

CARMEL AREA WASTEWATER DISTRICT



**CALLE LA CRUZ PIPELINE REPLACEMENT
PROJECT**

SCH #

**Initial Study and
Mitigated Negative Declaration**

DRAFT

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PROJECT**

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Mitigated Negative Declaration**

**Prepared for:
Carmel Area Wastewater District
P.O. Box 221428
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Carmel, CA 93922**

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February 2018

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CHAPTER 1 – INTRODUCTION

The Carmel Area Wastewater District (CAWD) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of construction and operation of the proposed Calle la Cruz Pipeline Replacement Project (Proposed Project). The Proposed Project and its location are described in depth in Chapter 2. This document was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines (14 California Code of Regulations [CCR] § 15000 et seq.).

Intent and Scope of this Document

This IS/MND has been prepared in accordance with CEQA, under which the Proposed Project is evaluated at a project level (CEQA Guidelines § 15378). The CAWD, as the Lead Agency under CEQA, will consider the Proposed Project's potential environmental impacts when considering whether to approve the project. This IS/MND is an informational document to be used in the planning and decision-making process for the Proposed Project and does not recommend approval or denial of the Proposed Project. The site plans for the Proposed Project included in this IS/MND are conceptual. The CAWD anticipates that the final design for the Proposed Project would include some modifications to these conceptual plans, and the environmental analysis has been developed with conservative assumptions to accommodate some level of modification. This IS/MND describes the Proposed Project; its environmental setting, including existing conditions and regulatory setting, as necessary; and the potential environmental impacts of the Proposed Project on or with regard to the topics on the CEQA Initial Study checklist, in Chapter 3.

Public Involvement Process

Public disclosure and dialogue are priorities under CEQA. CEQA Guidelines §15073 and §15105(b) require that the lead agency designate a period during the IS/MND process when the public and other agencies can provide comments on the potential impacts of the Proposed Project. Accordingly, the CAWD is now circulating this document for a 30- day public and agency review period.

All comments received before 5:00 p.m. from the date identified for closure of the public comment period in the Notice of Intent will be considered by the CAWD during its deliberations on whether to approve the Proposed Project. To provide input on this project, please send comments to the following contact:

Drew Lander
Principal Engineer
Carmel Area Wastewater District
P.O. Box 221428
3945 Rio Road
Carmel, CA 93922
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Organization of this Document

This IS/MND contains the following components:

Chapter 1, *Introduction*, provides a brief description of the intent and scope of this IS/MND, the public involvement process under CEQA, and the organization of and terminology used in this IS/MND.

Chapter 2, *Project Description*, describes the Proposed Project, including its objectives, the project site where the Proposed Project would be constructed, the construction approach and activities, operation-related activities, and related permits and approvals.

Chapter 3, *Environmental Checklist*, presents the environmental checklist used to assess the Proposed Project's potential environmental effects, which is based on the model provided in Appendix G of the CEQA Guidelines. This chapter also includes a brief environmental setting description for each resource topic and identifies the Proposed Project's anticipated environmental impacts, as well as any mitigation measures that would be required to reduce potentially significant impacts to a less than-significant level.

Chapter 4, *References*, provides a bibliography of printed references, websites, and personal communications used in preparing this IS/MND.

Appendices

- Appendix A. Air Quality Calculations
- Appendix B. Biological Resource Study
- Appendix C: Hydrology Report
- Appendix D: Noise Appendix
- Appendix E. Mitigation Monitoring and Reporting Program (in Final IS/MND)

CHAPTER 2 - PROJECT DESCRIPTION

1. Background and Need for the Project

CAWD proposes to replace an existing aboveground, 24-inch by 204-foot long treated wastewater outfall and a temporary 6-inch by 204-foot long sewage force main that currently span the Carmel River Lagoon. The pipelines, metal supporting beams and other supporting structure have degraded (rusted) to an unsafe condition. Flood surge and floating debris passing down the southern finger of the lagoon could cause a break the pipes off the 12-inch concrete-filled pile supports. The steel piles have corroded and, in some places, only the concrete in compression is holding up the pipes (concrete originally poured into the pile). The interior mortar lining of the 24-inch treated wastewater pipe is currently the last barrier to a potential spill in the Carmel Lagoon. Also, the six-inch sewage force main developed a seven-foot long crack over the length of pipe crossing the lagoon. The force main was bypassed with a temporary high-density polyethylene (HDPE) pipe in 2014; this temporary pipeline was anticipated to last for a few years, while a long-term solution is planned, permitted, and constructed. The proposed project would be the long-term replacement for the degraded pipelines and support piles.

2. Project Purpose and Objectives

The purpose of the project is to replace a damaged sewage force main and treated wastewater outfall that currently span the south arm of the Carmel Lagoon with new pipelines undergrounded below the lagoon that would not interfere with, or be subject to damage by, flows in the Lagoon.

3. Project Location and Setting

The project area is located within the south arm of the Carmel Lagoon north of Calle la Cruz, within unincorporated Carmel, Monterey County, California (Figure 1 and Figure 2). The CAWD Carmel Meadows Pump Station is located in the southwestern end of the project area and the CAWD Wastewater Treatment Plant is located directly north of the eastern end of the Project area. The northern portion of the project area bounds a 2,480-foot long dirt access road (northern access road) that would be used to access the work area from the north. The southern portion of the project area includes a 250-foot long fire road and 120-foot long footpath (southern access road) that would be used to access the work area from the south. A portion of the project area is on or adjacent to the Carmel River State Beach and Lagoon, and Wetland Natural Preserve and the Caltrans' Carmel River Mitigation Bank.



Figure 1
Project Location

4. Proposed Project Characteristics

CAWD proposes to replace an existing aboveground, 24-inch by 204-foot long treated wastewater outfall and temporary 6-inch by 204-foot long HDPE sewage force main. The outfall pipe and temporary force main currently span the south arm of the Carmel Lagoon. The two pipelines would be replaced with a below-ground 24-inch wastewater outfall pipe and an 8-inch sewage force main.

In addition to pipeline replacement, this project also involves the improvement of access roads and creation of staging areas to the north and south of the lagoon. This is because the pipeline replacement location is located primarily in a heavily vegetated riparian area that can only be accessed from the north by an existing dirt road and from the south by a foot trail. Existing roads to the north and south of the lagoon would be cleared of vegetation, grubbed, and stabilized to widen the road to 15-feet to facilitate construction vehicle and crane access. Access roads would also be stabilized with filter fabric and 1-foot of clean crushed gravel as necessary. Staging areas for construction access, construction equipment, and soil stockpiles would be located directly north and south of the lagoon. These areas would be created by clearing and grubbing existing stands of vegetation. Following vegetation removal, staging areas would be graded level to accommodate large construction equipment (i.e., cranes, sheet piles, dewatering equipment). In two locations, wetlands would need to be temporarily filled to facilitate construction access. Project construction areas are shown in Figure 3.

