWMD contacted Indian Canyon Mutsun Band of Costanoan via letter dated March 08, 2023. To date, no response to these letters has been received.

Thresholds of Significance

For the purposes of this initial study, the proposed project would result in a significant impact on tribal cultural resources if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - Listed or eligible for listing in the CRHR or in a local register of historical resources, as defined in PRC Section 5020.1(k), or
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As discussed above, the historic district and its two contributing elements that overlap the proposed project area meet the definition of historical resource pursuant to §15064.5 Direct and indirect impacts of the proposed project to the historic district, its contributing elements, and associated tribal practices that occur at these places could include disturbances from light, sound, smell, or other temporary to long-term changes implemented during proposed work, including brush clearing, earth disturbance, and vehicle traffic. The TCRs discussed here include a district comprised of archaeological sites and other tribal resource types, a trail/waterway, and plant gathering areas. These resources are not discussed in further detail in consideration of their status as TCRs. However, careful analysis of the location and nature of these resources indicates that surface expressions of these TCRs are found throughout the broader Carmel River region. The tribes have not confirmed that any expression of these resources is present within the project area. Accordingly, it is unlikely that the proposed project would cause any impacts to TCRs. The project proponent will continue to communicate and collaborate with tribal organizations through project implementation.

As a BMP, prior to ground disturbance, associated tribal organizations will be contacted to confirm there are no sensitive resources within the project area.

- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

At this time, prior to Assembly Bill 52 consultation, there are no known resources that the lead agency has determined significant and that meet the criteria of a historical resource with significance to a California Native American tribe.

Mitigation Measures

None required.

XIX. Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Cal-Am provides water utility service in the project area. The Los Padres Dam and Reservoir is the closest water utility infrastructure to the project.

Wastewater in the lowest portion of Carmel Valley is managed by the Carmel Area Wastewater District and operates under the authority of the Health and Safety Code of California. The primary wastewater treatment plant (WWTP) was originally built in 1939 with a design capacity of 800,000 gallons per day. Today, the WWTP has a permitted capacity of 3 million gallons per day. Above about River Mile 5, properties in Carmel Valley have onsite wastewater treatment systems.

The County of Monterey Health Department is responsible for the promulgation and enforcement of solid waste regulations. The department has contracted with the Waste Management (WM) company for solid waste management. WM operates a transfer station in Carmel Valley. The site does not accommodate hazardous, liquid, or special wastes (Monterey County Department of Health 2021).

Impact Analysis

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

There are no components of the proposed project that would result in the relocation, construction, or expansion of utilities in the project area. Therefore, there no anticipated impacts. No mitigation is required.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

There are no components of the proposed project that would impact existing water supplies within the reservoir or downstream of Los Padres Dam. Therefore, there are no anticipated impacts. No mitigation is required.

- c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?

There are no wastewater related components of the proposed project. On-site water quality would be maintained through rigorous adherence to the SWPPP as noted above in *Section X. Hydrology and Water Quality*. Therefore, there are no anticipated impacts. No mitigation is required.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The proposed project is not anticipated to generate solid waste in a capacity that would exceed state or local standards as demonstrated in Table 11.

Table 11. Los Padres Dam Outlet Works Demolition and Disposal Volumes

Material Type	Quantity
Cubic yards of concrete	781
Cubic yards of mud/ debris	168
Cubic yards existing ground	1,151
Linear feet guard rail	45
Linear feet steel pipe (30-inch)	63
Trash rack and cone dimensions	10 feet x 8 feet

Waste produced as a result of the project would be disposed of in accordance with existing regulation and into the appropriate solid waste repository. Therefore, there are no anticipated impacts. No mitigation is required.

- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The applicant would be required to comply with all federal and state regulations related to solid waste and Monterey County regulations as codified in County Code 10.41 Therefore, there are no anticipated impacts related to solid waste. No mitigation is required.



Mitigation Measures

None required.

XX. Wildfire

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Monterey County has a history of wildfires. Since 1911, there has been an average of four wildfires a year, with an average of 17,000 acres burning annually (Monterey County Office of Emergency Services 2023). About 80 percent of Monterey County's land area is categorized as having high, very high, or extreme fire threat (Monterey County Office of Emergency Services 2023).

CAL FIRE is required to classify the severity of fire hazard in areas of California. CAL FIRE maps FHSZs based on factors such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area (CAL FIRE 2023b). FHSZs in the SRAs are classified as follows: moderate, high, and very high (CAL FIRE 2023b). The project area is located in a SRA and is classified as a Very High FHSZ (CAL FIRE 2023a).

Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Emergency access to the project site during and after construction would be available via the gravel access road. The gravel access road to the project site is not an identified evacuation route (Monterey County 2021b). The closest evacuation route to the project site is the Cachagua

Road (Monterey County 2021b). As stated in *Section 3.3-XVII. Transportation*, the proposed project could add to the traffic volume on Cachagua Road during construction. However, the proposed project is not expected to impair evacuation procedures along Cachagua Road due to the low daily traffic volumes associated with the proposed project. Additionally, no temporary road closures or detours are proposed during construction. Therefore, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan, resulting in a **less than significant impact**. No mitigation is required.

- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The proposed project is located in a SRA and is classified as a Very High FHSZ (CAL FIRE 2023b). The proposed project is located in an area with unstable slopes. Vegetation in the project area, particularly when dry, creates a risk of fire hazard from natural conditions (e.g., wind or lightning strikes, etc.) or from human activities. During construction, the proposed project would involve the use of flammable materials, tools, vehicles, and equipment capable of generating a spark and igniting a wildfire. These factors, along with Monterey County's history of wildfire, create a potential for exacerbated wildfire risks that could expose workers to pollutant concentrations from a wildfire or uncontrolled spread of wildfire. Therefore, impacts would be significant. To minimize the impacts related to exacerbated wildfire risk, mitigation measure **MM-HAZ-1 Mitigation Measures**) would be implemented.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The proposed project is located in a SRA and is classified as a Very High FHSZ (CAL FIRE 2023b). The proposed project includes improvements to the existing access road. Additionally, the proposed project would involve the use of flammable materials, tools, vehicles, and equipment during construction. These factors, along with Monterey County's history of wildfire, could exacerbate wildfire risk in the project area, resulting in a potentially significant impact. To minimize the impacts related to exacerbated wildfire risk, mitigation measure **MM-HAZ-1** (described below under *Mitigation Measures*) would be implemented, which would incorporate specific fire prevention measures into project construction documents to be implemented during construction activities.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The proposed project would not alter the existing drainage pattern on site and would not affect surface runoff from the original operational state of the facility (see *Section 3.3-X. Hydrology and Water Quality*). The proposed project is located in an area that is susceptible to landslides (see *Section 3.3-VII. Geology and Soils*). Additionally, the project area has a history of landslides with three successive landslides occurring in 2018, 2019, and 2020. Therefore, the proposed project could expose people or structures to risks associated with landslides, resulting in a potentially significant impact. To minimize impacts related to landslides, mitigation measure **MM-GEO-1** (described below under *Mitigation Measures*) would be implemented, which would require the installation of slope stabilization, parking and staging location restrictions, and worker awareness training related to landslide hazards.

Mitigation Measures

MM-HAZ-1: FIRE PREVENTION MEASURES

See Section 3.3-IX. *Hazards and Hazardous Materials* for description.

With the implementation of **MM-HAZ-1**, impacts related to wildfire risks would be reduced to a less-than-significant level.

MM-GEO-1: LANDSLIDE REDUCTION MEASURES

See Section 3.3-VII. *Geology and Soils* for description.

With the implementation of **MM-GEO-1**, impacts related to landslides would be reduced to a less-than-significant level.

XXI. Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

As described in Section 3.3-IV. *Biological Resources*, the proposed project is located in the area surrounding Los Padres Dam, a portion of the Carmel River downstream of the dam, a portion of Los Padres Reservoir upstream of the dam, and immediately adjacent upland area consisting of undeveloped open space. The upland area is steeply sloped on both sides of the river and surrounding the reservoir and with vertically cut canyon walls and faces in some places along the river and reservoir. The project area is dominated by coast live oak woodland, pacific madrone-coast live oak woodland, white alder grove, California sagebrush - black sage scrub, coyote brush scrub, cattail marsh, needle grass – melic grass grassland, wild oats and annual brome grassland, disturbed/barren area, open water, and perennial channel. Table 5 identifies and refines the numerous special status species with known or likely habitat within or near the project area.

The proposed project is located in the California Coast Ranges geomorphic province Monterey County is one of the most seismically active regions in California. The San Andreas Fault is an active transform fault between the Pacific and North American tectonic plates and traverses the eastern portion of the county, making nearby areas susceptible to seismic hazards such as strong ground shaking, liquefaction, and earthquake-induced landslides. The area is underlain by the Franciscan Complex and Salinian block marine rock deposits. In addition, erosion hazards are present due to soil types in the area (Monterey County Planning and Building Inspection Department 2008). The project is located less than 1 mile southwest of the Cachagua fault, a quaternary fault of

undifferentiated age; approximately 3 miles southwest of the Tularcitos fault, a late quaternary fault with displacement in the past 700,000 years; and approximately 3 miles northwest of the Miller Creek fault, a late quaternary fault with displacement in the past 700,000 years. The proposed project is located approximately 30 miles southwest of the San Andreas Fault, a historically active fault at which displacement has occurred within the past 200 years (DOC 2015).

Finally, about 80 percent of Monterey County's land area is categorized as having high, very high, or extreme fire threat (Monterey County Office of Emergency Services 2023). The project area is located in a SRA and is classified as a Very High FHSZ (CAL FIRE 2023a).

Impact Analysis

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The analysis contained in section IV identifies special status plant and animal species that span the terrestrial and aquatic environs. Special status and protected species and habitat were identified in and around the project area, however based on the scope of work to be completed and limited duration, it is expected that the potential for impact is low. That said, the analysis recognized that without mitigation it would be difficult to confirm or measure that impact. The implementation of mitigation measures was determined necessary to substantiate the reduction of the level of impact to that of less than significant. The implementation of mitigation measures, in conjunction of the limited spatial and temporal impacts, and BMPs identified in Section 3.3, *IV. Biological Resources*, provides confidence that project impacts are not expected to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species identified in the analysis, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal.