Construction areas consist of the following (all dimensions are approximate):

- 5,800-square feet of cofferdam area;
- 4,300-square feet of trenching area;
- 0.1 acre staging area south of the lagoon arm
- 0.80 acre staging area north of the lagoon arm;
- 370-foot long by 15-foot wide Southern Access Road
- 2,235-foot long by 15-foot wide Northern Access Road



Figure 2
Project Site and Surrounding Area

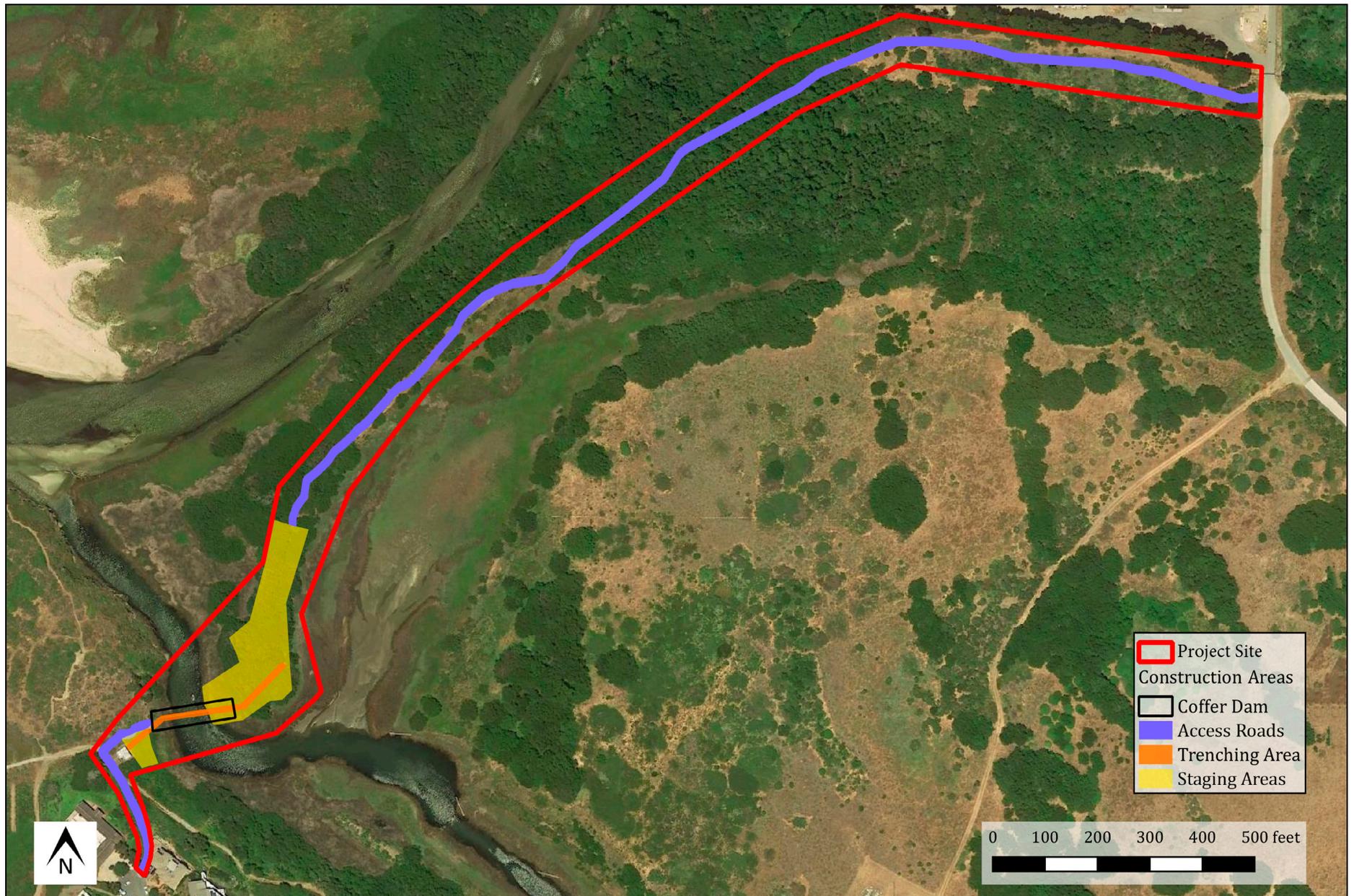


Figure 3
Proposed Locations of Work Areas

4.1 Construction

The project proposes undergrounding the pipelines using a trenching methodology. This would require clearing of site areas, installation of coffer dams for dewatering the trenching area, and the excavation of 400 cubic yards of soil.

Site Preparation, Dewatering, and Trenching

Staging areas and access roads would be cleared of woody vegetation as needed to facilitate vehicular access and accommodate equipment storage. The northern access road would be stabilized as necessary with appropriate BMPs (e.g., steel plates, rubber mats) in the location where it crosses a seasonal wetland (see Figure 4, in Biological Resources discussion). To level the northern staging area, the levee that is currently in the staging area would be removed and the earth spread out nearby. A temporary sediment basin would be installed in the northern staging area, and a crane pad would be placed at the southwestern edge of the staging area to accommodate a construction crane.

Trenching necessitates installing a cofferdam to dewater approximately 40 linear feet of the southern arm of the Carmel Lagoon. Prior to installation of cofferdam sheet piles, fish would be excluded from approximately 60 linear feet of the lagoon encompassing the trenching and dewatering areas. Two permeable curtains (e.g., turbidity curtains) of a sufficient length to reach the bottom elevation of the southern arm of the lagoon would be placed in the work area, parallel with the existing pipelines. The curtains would gradually be pulled apart, one upstream (north) and the other downstream (south), to exclude fish from the work area. Seine nets would also be used to ensure all fish have been removed from the fish exclusion area. This fish exclusion area would remain in place for the duration of sheet pile installation.

Upstream and downstream cofferdams would consist of sheet piles installed with a vibratory hammer. Sheet piles (65-feet long by 3-feet wide) would be installed up stream (north) and downstream (south) of the trenching area, across the southern arm of the Carmel Lagoon, to allow for the dewatering of a portion of the Lagoon. A total of 3,000 square feet of the Lagoon would be dewatered to replace the pipe. Water removed from the cofferdam would be pumped back to the CAWD plant for treatment. As water would continuously percolate into the dewatered area, approximately 300,000 to 500,000 gallons per day would be pumped out of the cofferdam at 200 gallons per minute to maintain a dry work environment. Up to 14,400 cubic feet of water would be continuously pumped around the dewatered cofferdam area during pipeline replacement to maintain flows into the southern arm of the Carmel Lagoon (from the main body of the lagoon). Screens would be installed around the intake of the pump to prevent fish entrapment.

All sediment would be stored in the sediment basin located in the northern staging area. Following installation, the new pipelines would be covered with native soil. Some of the graded material would be removed, and some would be used as backfill. Typically, excess fill material is sent to a sanitary land fill. It is anticipated that the project would require the following import and export of fill-related materials:

- Export: 1000 CY
- Import: 500 CY clean sand, and
- 180 CY concrete

Pipeline Placement

Once the cofferdam has been dewatered, the old pipelines and the five concrete filled steel piles would be removed with a crane and disposed at an approved upland facility. Following the removal of the existing pipelines, a 350-foot long trench would be excavated for the placement of the new wastewater outfall and sewage force main. The force main would consist of 300 linear feet of 8" diameter HDPE pipe. The outfall pipe would consist of 300 linear feet of 24" diameter HDPE pipe. All sediment would be stored in the sediment basin located in the Northern Staging Area. Following installation, the new pipelines would be covered with clean aggregate and native soil.

There would be a brief shut down during construction and then service would be provided through a bypass pipeline until the permanent pipes are ready for use. Once the new pipes are installed, the trench would be backfilled and the existing temporary pipelines would be removed.

Access Roads and Staging Areas

Staging areas would be needed to store pipe, construction equipment, and other construction-related material. The proposed staging area is a 0.1-acre site at the western end of the lagoon and a 0.8-acre staging area at the east end of the Lagoon (see Figure 3). These staging areas would be cleared of vegetation. A 16-foot wide by 2,500-foot long existing access road from the treatment plant to the northern staging area also would be cleared of vegetation.