The analysis in Section 3.3-V. *Cultural Resources*, identified three properties that meet the definition of historical resource pursuant to §15064.5. Additional consultation with the people for whom these historical resources hold significance is necessary to determine the level of impact and if any/all impacts can be avoided or mitigated. There are no archaeological resources within the project area based on a full survey completed for this project; thus, the proposed project would not result in the elimination of important examples of the major periods of California history or prehistory. **Given the need to undertake consultation with regard to cultural resources, the final assessment of those impact for this section will be revisited.**

- b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Per CEQA Guidelines Section 15355, a cumulative impact is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probably future projects. Although the project area is in a very remote location, other activities going on at the Los Padres Reservoir such as recreation are taken into account. Likewise, traffic along the limited roads accounts for not only access to Los Padres Reservoir but also residential neighborhoods throughout the area. No

other construction or projects by Caltrans, Cal-AM, local entities or the MPWMD are known to occur at the same time or in the same area of the proposed project. Impacts from air quality, greenhouse gases, noise, and transportation considering these ongoing activities as part of the baseline against which the potential impacts of the proposed project components were measured. Likewise, those resources for which potentially significant impacts are identified, including biological resources, cultural resource, geology and soils, hazards and hazardous waste, and wildfire, found that these other past, present, and reasonably foreseeable activities going on in the area would not further increase the potential level of impact. Moreover, the mitigation measures prescribed in each respective resource analysis are found to reduce or eliminate the potential for significant impact. With all of this considered, the proposed project when considered with other activities in the area would have a **less than significant impact**.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

The analysis recognizes three areas with the potential for significant impacts that could affect human beings unless those impacts are mitigated: geology and soils, hazards and hazardous materials, and wildfire. Additionally, resource areas with less than significant impacts can still result in direct and indirect impacts to human beings. Given the remote location of the proposed project and nearby communities, air quality, noise, traffic, and emergency response access were considered. The analysis does not reveal any direct, indirect, or cumulative impacts that would result in a substantial adverse effect on human beings from those resource areas identified as requiring mitigation or as less than significant, or those that required mitigation therefore, adverse effects on human being is assessed to be **less than significant**. No mitigation is required.

Mitigation Measures

None required at this time. This section will be updated if necessary following completion of consultation.

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Appendix

CalEEMod Input

Project Name: Los Padres Dam Outlet Modifications Project
 Project Location: Monterey Bay AQMD
 CEC Climate Zone: 4
 Land Use Setting: Rural
 Operational Year: 2025

Land Use

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	SF
Parking	Other Non-Asphalt Surf	26.7	Acre	26.7	1,163,052.00

Construction Schedule

Project Phase Name	CalEEMod Phase Name	CalEEMod Phase Type	Start Date	End Date	# Days/Week	Total Days	# one-way worker trips/day	# one-way vendor trips/day	# Total haul trips	Worker Trip Length	Vendor Trip Length	Haul Trip Length
Site Preparation & Access Improvements	Site Preparation	Site Preparation	1/2/2024	4/25/2024	5	83	54	14	624	30	50	50
Relocation of Upstream Entrance & Replacement of Outlet Valves	Construction	Building Construction	4/26/2024	11/28/2024	5	155	54	14	270	30	50	50

Notes:

Vendor and Haul trip lengths are assumed to be 50 miles
 Worker trip length is assumed to be 30 miles
 Work would occur 8 hours/day and 5 days/week
 2 Service vehicles (4 trips per day) and 5 Support vehicles (10 trips per day) included as vendor trips in both phases
 Assumed that workers (27) would travel to/from site in a separate vehicle (54 trips/day)
 Assumed speed of vehicles and trucks would be limited to 15 mph on the unpaved Nason Road (approximately 1 mile)

List of Construction Equipment

Equipment Name	CalEEMod Equipment Name	Count	Hours/Day	HP	Load Factor	Notes
Site Preparation & Access Improvements						
Single Drum Roller	Rollers	1	8	160	0.3752	Adjusted default hp based on project-specific data
Paver	Pavers	1	8	250	0.4154	Adjusted default hp based on project-specific data
Wheeled Loader	Tractor/Loader/Backhoe	1	5	300	0.3685	Adjusted default hp based on project-specific data
Wheeled Backhoe	Tractor/Loader/Backhoe	1	5	100	0.3685	Adjusted default hp based on project-specific data
Mid-Sized Tracked Excavators	Excavators	2	8	325	0.3819	Adjusted default hp based on project-specific data
Relocation of Upstream Entrance & Replacement of Outlet Valves						
Land Based Crane	Crane	1	8	700	0.2881	Adjusted default hp based on project-specific data
Wheeled Loader	Tractor/Loader/Backhoe	1	5	300	0.3685	Adjusted default hp based on project-specific data
Wheeled Backhoe	Tractor/Loader/Backhoe	1	5	100	0.3685	Adjusted default hp based on project-specific data
Mid-Sized Tracked Excavators	Excavators	2	8	325	0.3819	Adjusted default hp based on project-specific data
Marine Crane on Barge	Off-Highway Trucks	1	6	500	0.3819	Adjusted default hp based on project-specific data

Hauling in

Material	Quantity	Unit	Qty/Truck	Number of Trucks	Number of Trips
4" Pipe	200	LF	200	1	2
12" Pipe	310	LF	310	1	2
16" Pipe	120	LF	120	1	2
30" Pipe	470	LF	120	4	8
Guardrail	45	LF	45	1	2
Caisson	12' x 20'	square feet		5	10
New Trash Rack and Cone Structure	10' x 8'	square feet		2	4
Rock Anchors	10' x 4'	square feet		1	2
Micropiles	10' x 8'	square feet		2	4
Concrete	209	CY	10	21	42
HMA	42	CY	10	5	10
Fill	732	CY	16	46	92
Riprap	26	CY	10	3	6