Staging areas and access roads would be cleared of approximately 1-acre of woody vegetation as needed to facilitate vehicular access and accommodate equipment storage. There is one location on the Northern Access Road where a seasonal wetland and drainage cannot be avoided; this wetland and drainage would be temporarily filled with filter fabric and gravel to facilitate vehicular access. To level the Northern Staging Area, the levee that is currently in the staging area would be knocked down. A temporary sediment basin would be installed in the Northern Staging Area, and a crane pad would be placed at the southwestern edge of the staging area to accommodate a construction crane. As the crane pad would be partially located in a perennial wetland, it may need to be stabilized with temporary fill consisting of filter fabric, gravel, and crane mats. It would also be necessary to grade and place temporary fill to widen a portion of the Southern Access Road and level the Southern Staging Area. Pre-construction grades would be restored following construction activities, and the staging areas would be re-planted with appropriate native vegetation.

To facilitate access to the Northern Staging Area, the Northern Access Road must traverse one seasonal wetland and drainage. Appropriate BMPs (e.g., filter fabric and gravel) would be placed over the wetland at this location, temporarily impacting 0.02 acre of seasonal

wetland and 0.0003 acre of drainage with placement of 150 cubic yards of fill. Leveling and stabilizing the Northern Staging Area would include grading 0.21 acre of perennial wetland. A 50-foot by 30-foot crane pad would be constructed at the southwestern edge of the Northern Staging Area that would necessitate import of 200 cubic yards of clean fill. Trenching activities would result in the excavation of 400 cubic yards of native soil; the excavated soil would be used as backfill material. All construction would occur from the top of bank and there would be no requirement to place heavy equipment within the open water of the lagoon.

The anticipated staging area activities include:

- i. Clearing and grubbing the District's sewer easement to the staging area.
- ii. Stabilization of the easement through wet areas with crane pads.
- iii. Delineation of the easement with construction fence (orange snow fence).
- iv. Clearing, grubbing, and stabilization of the staging area with crane pads and possibly clean imported gravel fill.

Site Restoration

Site restoration would generally involve overall clean up, grading, and installing erosion controls, as necessary. Natural grades would be restored following construction activities, and the staging areas would be re-planted with appropriate native vegetation.

Construction Equipment and Workers

To complete construction, the project would implement the use of vibratory hammers, water trucks, scrapers, compactors, bull-dozers, caterpillars, back-hoes, augers, concrete trucks, water pumps, and assorted other hand tools and equipment. Construction vehicles would only access the project site from the designated access roads. No additional improvements or off-site staging would be required.

Work would be completed by five to ten construction workers at any given time during construction.

Construction Schedule

Construction is planned for June 2018 through October 2018. The project would take four months to complete, with two months of work directly within the lagoon. This includes 2 weeks to install coffer dam, 4 weeks to install pipe and backfill, and 2 weeks to remove the coffer dam and restore the channel.

In-water work is proposed to occur during the months of August to October to avoid migrating steelhead. Crews typically would work from approximately 6:00 a.m. to 5:00 p.m., Monday through Friday. These dates and times are subject to change, pending issuance of project permits and agency authorizations.

5. Best Management Practices CAWD to verify/edit as applicable

Project construction would include a range of environmental commitments, otherwise known as best management practices (BMPs), to avoid adverse effects on people and the environment. BMPs are developed to address anticipated effects from various construction activities and would be implemented pre-construction, during construction, and post construction, as specified in Table 1. All BMPs will be regularly monitored for effectiveness using appropriate methods (visual observation, sampling) at appropriate intervals (e.g., daily or weekly) and corrected immediately if determined to not be effective.

Table 1. Best Management Practices to be Implemented for the Proposed Project

Number	Title	BMP Description
BMP-1	Best Management Practices for Construction Air Quality	The contractor will use construction equipment that minimizes air emissions, to the extent feasible. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
BMP-2	Best Management Practices for Construction Emissions, Including Fugitive Dust Emissions	Implementation of construction BMPs to limit construction emissions, particularly fugitive dust emissions, as follows: <ul style="list-style-type: none">• All exposed areas of bare soil should be watered twice per day to minimize fugitive dust emissions.• All haul trucks transporting soil, sand, or other loose material off-site should be covered or maintain at least two feet of free board space. Any haul trucks traveling along freeways or major roadways should be covered.• All vehicle speeds on unpaved roads should be limited to 15 miles per hour (mph).• All visible mud or dirt track-out onto roads in the Carmel Meadows neighborhood should be removed using wet power-vacuum street

sweepers at least once per day. The use of dry power sweeping should be prohibited.

Idling times should be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13 CCR § 2485). Clear signage regarding this requirement should be provided for construction workers at all access points.

BMP-3	Best Management Practices for Sediment Control	<p>Site specific BMPs to control sediments during construction activities, which may include but not be limited to:</p> <ul style="list-style-type: none">• Install, implement, and maintain BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (California Storm Water Quality Association [CASQA] 2015) or equivalent to minimize the discharge of pollutants.• Implement practices to reduce erosion of exposed soil, including stabilization of soil stockpiles, watering for dust control, establishment of perimeter silt fences, and/or placement of fiber rolls.• Minimize soil disturbance area.• Implement other practices to maintain water quality, including use of silt fences, stabilized construction entrances, and storm-drain inlet protection.• Where feasible, limit construction to dry periods.• Revegetate disturbed areas.
BMP-4	Best Management Practices for Hazardous Materials	<p>Site-specific hazardous materials BMPs during construction activities, which may include but not be limited to:</p> <ul style="list-style-type: none">• Develop (before initiation of construction activities) and implement (during construction and operational activities) a spill prevention

and emergency response plan to handle potential spills of fuel or other pollutants.

- Install, implement, and maintain BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (CASQA 2015) or equivalent to minimize the discharge of pollutants to the MS4s, consistent with the requirements of the construction site stormwater and hazardous materials control requirements of the County of Monterey, in compliance with Central Coast RWQCB Orders.
- Implement practices to minimize the contact of construction materials, equipment, and maintenance supplies with stormwater.
- Limit fueling and other activities involving hazardous materials to designated areas only; provide drip pans under equipment and conduct daily checks of vehicle condition.
- Require the proper disposal of trash and any other construction-related waste.

Ensure, through the enforcement of contractual obligations, that all contractors transport, store, handle, and dispose of construction-related hazardous materials consistent with relevant regulations and guidelines, including those recommended and enforced by Caltrans; the Central Coast RWQCB; the applicable county department; and the applicable local fire department. Recommendations may include minimizing the amount of hazardous materials/waste stored on-site at any one time, transporting, and storing materials in appropriate and approved containers, maintaining required clearances, and handling materials using the applicable federal, state, and/or local regulatory agency protocols. In addition, all precautions required by the County of Monterey pursuant to the Central Coast RWQCB Orders, if applicable, will be taken

to ensure that no hazardous materials enter any storm drainages.

BMP-5	Best Management Practices for Biological Resources	<p>Site specific BMPs to control sediments during construction activities, which may include but not be limited to:</p> <ul style="list-style-type: none">• Install, implement, and maintain BMPs consistent with the California Storm Water Quality Association Best Management Practice Handbook (California Storm Water Quality Association [CASQA] 2015) or equivalent to minimize the discharge of pollutants;• Implement practices to reduce erosion of exposed soil, including stabilization of soil stockpiles, watering for dust control, establishment of perimeter silt fences, and/or placement of fiber rolls;• Minimize soil disturbance area;• Implement other practices to maintain water quality, including use of silt fences, stabilized construction entrances, and storm-drain inlet protection;• Where feasible, limit construction to dry periods; and• Revegetate disturbed areas.
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CHAPTER 3. ENVIRONMENTAL CHECKLIST

A. Summary of Project Information

1. Project Title: Calle la Cruz Pipeline Replacement Project

2. Lead Agency Name and Address:

Carmel Area Wastewater District
P.O. Box 221428
3945 Rio Road
Carmel, CA 93922

3. Contact Person, Email, and Phone Number:

Drew Lander, Principal Engineer
(831) 624-1248
lander@cawd.org

4. Project Location:

The proposed project is located at the mouth of the Carmel River, just south of the town of Carmel, in unincorporated Monterey County (see Figure 1 and Figure 2); it is located within and adjacent to the south arm of the Carmel Lagoon, north of Calle La Cruz.