Hauling out

Material	Quantity	Unit	Qty/Truck	Number of Trucks	Number of Trips
Guardrail	45	LF	45	1	2
30" Pipe	63	LF	120	1	2
Trash Rack and Cone	10' x 8'	square feet		2	4
Concrete	781	CY	10	79	158
Mud/Debris	168	CY	16	11	22
Existing Ground	4151	CY	16	260	520

TOTAL	447	894
Phase 1 total	312	624
Phase 2 total	135	270

Note: Assuming a 70-30 split of hauling trips between Phase 1 and Phase 2

Quantity Totals

Hauling in	
CY concrete	209
CY HMA	42
CY Fill (Ranging from common backfill to 8" quarry spalls)	732
CY Riprap	26
LF Pipe (4")	200
LF Pipe (12" & 16")	440
LF Pipe (30")	470
LF Guardrail	45
Steel Dimensions	
Caisson	12' x 20'
New Trash Rack and Cone Structure	10' x 8'
Rock Anchors	10' x 4"
Micropiles	10' x 8"

Demo and hauling out	
CY concrete	781
CY mud/debris	168
CY (existing ground)	4,151
LF Guard rail	45
LF Steel Pipe (30")	63
Trash Rack and Cone Dimensions	10' x 8'

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Los Padres Dam Outlet Modifications Project
Monterey Bay Unified APCD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	26.70	Acre	26.70	1,163,052.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - adjusted per project specific data
- Off-road Equipment - adjusted per project specific data
- Off-road Equipment - adjusted per project specific data
- Trips and VMT - adjusted per project specific data
- Grading - trips associated with import/export accounted for on the Trips and VMT screen
- On-road Fugitive Dust - accounted for 1 mile of unpaved access road
- Construction Off-road Equipment Mitigation - speed would be limited to 15 mph on unpaved access road

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	440.00	155.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	20.00	83.00
tblGrading	AcresOfGrading	0.00	26.70
tblOffRoadEquipment	HorsePower	231.00	700.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	402.00	500.00
tblOffRoadEquipment	HorsePower	130.00	250.00
tblOffRoadEquipment	HorsePower	80.00	160.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	624.00
tblTripsAndVMT	HaulingTripNumber	0.00	270.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	191.00	14.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	54.00
tblTripsAndVMT	WorkerTripNumber	488.00	54.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2507	2.2687	2.1943	0.0104	10.1786	0.0689	10.2475	1.0561	0.0635	1.1197	0.0000	940.5499	940.5499	0.1852	0.0430	957.9768
Maximum	0.2507	2.2687	2.1943	0.0104	10.1786	0.0689	10.2475	1.0561	0.0635	1.1197	0.0000	940.5499	940.5499	0.1852	0.0430	957.9768

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2507	2.2687	2.1943	0.0104	6.3269	0.0689	6.3957	0.6710	0.0635	0.7345	0.0000	940.5493	940.5493	0.1852	0.0430	957.9761
Maximum	0.2507	2.2687	2.1943	0.0104	6.3269	0.0689	6.3957	0.6710	0.0635	0.7345	0.0000	940.5493	940.5493	0.1852	0.0430	957.9761

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.84	0.00	37.59	36.47	0.00	34.40	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2024	4-1-2024	0.5905	0.5905
2	4-2-2024	7-1-2024	0.6941	0.6941
3	7-2-2024	9-30-2024	0.7363	0.7363
		Highest	0.7363	0.7363

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0995	0.0000	3.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0995	0.0000	3.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2024	4/25/2024	5	83	
2	Construction	Building Construction	4/26/2024	11/28/2024	5	155	

Acres of Grading (Site Preparation Phase): 26.7

Acres of Grading (Grading Phase): 0

Acres of Paving: 26.7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	2	8.00	325	0.38
Site Preparation	Pavers	1	8.00	250	0.42
Site Preparation	Rollers	1	8.00	160	0.38
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	300	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Cranes	1	8.00	700	0.29
Construction	Excavators	2	8.00	325	0.38
Construction	Forklifts	0	8.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Off-Highway Trucks	1	6.00	500	0.38
Construction	Tractors/Loaders/Backhoes	1	5.00	300	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	54.00	14.00	624.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Construction	6	54.00	14.00	270.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										Mt/yr					
Fugitive Dust					0.0142	0.0000	0.0142	1.5300e-003	0.0000	1.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0488	0.4102	0.5223	1.8000e-003		0.0151	0.0151		0.0139	0.0139	0.0000	158.0607	158.0607	0.0511	0.0000	159.3387
Total	0.0488	0.4102	0.5223	1.8000e-003	0.0142	0.0151	0.0292	1.5300e-003	0.0139	0.0154	0.0000	158.0607	158.0607	0.0511	0.0000	159.3387