5. Property Owner(s): California Department of Parks and Recreation

6. General Plan Designation: Wetlands and Coastal Strand, Agricultural Preservation¹

7. Zoning: RC-D CZ, (Resources Conservation, Coastal Zone) CAP-D (CZ) (Coastal Agricultural Preserve, Coastal Zone)²

8. Project Description: See Chapter 2 for detailed project description.

9. Surrounding Land Uses and Setting:

The project pipeline would run from the Calle la Cruz pump station, in the Carmel Meadows residential development, through the southern arm of the Carmel River lagoon, to connect with existing pipelines extending to the CAWD's sewage treatment plant. Nearby uses include residential, wetland preserve, mitigation bank, and recreation/open space uses. Carmel River State Beach lies to the west of the site.

¹ Monterey County Land Use Plan, Carmel Area, as amended, March 9, 1995

² Monterey County Zoning, Coastal Implementation Plan – Title 20 (accessed October 19, 2017)

10. Other Public Agencies whose Approval or Input May Be Needed

- US Fish and Wildlife Service (Section 7 Consultation with USFWS - informal consultation anticipated)
- National Marine Fisheries Service (Section 7 Consultation with NMFS)
- California Regional Water Quality Control Board #3 (SWPPP, NOI for Water Quality Order No. 2004-004 DWQ)
- State of California Department of Parks and Recreation (Right of Entry permit)
- California Department of Fish and Wildlife (Streambed Alteration Agreement [Section 1602], Notice of Intent)
- US Army Corps of Engineers, Section 404 of the Clean Water Act (33 U.S.C. Section 1344)
- US Army Corps of Engineers, Section 10 of the Rivers and Harbors Act (33 U.S.C. Section 403).
- California Coastal Commission (Coastal Development Permit)
- California Department of Transportation (Encroachment Permit)

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B. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project as indicated by the checklists and responses contained on the following pages:

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

C. Determination:

On the basis of this initial evaluation:

- I find that the proposed project COULD 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

Drew Lander, Principal Engineer

Printed name

D. Evaluation of Environmental Impacts

Evaluation of Environmental Impacts

The following checklist is formatted consistent with CEQA Guidelines, Appendix G. A “**no impact**” response indicates that the project would not result in an environmental impact in a particular area of interest, either because the resource is not present, or the project does not have the potential to cause an effect on the resource.

A “**less than significant**” response indicates that, while there may be potential for an environmental impact, the significance of the impact would not exceed established thresholds and/or that there are standard procedures or regulations in place that would apply to the project and hence no mitigation is required.

Responses that indicated that the impact of the project would be “**less than significant with mitigation**” mean that, although there is the potential for a significant impact, feasible mitigation measures would become conditions of approval for the project if it receives approval by the City Planning Commission.

A “**potentially significant impact**” response indicates that the impact would exceed established thresholds and that the impact could not be avoided by utilizing standard operating procedures and regulations, program requirements, or design features incorporated into the project or that additional analysis is required in an EIR.

Public comments on this Initial Study should focus on the accuracy and completeness of the analysis contained herein.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--	--------------------------------	---------------------------------------	------------------------------	-----------

I. AESTHETICS – 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 buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <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"/> |

Background:

The project pipelines would be placed underground across a narrow arm of the Carmel River lagoon. The project area's aesthetics are characterized by views of riparian vegetation, open waters of the Carmel River and Lagoon, open agricultural fields, and single-family residences (on the Carmel Meadows ridgeline). Those residences would have the most prominent views of aesthetic alterations associated with the project (see Figure 5). The project site is shielded from public views from Highway 1 and other local roadways outside of Carmel Meadows.

Discussion:

a. Scenic Vista - *Less than Significant Impact.* The project area is designated as visually "Sensitive" in the Monterey County General Plan (see Figure 14, Scenic Highway Corridors and Visual Sensitivity Map, January 26, 2010). However, most of the project would be subsurface, and not visible in any local views. Access roads and staging areas would be cleared of vegetation, creating temporary aesthetic impacts. However, this localized clearing of vegetation would not significantly alter the visual quality of the area, and the cleared areas would be allowed to revegetated after project construction is complete. Views of the cleared areas would be limited to eastward facing houses in Carmel Meadows (see Figure 5). In the longer term, removal of the above-ground pipelines would improve views of the lagoon

by eliminating an intrusive visual element from those views. Therefore, the project's impact on scenic vistas and views would be ***less than significant***.



Figure 5. View of Project Area from Calle la Cruz Pump station.

b. Scenic Highway – *Less Than Significant Impact*. Highway 1 in the project area is a designated Scenic Highway (see Figure 14, Scenic Highway Corridors and Visual Sensitivity map, Monterey County General Plan, January 26, 2010). In addition, Caltrans has designated Highway 1 from the San Luis Obispo County Line to State Route 68, just north of the project area, as a State Scenic Highway (http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/route1.htm). As described in Item a), above, most of the project would be subsurface, and the surface elements would be limited to temporary vegetation clearing and staging during construction, with limited visibility to the general public. Therefore, the project would have a ***less-than-significant impact*** on scenic highways.

c. Visual Quality – *Less than Significant Impact*. As described in Item a) above, impact on the proposed project on visual quality of the area would be ***less than significant***.

d. Light and Glare – *No Impact.* The project would not include any lighting and no nighttime construction would occur. Therefore, the proposed project would have no impact on light and glare.

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	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--	--------------------------------	---------------------------------------	------------------------------	-----------

II. AGRICULTURE AND FOREST RESOURCES:

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 on 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 zone 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

The project access road runs adjacent to an area designated for agricultural use in the Monterey County General Plan Land Use Element. However, that area is currently managed by Caltrans (biological mitigation bank) and owned by the California Department of Parks and Recreation (wetlands preserve) and is no longer in agricultural use. In addition, no construction or other disturbance is proposed. The project construction area is not in agricultural use and is not under a California Land Conservation (Williamson Act) contract. No forest resources exist on the site.

Discussion:

a, b. Farmland, Williamson Act - *No Impact*. The project site is located in open water and heavily vegetated riparian areas. The project would have no impact on conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program because no such designated lands are mapped on the corridor. No portions of the site are not under a Williamson Act Contract. Therefore, the project would result in ***no impact*** on farmland, land zoned for agricultural use, and/or Williamson Act contracts.

c, d. Forest Lands – *No Impact*. The project would not affect forest land or forest zoning because no such lands or zoning exist or are proposed on the site.

e. Conversion of Farmland – *No Impact*. The proposed project would not involve changes in the existing environment that could result in any conversion of Farmland to a non-agricultural use.

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	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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III. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Background:

The analysis was completed in accordance with the Monterey Bay Unified Air Pollution Control District's (MBUAPCD's) *CEQA Air Quality Guidelines* (dated February 2008).³ The air quality analysis includes the estimation of construction emissions such as volatile organic compounds (VOC) as reactive organic gases (ROG)⁴, nitrogen oxides (NOx), particulate

³ MBUAPCD, *CEQA Air Quality Guidelines, dated February 2008*, [http://mbuapcd.org/pdf/CEQA_full%20\(1\).pdf](http://mbuapcd.org/pdf/CEQA_full%20(1).pdf)

⁴ VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG are any reactive compounds of carbon, excluding methane, CO,

matter less than 10 micrometers (coarse particulate or PM₁₀), and particulate matter less than 2.5 micrometers (fine particulate or PM_{2.5})⁵.