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3500e-003	0.1020	0.0154	4.5000e-004	0.4056	9.8000e-004	0.4065	0.0428	9.4000e-004	0.0437	0.0000	43.4715	43.4715	4.8000e-004	6.8500e-003	45.5253
Vendor	3.0200e-003	0.1562	0.0263	7.5000e-004	0.7567	1.2500e-003	0.7579	0.0804	1.2000e-003	0.0816	0.0000	72.4032	72.4032	5.3000e-004	0.0106	75.5687
Worker	0.0140	0.0116	0.1378	4.3000e-004	2.5854	2.9000e-004	2.5857	0.2660	2.6000e-004	0.2663	0.0000	39.1491	39.1491	8.2000e-004	9.8000e-004	39.4602
Total	0.0184	0.2699	0.1794	1.6300e-003	3.7477	2.5200e-003	3.7502	0.3892	2.4000e-003	0.3916	0.0000	155.0237	155.0237	1.8300e-003	0.0184	160.5543

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	1.5300e-003	0.0000	1.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0488	0.4102	0.5223	1.8000e-003		0.0151	0.0151		0.0139	0.0139	0.0000	158.0605	158.0605	0.0511	0.0000	159.3385
Total	0.0488	0.4102	0.5223	1.8000e-003	0.0142	0.0151	0.0292	1.5300e-003	0.0139	0.0154	0.0000	158.0605	158.0605	0.0511	0.0000	159.3385

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	tons/yr										MT/yr					
Hauling	1.3500e-003	0.1020	0.0154	4.5000e-004	0.2534	9.8000e-004	0.2544	0.0275	9.4000e-004	0.0285	0.0000	43.4715	43.4715	4.8000e-004	6.8500e-003	45.5253
Vendor	3.0200e-003	0.1562	0.0263	7.5000e-004	0.4733	1.2500e-003	0.4745	0.0521	1.2000e-003	0.0533	0.0000	72.4032	72.4032	5.3000e-004	0.0106	75.5687
Worker	0.0140	0.0116	0.1378	4.3000e-004	1.6016	2.9000e-004	1.6019	0.1676	2.6000e-004	0.1679	0.0000	39.1491	39.1491	8.2000e-004	9.8000e-004	39.4602
Total	0.0184	0.2699	0.1794	1.6300e-003	2.3283	2.5200e-003	2.3308	0.2472	2.4000e-003	0.2496	0.0000	155.0237	155.0237	1.8300e-003	0.0184	160.5543

3.3 Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1512	1.2310	1.1795	4.5600e-003		0.0480	0.0480		0.0441	0.0441	0.0000	400.3353	400.3353	0.1295	0.0000	403.5722
Total	0.1512	1.2310	1.1795	4.5600e-003		0.0480	0.0480		0.0441	0.0441	0.0000	400.3353	400.3353	0.1295	0.0000	403.5722

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	0.0441	6.6500e-003	1.9000e-004	0.1755	4.2000e-004	0.1759	0.0185	4.1000e-004	0.0189	0.0000	18.8098	18.8098	2.1000e-004	2.9600e-003	19.6985

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vendor	5.6400e-003	0.2918	0.0490	1.4100e-003	1.4131	2.3300e-003	1.4154	0.1501	2.2300e-003	0.1524	0.0000	135.2108	135.2108	1.0000e-003	0.0198	141.1223
Worker	0.0261	0.0217	0.2573	8.0000e-004	4.8282	5.3000e-004	4.8287	0.4968	4.9000e-004	0.4973	0.0000	73.1097	73.1097	1.5200e-003	1.8200e-003	73.6908
Total	0.0324	0.3576	0.3130	2.4000e-003	6.4168	3.2800e-003	6.4201	0.6654	3.1300e-003	0.6686	0.0000	227.1302	227.1302	2.7300e-003	0.0245	234.5116

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1512	1.2310	1.1795	4.5600e-003		0.0480	0.0480		0.0441	0.0441	0.0000	400.3349	400.3349	0.1295	0.0000	403.5718
Total	0.1512	1.2310	1.1795	4.5600e-003		0.0480	0.0480		0.0441	0.0441	0.0000	400.3349	400.3349	0.1295	0.0000	403.5718

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	0.0441	6.6500e-003	1.9000e-004	0.1096	4.2000e-004	0.1101	0.0119	4.1000e-004	0.0123	0.0000	18.8098	18.8098	2.1000e-004	2.9600e-003	19.6985
Vendor	5.6400e-003	0.2918	0.0490	1.4100e-003	0.8839	2.3300e-003	0.8862	0.0972	2.2300e-003	0.0995	0.0000	135.2108	135.2108	1.0000e-003	0.0198	141.1223
Worker	0.0261	0.0217	0.2573	8.0000e-004	2.9910	5.3000e-004	2.9915	0.3131	4.9000e-004	0.3136	0.0000	73.1097	73.1097	1.5200e-003	1.8200e-003	73.6908

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.0324	0.3576	0.3130	2.4000e-003	3.9844	3.2800e-003	3.9877	0.4222	3.1300e-003	0.4253	0.0000	227.1302	227.1302	2.7300e-003	0.0245	234.5116
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHH	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.517882	0.052795	0.193633	0.146997	0.027981	0.006802	0.010707	0.009580	0.001188	0.000578	0.027032	0.001276	0.003550

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										M1/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004
Unmitigated	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004
Total	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0243					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004
Total	0.0995	0.0000	3.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.6000e-004	6.6000e-004	0.0000	0.0000	7.1000e-004