The project site is in unincorporated Monterey County, south of the City of Carmel. Monterey County is located within the North Central Coast Air Basin (NCCAB), which also encompasses Santa Cruz and San Benito County. The MBUAPCD is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, as well as education and public information activities related to air pollution, as required by the California Clean Air Act and Amendments and the Federal Clean Air Act and Amendments. In 2016, the MBUAPCD changed its name to the Monterey Bay Air Resources District (MBARD). The Air District is referred to as the MBARD for the rest of this section.

The northwest sector of the NCCAB is dominated by the Santa Cruz Mountains. The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure which intensifies the onshore air flow during the afternoon and evening.

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. 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, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the NCCAB as a whole in winter and early spring.⁶

Existing Setting

The California Air Resources Board (CARB) maintains air quality monitoring data for the MBARD-operated Carmel Valley monitoring station, which is the closest monitoring station

CO₂ carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

⁵ *PM₁₀ and PM_{2.5} consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.*

⁶ *MBUAPCD, CEQA Air Quality Guidelines, dated February 2008, [http://mbuapcd.org/pdf/CEQA_full%20\(1\).pdf](http://mbuapcd.org/pdf/CEQA_full%20(1).pdf)*

to the project site. The monitoring station is located at 35 Ford Road in Carmel Valley, which is approximately 11 miles southeast of the project site. The monitoring station currently measures the ambient concentrations of ozone and PM2.5. Eight-hour and hourly ozone measurements show no exceedances of California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standards (NAAQS) between 2014 and 2016. PM2.5 measurements show no exceedances of the 24-hour NAAQS in 2014, one exceedance in 2015, and 11 exceedances in 2016. PM2.5 measurements show no exceedances of the annual CAAQS or NAAQS between 2014 and 2016.⁷

The Monterey County portion of the NCCAB is designated as a non-attainment-transitional area for CAAQS for ozone and as a non-attainment area for CAAQS for PM10. All other pollutants are in attainment or unclassified for all other State and federal standards.⁸

Sensitive Receptors

The MBARD's *CEQA Air Quality Guidelines* define a sensitive receptor 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 retirements and nursing homes." For the proposed project, the closest sensitive receptors are homes in the Carmel Meadows neighborhood as close as 150 feet southwest of the project site. No other sensitive receptors exist within 1,000 feet of the project site.

Significance Criteria

The MBARD has developed a threshold of significance for PM10 emissions during construction activities of 82 pounds per day for CEQA purposes.⁹ In regards to ozone and ozone precursors (ROG and NOx), the MBARD states that construction emissions from construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone State and federal standards. For the purposes of the proposed project, construction emissions would have a potentially significant air quality impact if they exceed the daily PM10 threshold of 82 pounds per day. Emissions of ozone precursors (ROG and NOx) and PM2.5 emissions are estimated for informational purposes.

⁷ California Air Resources Board, *ADAM: Air Quality Data Statistics*, <http://www.arb.ca.gov/adam/topfour/topfourdisplay.php>

⁸ California Air Resources Board, *Area Designation Maps/State and National*, <https://www.arb.ca.gov/desig/adm/adm.htm>

⁹ MBUAPCD, *CEQA Air Quality Guidelines*, February 2008, [http://mbuapcd.org/pdf/CEQA_full%20\(1\).pdf](http://mbuapcd.org/pdf/CEQA_full%20(1).pdf)

Discussion:

a) Conflict with or obstruct implementation of the applicable air quality plan – *No Impact.*

The MBARD's 2012-2015 Air Quality Management Plan¹⁰ is the seventh update to the 1991 Air Quality Management Plan and is the applicable air quality plan to the project site. The MBARD uses population and vehicle miles traveled (VMT) projections from the Association of Monterey Bay Area Governments (AMBAG) as the basis for air quality planning and develops an emissions inventory for the NCCAB from AMBAG population forecasts. The proposed project would not result in increases in population, housing, or other development and therefore would not increase the AMBAG population forecast. Thus, the proposed project would not conflict with or obstruct the MBARD's 2012-2015 Air Quality Management Plan and would have *no impact*.

b, c) Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment – *Less than Significant Impact*

Although temporary in duration, potential construction impacts would occur as a result of the proposed project. The proposed project is a replacement project and would not result in an operational emissions increase.

Construction activities would include site clearing of staging areas and access roads, installation of cofferdam sheet piles to dewater the lagoon, trenching, removal of existing wastewater outfall and sewage force main, installation of new wastewater outfall and sewage force main, removal of the cofferdam sheets piles, and restoration. Construction activities would occur over a four-month period, planned for the months of June through October 2018. Construction equipment is estimated to include a crane, excavator, dump truck, loader, bulldozer, concrete truck, concrete pumping truck, air compressor, generator, water truck and worker pickup trucks. Up to ten haul truck trips per day would be needed to export soil material, existing pipeline materials and structures, and to import clean sand and concrete. Approximately five to 10 workers would be on site per day, which would generate approximately 20 worker trips per day.

The proposed project would temporarily generate combustion emissions of criteria air pollutants from construction equipment, haul trucks, and worker automobiles. Construction emissions were estimated with the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Road Construction Emissions Model (Version 8.1.0).¹¹ See Appendix A of this IS/MND for calculations. The Road Construction Emissions Model is recommended for linear construction projects such as roadways, bridges, pipelines, transmission lines and

¹⁰ MBUAPCD, 2012-2015 Air Quality Management Plan, March 15, 2017, http://mbard.org/wp-content/uploads/2017/03/2012-2015-AQMP_FINAL.pdf

¹¹ SMAQMD Road Construction Emissions Model Version 8.1.0, May 2016, <http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools>

levees. Estimated construction emissions from the proposed project are displayed in **Table AQ-1**.

Table AQ-1: Estimated Maximum Daily Construction Emissions

Phase	ROG	NOx	PM10	PM2.5
Maximum Daily Emissions (pounds)	4.84	49.41	12.39	4.25
MBARD Daily Threshold (pounds)	--	--	82.0	--
Significant?	No	No	No	No

Source: SMAQMD Road Construction Emissions Model Version 8.1.0

Note: See **Air Quality Appendix** for detailed emission estimates and assumptions

As shown in **Table AQ-1**, estimated maximum daily construction emissions of PM10 are below the MBARD's daily significance threshold. In regard to ozone precursors (ROG and NOx), the MBARD states that construction emissions from construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone State and federal standards. The proposed project would not require the use of unusual construction equipment and construction would be temporary (four months). Therefore, construction emissions would be **less than significant**.

Poor construction practices could result in substantial emissions of fugitive dust that would be a nuisance and could create localized health impacts. The MBARD requires construction projects to comply with the fugitive dust prohibitions identified in Rule 403 (Particulate Matter). In order to prevent and control fugitive dust emissions and ensure compliance with MBARD rules, construction activities associated with the proposed project would adhere to the following best management practices:

- All exposed areas of bare soil should be watered twice per day to minimize fugitive dust emissions.
- All haul trucks transporting soil, sand, or other loose material off-site should be covered or maintain at least two feet of free board space. Any haul trucks traveling along freeways or major roadways should be covered.
- All vehicle speeds on unpaved roads should be limited to 15 miles per hour (mph).
- All visible mud or dirt track-out onto roads in the Carmel Meadows neighborhood should be removed using wet power-vacuum street sweepers at least once per day. The use of dry power sweeping should be prohibited.
- Idling times should be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California

airborne toxics control measure Title 13 CCR § 2485). Clear signage regarding this requirement should be provided for construction workers at all access points.

With implementation of the BMPs, the project's impact on fugitive dust would be ***less than significant***.

d) Expose sensitive receptors to substantial pollutant concentrations - *Less than Significant Impact*

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. The closest residences to the project site are in the Carmel Meadows neighborhood and construction activities could occur as close as approximately 150 feet away from the closest residence. However, most of the construction activities would occur in the lagoon, which is approximately 250 feet away from the closest residence. Approximately seven residences are within 500 feet of the lagoon. No schools, day care centers or other types of sensitive receptors exist within 1,000 feet of the project site.