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Los Padres Dam Outlet Modifications Project
Monterey Bay Unified APCD Air District, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	26.70	Acre	26.70	1,163,052.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - adjusted per project specific data
- Off-road Equipment - adjusted per project specific data
- Off-road Equipment - adjusted per project specific data
- Trips and VMT - adjusted per project specific data
- Grading - trips associated with import/export accounted for on the Trips and VMT screen
- On-road Fugitive Dust - accounted for 1 mile of unpaved access road
- Construction Off-road Equipment Mitigation - speed would be limited to 15 mph on unpaved access road

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	440.00	155.00
tblConstructionPhase	NumDays	20.00	83.00
tblGrading	AcresOfGrading	0.00	26.70
tblOffRoadEquipment	HorsePower	231.00	700.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	402.00	500.00
tblOffRoadEquipment	HorsePower	130.00	250.00
tblOffRoadEquipment	HorsePower	80.00	160.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	624.00
tblTripsAndVMT	HaulingTripNumber	0.00	270.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	191.00	14.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	54.00
tblTripsAndVMT	WorkerTripNumber	488.00	54.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.3601	20.2962	19.5637	0.0903	105.6934	0.6614	106.1173	10.9253	0.6098	11.3174	0.0000	8,979.8963	8,979.8963	1.8806	0.4864	9,130.2036

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	2.3601	20.2962	19.5637	0.0903	105.6934	0.6614	106.1173	10.9253	0.6098	11.3174	0.0000	8,979.8963	8,979.8963	1.8806	0.4864	9,130.2036
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Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.3601	20.2962	19.5637	0.0903	65.6808	0.6614	66.1048	6.9241	0.6098	7.3161	0.0000	8,979.8963	8,979.8963	1.8806	0.4864	9,130.2036
Maximum	2.3601	20.2962	19.5637	0.0903	65.6808	0.6614	66.1048	6.9241	0.6098	7.3161	0.0000	8,979.8963	8,979.8963	1.8806	0.4864	9,130.2036

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.86	0.00	37.71	36.62	0.00	35.35	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1	Site Preparation	Site Preparation	1/2/2024	4/25/2024	5	83
2	Construction	Building Construction	4/26/2024	11/28/2024	5	155

Acres of Grading (Site Preparation Phase): 26.7

Acres of Grading (Grading Phase): 0

Acres of Paving: 26.7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	2	8.00	325	0.38
Site Preparation	Pavers	1	8.00	250	0.42
Site Preparation	Rollers	1	8.00	160	0.38
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	300	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Cranes	1	8.00	700	0.29
Construction	Excavators	2	8.00	325	0.38
Construction	Forklifts	0	8.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Off-Highway Trucks	1	6.00	500	0.38
Construction	Tractors/Loaders/Backhoes	1	5.00	300	0.37
Construction	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	6	54.00	14.00	624.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Construction	6	54.00	14.00	270.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3412	0.0000	0.3412	0.0368	0.0000	0.0368			0.0000			0.0000
Off-Road	1.1767	9.8854	12.5863	0.0434		0.3634	0.3634		0.3343	0.3343		4,198.3634	4,198.3634	1.3578		4,232.3093
Total	1.1767	9.8854	12.5863	0.0434	0.3412	0.3634	0.7045	0.0368	0.3343	0.3712		4,198.3634	4,198.3634	1.3578		4,232.3093

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0332	2.3664	0.3686	0.0108	11.3879	0.0236	11.4115	1.1929	0.0226	1.2155		1,154.4231	1,154.4231	0.0127	0.1820	1,208.9648
Vendor	0.0725	3.6187	0.6356	0.0181	21.2417	0.0301	21.2718	2.2399	0.0288	2.2687		1,922.9302	1,922.9302	0.0143	0.2807	2,006.9389

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.3290	0.2452	3.6228	0.0108	72.7227	6.8700e-003	72.7296	7.4557	6.3300e-003	7.4621		1,095.3684	1,095.3684	0.0218	0.0237	1,102.9898
Total	0.4346	6.2303	4.6270	0.0398	105.3522	0.0606	105.4128	10.8885	0.0577	10.9462		4,172.7217	4,172.7217	0.0488	0.4864	4,318.8935

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3412	0.0000	0.3412	0.0368	0.0000	0.0368			0.0000			0.0000
Off-Road	1.1767	9.8854	12.5863	0.0434		0.3634	0.3634		0.3343	0.3343	0.0000	4,198.3634	4,198.3634	1.3578		4,232.3093
Total	1.1767	9.8854	12.5863	0.0434	0.3412	0.3634	0.7045	0.0368	0.3343	0.3712	0.0000	4,198.3634	4,198.3634	1.3578		4,232.3093

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0332	2.3664	0.3686	0.0108	7.0977	0.0236	7.1213	0.7639	0.0226	0.7865		1,154.4231	1,154.4231	0.0127	0.1820	1,208.9648
Vendor	0.0725	3.6187	0.6356	0.0181	13.2526	0.0301	13.2827	1.4410	0.0288	1.4698		1,922.9302	1,922.9302	0.0143	0.2807	2,006.9389

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.3290	0.2452	3.6228	0.0108	44.9894	6.8700e-003	44.9962	4.6824	6.3300e-003	4.6887		1,095.3684	1,095.3684	0.0218	0.0237	1,102.9898
Total	0.4346	6.2303	4.6270	0.0398	65.3397	0.0606	65.4002	6.8872	0.0577	6.9450		4,172.7217	4,172.7217	0.0488	0.4864	4,318.8935