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TAC that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

The proposed project would constitute a new emission source of DPM¹² due to construction activities. Studies have demonstrated that DPM from diesel-fueled engines is a human

¹² In August of 1998, CARB identified particulate emissions from diesel-fueled engines as a toxic air contaminant. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. The document represents a proposal to reduce diesel particulate emissions, with the goal to reduce emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. The proposed project is a short-term (four-month) construction project that would use diesel construction equipment intermittently and would not generate substantial TAC emissions. The general wind flow is from the west to east, which is not in alignment with the nearby sensitive receptors and the project site. The project site is located to the east of the receptors and thus, the general wind flow is from the receptors towards the project site. Implementation of the BMPs listed above would reduce the potential for localized health impacts from fugitive dust. Therefore, this impact would be **less than significant**.

e) Create objectionable odors affecting a substantial number of people - *Less than Significant Impact*

The MBARD's Rule 402 (Nuisances) prohibits the discharge of air contaminants which cause injury, detriment, nuisance, or annoyance to any considerable number of persons. Construction of the proposed project could potentially generate some temporary odors from diesel exhaust emissions, however odors would be minimally perceptible. Odors would be temporary as construction equipment would operate intermittently over the four-month construction period. The proposed project would be required to comply with MBARD's Rule 402 Nuisance. Therefore, the proposed project would have a ***less-than-significant*** impact on odors.

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Diesel particulate matter (DPM) is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition includes both solid and liquid material that condenses during the dilution process. The basic fractions of DPM are elemental carbon; heavy hydrocarbons derived from the fuel and lubricating oil and hydrated sulfuric acid derived from the fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbons found in diesel exhaust. Diesel particulates include small nuclei particles of diameters below 0.04 micrometers (μm) and their agglomerates of diameters up to 1 μm .

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – 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, 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 native 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 type="checkbox"/>	<input checked="" 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"/>

- g) Results in a conversion of Oak Woodlands that will have a significant effect on the environment

Background:

Studies Conducted

A Biological Resource Analysis was prepared for the project by Johnson Marigot Consulting, LLC in January 2018. This section of the Initial Study is based entirely on the findings of that report, which is included as Appendix B to this IS/MND.

Site surveys were conducted on the project site on November 10, 2014 and September 13 and 14, 2017. Surveys included walking the project site to characterize current site conditions including vegetation, topography, and the presence of suitable resting, nesting, and/or roosting wildlife habitat. In addition, general current and historic uses of the site were noted, as well as general observations of neighboring property uses. On September 13, 2017, Johnson Marigot Consulting, LLC (JMC) biologists conducted a field survey to determine the location and extent of potential waters of the U.S. within the project site. The wetland delineation was conducted using the methods described in the *Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), supplemented with guidance as directed by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008).

Prior to site investigations, literature reviews were conducted of known and potential special-status species, including analysis of the California Natural Diversity Database (CNDDDB) and a query of the Inventory of Rare, Threatened, and Endangered Plants of California (California Native Plant Society; CNPS), and review of the on-site soils pursuant to the US Department of Agriculture (USDA).

Existing Site Conditions

The project site consists of undeveloped land surrounding a rarely maintained access road. The project site occurs primarily on the former northern levee of the former Odello family artichoke farm; the western portion of the project site was re-graded approximately 13 years ago to match the surrounding floodplain elevations. The project site occurs on a gentle south and southwestern facing slope, with elevations ranging between approximately 20 feet above mean sea level (AMSL) at the northeastern portion of the site and approximately 8 feet AMSL at the western portion of the site (adjacent to the lagoon).

The project site is dominated by riparian woodland and ruderal habitat, as well as seasonal and perennial wetland; a small area of coastal sage scrub occurs at the southwestern corner of the project site (see Figure 4). These habitats are described below.

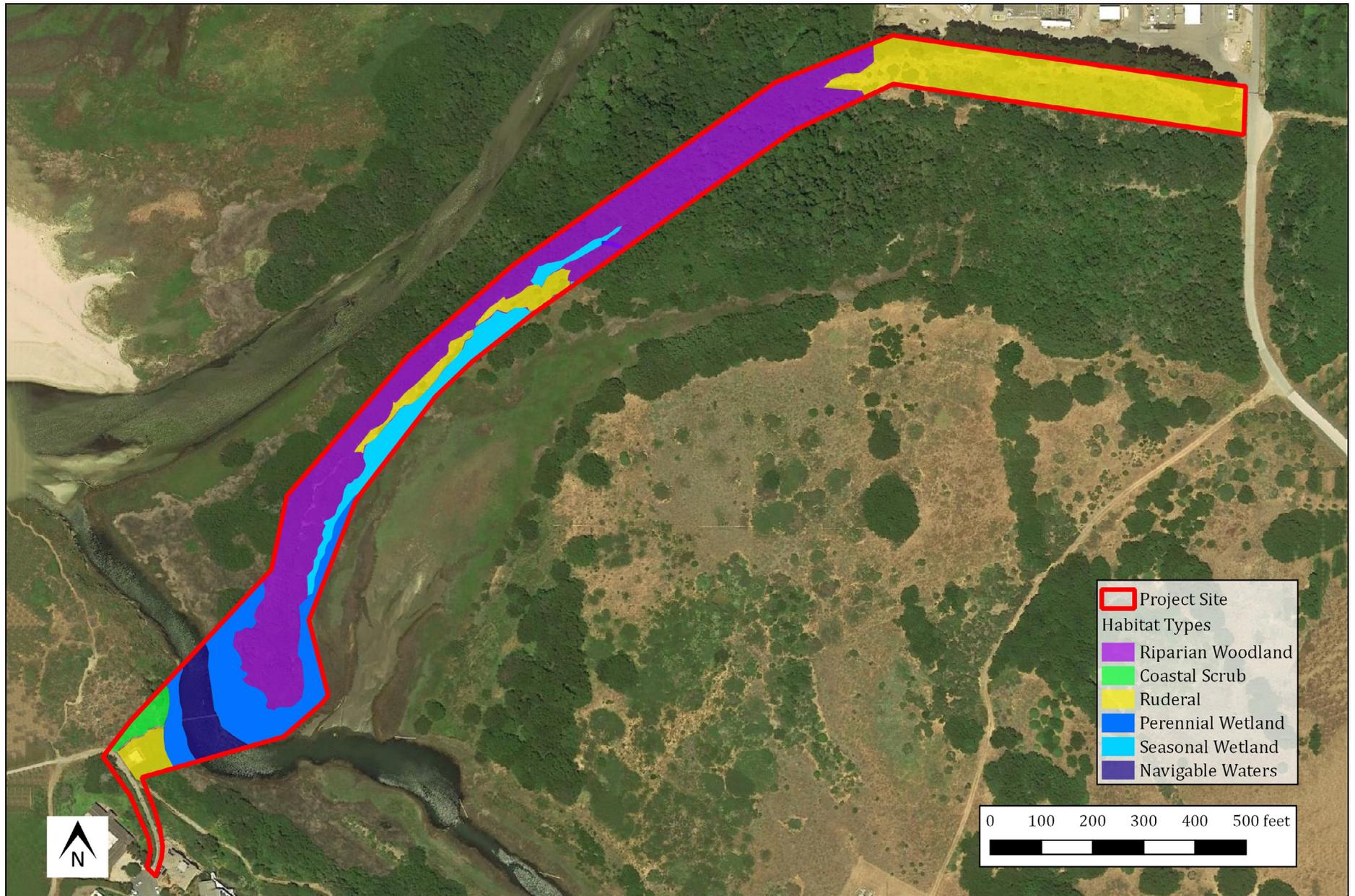


Figure 4
Project Site Habitat Areas

Riparian Woodland

A majority of the project site is comprised of riparian woodland, which dominates the northern and central portions of the project site. The fairly dense canopy (70-100% canopy cover) is dominated by willows (*Salix* spp.), coast live oak (*Quercus agrifolia*), and cottonwood (*Populus fremontii*), with sub-dominant species including elderberry (*Sambucus nigra*), and dogwood (*Cornus sericea*). The understory is fairly densely vegetated, and is dominated by California blackberry (*Rubus ursinus*) and poison oak (*Toxicodendron diversilobum*).