3.3 Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694		5,694.1182	5,694.1182	1.8416		5,740.1581
Total	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694		5,694.1182	5,694.1182	1.8416		5,740.1581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6800e-003	0.5483	0.0854	2.5000e-003	2.6386	5.4700e-003	2.6440	0.2764	5.2300e-003	0.2816		267.4796	267.4796	2.9500e-003	0.0422	280.1168
Vendor	0.0725	3.6187	0.6356	0.0181	21.2417	0.0301	21.2718	2.2399	0.0288	2.2687		1,922.9302	1,922.9302	0.0143	0.2807	2,006.9389
Worker	0.3290	0.2452	3.6228	0.0108	72.7227	6.8700e-003	72.7296	7.4557	6.3300e-003	7.4621		1,095.3684	1,095.3684	0.0218	0.0237	1,102.9898

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.4091	4.4122	4.3438	0.0315	96.6029	0.0425	96.6454	9.9720	0.0404	10.0123		3,285.7781	3,285.7781	0.0390	0.3466	3,390.0455
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694	0.0000	5,694.1182	5,694.1182	1.8416		5,740.1581
Total	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694	0.0000	5,694.1182	5,694.1182	1.8416		5,740.1581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6800e-003	0.5483	0.0854	2.5000e-003	1.6445	5.4700e-003	1.6500	0.1770	5.2300e-003	0.1822		267.4796	267.4796	2.9500e-003	0.0422	280.1168
Vendor	0.0725	3.6187	0.6356	0.0181	13.2526	0.0301	13.2827	1.4410	0.0288	1.4698		1,922.9302	1,922.9302	0.0143	0.2807	2,006.9389
Worker	0.3290	0.2452	3.6228	0.0108	44.9894	6.8700e-003	44.9962	4.6824	6.3300e-003	4.6887		1,095.3684	1,095.3684	0.0218	0.0237	1,102.9898
Total	0.4091	4.4122	4.3438	0.0315	59.8865	0.0425	59.9289	6.3003	0.0404	6.3407		3,285.7781	3,285.7781	0.0390	0.3466	3,390.0455

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Non-Asphalt Surfaces	0.517882	0.052795	0.193633	0.146997	0.027981	0.006802	0.010707	0.009580	0.001188	0.000578	0.027032	0.001276	0.003550
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Unmitigated	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Total	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Total	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Los Padres Dam Outlet Modifications Project

Monterey Bay Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	26.70	Acre	26.70	1,163,052.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - adjusted per project specific data

Off-road Equipment - adjusted per project specific data

Off-road Equipment - adjusted per project specific data

Trips and VMT - adjusted per project specific data

Grading - trips associated with import/export accounted for on the Trips and VMT screen

On-road Fugitive Dust - accounted for 1 mile of unpaved access road

Construction Off-road Equipment Mitigation - speed would be limited to 15 mph on unpaved access road

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	440.00	155.00
tblConstructionPhase	NumDays	20.00	83.00
tblGrading	AcresOfGrading	0.00	26.70
tblOffRoadEquipment	HorsePower	231.00	700.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	97.00	300.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	158.00	325.00
tblOffRoadEquipment	HorsePower	402.00	500.00
tblOffRoadEquipment	HorsePower	130.00	250.00
tblOffRoadEquipment	HorsePower	80.00	160.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	HaulingPercentPave	100.00	98.00

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblOnRoadDust	WorkerPercentPave	100.00	97.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	624.00
tblTripsAndVMT	HaulingTripNumber	0.00	270.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripLength	6.60	50.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	191.00	14.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	54.00
tblTripsAndVMT	WorkerTripNumber	488.00	54.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.4106	20.5920	19.3213	0.0897	105.6934	0.6614	106.1174	10.9253	0.6098	11.3174	0.0000	8,920.9466	8,920.9466	1.8809	0.4908	9,072.5502

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	2.4106	20.5920	19.3213	0.0897	105.6934	0.6614	106.1174	10.9253	0.6098	11.3174	0.0000	8,920.9466	8,920.9466	1.8809	0.4908	9,072.5502
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Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.4106	20.5920	19.3213	0.0897	65.6808	0.6614	66.1048	6.9241	0.6098	7.3161	0.0000	8,920.9466	8,920.9466	1.8809	0.4908	9,072.5502
Maximum	2.4106	20.5920	19.3213	0.0897	65.6808	0.6614	66.1048	6.9241	0.6098	7.3161	0.0000	8,920.9466	8,920.9466	1.8809	0.4908	9,072.5502

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.86	0.00	37.71	36.62	0.00	35.35	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1	Site Preparation	Site Preparation	1/2/2024	4/25/2024	5	83
2	Construction	Building Construction	4/26/2024	11/28/2024	5	155

Acres of Grading (Site Preparation Phase): 26.7

Acres of Grading (Grading Phase): 0

Acres of Paving: 26.7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	2	8.00	325	0.38
Site Preparation	Pavers	1	8.00	250	0.42
Site Preparation	Rollers	1	8.00	160	0.38
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	300	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Cranes	1	8.00	700	0.29
Construction	Excavators	2	8.00	325	0.38
Construction	Forklifts	0	8.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Off-Highway Trucks	1	6.00	500	0.38
Construction	Tractors/Loaders/Backhoes	1	5.00	300	0.37
Construction	Tractors/Loaders/Backhoes	1	5.00	100	0.37
Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	6	54.00	14.00	624.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Construction	6	54.00	14.00	270.00	30.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3412	0.0000	0.3412	0.0368	0.0000	0.0368			0.0000			0.0000
Off-Road	1.1767	9.8854	12.5863	0.0434		0.3634	0.3634		0.3343	0.3343		4,198.3634	4,198.3634	1.3578		4,232.3093
Total	1.1767	9.8854	12.5863	0.0434	0.3412	0.3634	0.7045	0.0368	0.3343	0.3712		4,198.3634	4,198.3634	1.3578		4,232.3093

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0319	2.4970	0.3723	0.0108	11.3879	0.0236	11.4115	1.1929	0.0226	1.2155		1,155.0270	1,155.0270	0.0127	0.1821	1,209.5970
Vendor	0.0745	3.8222	0.6321	0.0181	21.2417	0.0301	21.2718	2.2399	0.0288	2.2687		1,923.4705	1,923.4705	0.0141	0.2811	2,007.6014

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.3778	0.3073	3.3831	0.0103	72.7227	6.8700e-003	72.7296	7.4557	6.3300e-003	7.4621		1,035.7384	1,035.7384	0.0222	0.0276	1,044.5275
Total	0.4842	6.6265	4.3875	0.0392	105.3522	0.0606	105.4128	10.8885	0.0578	10.9462		4,114.2360	4,114.2360	0.0490	0.4908	4,261.7259

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3412	0.0000	0.3412	0.0368	0.0000	0.0368			0.0000			0.0000
Off-Road	1.1767	9.8854	12.5863	0.0434		0.3634	0.3634		0.3343	0.3343	0.0000	4,198.3634	4,198.3634	1.3578		4,232.3093
Total	1.1767	9.8854	12.5863	0.0434	0.3412	0.3634	0.7045	0.0368	0.3343	0.3712	0.0000	4,198.3634	4,198.3634	1.3578		4,232.3093

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0319	2.4970	0.3723	0.0108	7.0977	0.0236	7.1213	0.7639	0.0226	0.7865		1,155.0270	1,155.0270	0.0127	0.1821	1,209.5970
Vendor	0.0745	3.8222	0.6321	0.0181	13.2526	0.0301	13.2827	1.4410	0.0288	1.4698		1,923.4705	1,923.4705	0.0141	0.2811	2,007.6014

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.3778	0.3073	3.3831	0.0103	44.9894	6.8700e-003	44.9962	4.6824	6.3300e-003	4.6887		1,035.7384	1,035.7384	0.0222	0.0276	1,044.5275
Total	0.4842	6.6265	4.3875	0.0392	65.3397	0.0606	65.4003	6.8872	0.0578	6.9450		4,114.2360	4,114.2360	0.0490	0.4908	4,261.7259

3.3 Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694		5,694.1182	5,694.1182	1.8416		5,740.1581
Total	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694		5,694.1182	5,694.1182	1.8416		5,740.1581

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3900e-003	0.5786	0.0863	2.5000e-003	2.6386	5.4700e-003	2.6440	0.2764	5.2400e-003	0.2816		267.6195	267.6195	2.9400e-003	0.0422	280.2633
Vendor	0.0745	3.8222	0.6321	0.0181	21.2417	0.0301	21.2718	2.2399	0.0288	2.2687		1,923.4705	1,923.4705	0.0141	0.2811	2,007.6014
Worker	0.3778	0.3073	3.3831	0.0103	72.7227	6.8700e-003	72.7296	7.4557	6.3300e-003	7.4621		1,035.7384	1,035.7384	0.0222	0.0276	1,044.5275

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.4597	4.7080	4.1014	0.0309	96.6029	0.0425	96.6454	9.9720	0.0404	10.0124		3,226.8284	3,226.8284	0.0393	0.3509	3,332.3922
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694	0.0000	5,694.1182	5,694.1182	1.8416		5,740.1581
Total	1.9510	15.8840	15.2199	0.0588		0.6189	0.6189		0.5694	0.5694	0.0000	5,694.1182	5,694.1182	1.8416		5,740.1581

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3900e-003	0.5786	0.0863	2.5000e-003	1.6445	5.4700e-003	1.6500	0.1770	5.2400e-003	0.1822		267.6195	267.6195	2.9400e-003	0.0422	280.2633
Vendor	0.0745	3.8222	0.6321	0.0181	13.2526	0.0301	13.2827	1.4410	0.0288	1.4698		1,923.4705	1,923.4705	0.0141	0.2811	2,007.6014
Worker	0.3778	0.3073	3.3831	0.0103	44.9894	6.8700e-003	44.9962	4.6824	6.3300e-003	4.6887		1,035.7384	1,035.7384	0.0222	0.0276	1,044.5275
Total	0.4597	4.7080	4.1014	0.0309	59.8865	0.0425	59.9290	6.3003	0.0404	6.3407		3,226.8284	3,226.8284	0.0393	0.3509	3,332.3922

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Other Non-Asphalt Surfaces	0.517882	0.052795	0.193633	0.146997	0.027981	0.006802	0.010707	0.009580	0.001188	0.000578	0.027032	0.001276	0.003550
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Unmitigated	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Total	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1329					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003
Total	0.5451	2.0000e-005	2.7200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.8400e-003	5.8400e-003	2.0000e-005		6.2200e-003

Los Padres Dam Outlet Modifications Project - Monterey Bay Unified APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