Ruderal Vegetation

The northeastern portion of the project site is dominated by ruderal vegetation. These species may be native or non-native, but are often thought of as “weedy” species. Dominant species in this area include non-native herbaceous species such as Italian thistle (*Carduus pycnocephalus*), poison hemlock (*Conium maculatum*), bristly ox-tongue (*Helminthotheca echioides*), and Canada horseweed (*Erigeron canadensis*), as well as non-native grasses such as Italian wildrye (*Festuca perennis*), slender wild oat (*Avena barbata*), and rip-gut brome (*Bromus diandrus*). A small native contingent occurs within the shrub layer and includes species such as coyote brush (*Baccharis pilularis*), California blackberry, and California sage (*Artemisia californica*).

Coastal Sage Scrub

The northernmost section of the southwestern portion of the project site is dominated by a small area of coastal sage scrub. The onsite scrub habitat is densely vegetated and is dominated by Monterey cypress (*Hesperocyparis macrocarpa*), California sage, poison oak, coyote brush, poison hemlock, and black mustard (*Brassica nigra*).

Wetlands

Seasonal Wetland

Seasonal wetlands occur throughout the central portion of the project site. These wetlands are dominated by brown-headed rush (*Juncus phaeocephalus*), hardstem bulrush (*Schoenoplectus acutus*), and salt grass (*Distichlis spicata*), with lesser common species including cutleaf plantain (*Plantago coronopus*) and seaside barley (*Hordeum marinum*).

Perennial Wetland

The southwestern portion of the project site is dominated by perennial wetland. This wetland area is clearly subjected to greater periods of inundation than the seasonal wetlands due to closer proximity to the topographic low portions of the adjacent lagoon. At the time of the September site visit, some portions of this wetland were still inundated with several inches of water. Dominant species in the perennial wetland included Santa Barbara sedge (*Carex barbarae*), fleshy jaumea (*Jaumea carnosa*), spotted ladies thumb (*Persicaria maculosa*), dotted smartweed (*Persicaria punctata*), and hardstem bulrush.

Aquatic Resources

Approximately 1.813 acres of potential waters of the U.S. have been mapped on the project site, including 0.352 acre of seasonal wetland, 0.95 acre of perennial wetland, 0.33 acre of navigable waters, and 0.001 acre of drainages. A wetland delineation was conducted on September 13, 2017, and JMC submitted a Request for Preliminary Jurisdictional Determination to the Corps on December 14, 2017. To date, the Corps has not determined the extent of waters of the U.S./State on the project site.

Discussion:

a. Effect on Protected Species – *Less than Significant Impact with Mitigation.*

Special-status species include species considered to be rare by federal and/or state resource agencies (USFWS, NMFS, CDFW) and/or the scientific community (CNPS) and are accordingly legally protected via the federal, state, and/or local laws defined below.

Endangered Species Act (ESA): The USFWS and NMFS (Resource Agencies), with regulatory authority over listed plants, wildlife, and fish, oversee the ESA (50 CFR § 402.7, Section 305(b)(4)(B)). The ESA prohibits the “take” of any wildlife species listed as threatened or endangered, by the Resource Agencies, including the destruction of habitat that could hinder species recovery. The Resource Agencies administer the ESA and authorize take through issuance of Biological Opinions in consultation with the federal action agency (e.g. Corps or FEMA).

Migratory Bird Treaty Act (MBTA): The MBTA of 1918 (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755; as amended in 1936; 1960, 1968, 1969, 1974, 1978, 1986, and 1998) prohibits the take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of any migratory bird or any part, nest, or egg of any such bird.

California Endangered Species Act (CESA): CESA prohibits the “take” of any wildlife species listed as endangered and threatened by the state of California. Section 2090 of the CESA requires state agencies to comply with regulations for protection and recovery of listed species and to promote conservation of these species. The CDFW administers the act and authorizes “take” through section 2081 agreements (except for designated “fully protected species”). Regarding rare plant species, the CESA defers to the California Native Plant Protection Act of 1977.

California Native Plant Protection Act & California Fish and Game Code (Plants): The California Native Plant Society (CNPS) designates California Rare Plants through a ranking system. Rank 1A, 1B, and 2 meet the definitions established in Sec. 1901, Chapter 10 (Native Plant Protection Act of 1977) or Secs. 2062 and 2067 of the CESA and are eligible for state listing (CNPS Inventory, 2015).

California Fish and Game Code (Fully Protected Species): To provide additional protections for wildlife that is rare or faces potential extinction, California Fish and Game

Code Sections 3511, 4700, 5050, and 5515 designates “fully protected” status for specific birds, mammals, reptiles and amphibians, and fish. Fully protected species cannot be taken or possessed at any time and no licenses or permits can be issued for their take. Exceptions are established for scientific research collection, relocation of the bird species for the protection of livestock, and take resulting from recovery activities for state-listed species.

California Fish and Game Code (Birds): California Fish and Game Code (Section 3503) prohibits the take of nest or eggs of any bird. Raptors and other fully protected bird species are further protected in Sections 3503.5 and 3511, which states that raptors/fully protected birds or parts thereof may not be taken or possessed at any time.

California Fish and Game Code (Species of Special Concern): A species of special concern is a designation given by the state to a native species that meets one or more of the following criteria: extirpated for the state; federally (but not state) listed; experiencing, or formerly experienced, population declines or range restrictions; has naturally small populations at high risk of declines.

A search of the CNDDDB and the CNPS Inventory of Rare, Threatened, and Endangered Plants of California was conducted for state and federally listed and candidate species, as well as CNPS-ranked species known to occur in the vicinity of the property. The species identified in this search were compiled in tables (Tables 1 and 2) and evaluated for likelihood of occurrence on the project site. The potential for species to be adversely affected by the proposed project was classified as high, moderate, or low, using the definitions provided below. When a species was not expected to occur on or adjacent to the project site, the potential for adverse effects was identified as “none.”

High: The potential for a species to occur was considered high when the project site was located within the range of the species, recorded observations were identified within known dispersal distance of the project site, and suitable habitat was present on the project site.

Moderate: The potential for a species to occur was considered moderate when the project site was located within the range of the species, recorded observations were identified nearby but outside known dispersal distance of the project site, and suitable habitat was present on the project site. A moderate classification was also assigned when recorded observations were identified within known dispersal distance of the project site but habitat on the project site was of limited or marginal quality.

Low: The potential for a species to be adversely affected was considered low when the project site was within the range of the species, but no recorded observations within known dispersal distance were identified, and habitat on the project site was limited or of marginal quality. The potential for adverse effects was also classified as low when the project site was located at the edge of a species’ range and recorded observations were extremely rare, but habitat in the project site was suitable.

Special-Status Plants

According to the CNDDDB and the CNPS Inventory of Rare, Threatened, and Endangered Plants of California, a total of 36 special-status plant species are known to occur in the vicinity of the project site (Table 1). The closest of these recorded occurrences of special-status plant species (according to the CNDDDB and CNPS databases) is approximately 0.7-mile northeast of the project site. Eleven of these species require specialized habitats that do not occur on the project site (coniferous forest, broadleaved upland forest, cismontane woodland, chaparral, coastal prairie, coastal dunes, and valley and foothill grassland).

While no occurrences of special-status plant species have been documented on or adjacent to the project site, the project site provides suitable habitat for the 25 remaining species. A brief description of each of these species is included below, including the species' distribution, habitat, life cycle, threats to the species, and potential impacts to the species resulting from development of the proposed project.

Hickman's Onion (Allium hickmanii)

Hickman's onion is a small, white to pale-pink-flowered perennial bulbiferous herbaceous member of the onion family (Alliaceae), that blooms between March and May. Hickman's onion is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by urbanization, grazing, non-native plants, trampling, road construction, and military activities.

A 1985 occurrence of this species was recorded on grassy slopes in coastal prairie approximately 0.7-mile northeast of the project site (CNDDDB Occurrence No. 5). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Hickman's onion. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Hooker's Manzanita (Arctostaphylos hookeri ssp. hookeri)

Hooker's manzanita is a white to pink-flowered shrub member of the heather family (Ericaceae), that blooms between February and April. This species is endemic to California and is known to occur in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats. Hooker's manzanita is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by agriculture, development, fire suppression, and competition with non-native *Eucalyptus*.

A 2005 occurrence of this species was recorded in maritime chaparral on a west-facing ridgeline approximately 1.2 miles south of the project site (CNDDDB Occurrence No. 15). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While no manzanita species were observed during site surveys, the surveys conducted on the project site were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of

protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Hooker's manzanita. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Toro manzanita (Arctostaphylos montereyensis)

Toro manzanita is a white to pink-flowered perennial evergreen shrub member of the heather family, that blooms between February and March. This species is endemic to California and is known to occur in maritime chaparral, cismontane woodland, and coastal scrub. Toro manzanita is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by development.

An historic record for this species is documented approximately 0.9 mile north of the project site (CNDDDB Occurrence No. 25), however, that occurrence is presumed extirpated. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While no manzanita species were observed during site surveys, the surveys conducted on the project site were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Toro manzanita. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Sandmat Manzanita (Arctostaphylos pumila)

Sandmat manzanita is a white to pink-flowered perennial evergreen shrub member of the heather family, that blooms between February and May. This species is endemic to California and is known to occur in closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub. Sandmat manzanita is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by urbanization and military activities.

An historic record for this species is documented in the vicinity of the project site (exact location is unknown) (CNDDDB Occurrence No. 12), however, that occurrence is considered possibly extirpated. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While no manzanita species were observed during site surveys, the surveys conducted on the project site were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to sandmat manzanita. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Coastal Dunes Milk-Vetch (Astragalus tener var. titi)

Coastal dunes milk-vetch is a purple-flowered annual herbaceous member of the pea family (Fabaceae), that blooms between March and May. This species is endemic to California and is known to occur in sandy coastal bluff scrub, coastal dunes, and mesic coastal prairie. Coastal dunes milk-vetch is state and federally endangered, and is a CNPS Rank 1B.1 species, threatened by urbanization, recreational activities, and non-native plants.

This species is known to occur near the project site. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to coastal dunes milk-vetch. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Pink Johnny-Nip (Castilleja ambigua ssp. insalutata)

Pink Johnny-nip is a pink, yellow, and white-flowered hemiparasitic annual herbaceous member of the broomrape family (Orobanchaceae), that blooms between May and August. This species is endemic to California and is known to occur in coastal prairie and coastal scrub. Pink Johnny-nip is not state or federally listed, but is a CNPS Rank 1B.1 species, threatened by development and non-native plants.

An historic record for this species is documented approximately 1.5 miles southwest of the project site (CNDDDB Occurrence No. 6). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to pink Johnny-nip. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Monterey Spineflower (Chorizanthe pungens var. pungens)

Monterey spineflower is a white-flowered annual herbaceous member of the buckwheat family (Polygonaceae), that blooms between April and August. This species is endemic to California and is known to occur in sandy-soiled maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland. Monterey spineflower is federally threatened, and is a CNPS Rank 1B.2 species, threatened by urbanization, recreational development and activities, agriculture, military activities, and non-native plants.

The closest record for this species occurs approximately 1.5 miles southwest of the project site (CNDDDB Occurrence No. 45). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Monterey spineflower. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

4.1.8 Jolon Clarkia (*Clarkia jolonensis*)

Jolon clarkia is a pale lavender-flowered annual herbaceous member of the evening primrose family (Onagraceae), that blooms between April and June. This species is endemic to California and is known to occur in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Jolon clarkia is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by grazing, foot traffic, and non-native plants.

An historic record for this species is documented in the vicinity of the project site (exact location is unknown) (CNDDDB Occurrence No. 15). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to jolon clarkia. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

San Francisco Collinsia (*Collinsia multicolor*)

San Francisco collinsia is a white and purple-flowered annual herbaceous member of the plantain family (Plantaginaceae), that blooms between February and May. This species is endemic to California and is known to occur in closed-cone coniferous forest and coastal scrub. San Francisco collinsia is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by urbanization, foot traffic, and non-native plants.

This species is known to occur on near the project site. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to San Francisco collinsia. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Seaside Bird's-Beak (*Cordylanthus rigidus ssp. littoralis*)

Seaside bird's-beak is a yellow-flowered hemiparasitic annual herbaceous member of the broomrape family, that blooms between April and October. This species is endemic to California and is known to occur in sandy closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub. Seaside bird's-beak is state-listed as endangered, and is a CNPS Rank 1B.1 species, threatened by development, energy projects, road widening, vehicles, military operations, and non-native plants.

This species is known to occur near the project site. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species.

While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to seaside bird's-beak. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Hutchinson's Larkspur (Delphinium hutchinsoniae)

Hutchinson's larkspur is a blue-purple-flowered perennial herbaceous member of the buttercup family (Ranunculaceae), that blooms between March and June. This species is endemic to California and is known to occur in broadleafed upland forest, chaparral, coastal prairie, and coastal scrub. Hutchinson's larkspur is not state or federally listed, but is a CNPS Rank 1B.1 species, threatened by foot traffic, non-native plants, recreational activities, grazing, and trampling.

This species is known to occur near the project site. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Hutchinson's larkspur. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Eastwood's Goldenbush (Ericameria fasciculata)

Eastwood's goldenbush is a yellow-flowered perennial evergreen shrub member of the sunflower family (Asteraceae), that blooms between July and October. This species is endemic to California and is known to occur in sandy openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub in the Monterey Bay area. Eastwood's goldenbush is not state or federally listed, but is a CNPS Rank 1B.1 species, threatened by development.

Multiple historic observations (1889-1913) of Eastwood's goldenbush are documented in the vicinity of the project site (exact locations are unknown) (CNDDDB Occurrence No. 8). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Eastwood's goldenbush. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Fragrant Fritillary (Fritillaria liliacea)

Fragrant fritillary is a white-flowered perennial bulbiferous herbaceous member of the lily family (Liliaceae), that blooms between February and April. This species is endemic to California and is known to occur in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland. Fragrant fritillary is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by grazing, agriculture, urbanization, and non-native plants. An historic record (1940) for this species is documented in the vicinity of the project site (exact location is unknown) (CNDDDB Occurrence No. 5). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species.

While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Fragrant fritillary. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Monterey Gilia (Gilia tenuiflora ssp. arenaria)

Monterey gilia is a purple and pink-flowered annual herbaceous member of the phlox family (Polemoniaceae), that blooms between April and June. This species is endemic to California and is known to occur sandy openings in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub. Monterey gilia is federally listed as endangered, state-listed as threatened, and is a CNPS Rank 1B.2 species, threatened by development, sand mining, vehicles, recreational activities, foot traffic, and non-native plants.

This species is known to occur on the same quad as the project site (Monterey Quad). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Monterey gilia. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Kellogg's Horkelia (Horkelia cuneata ssp. sericea)

Kellogg's horkelia is a white-flowered perennial herbaceous member of the rose family (Rosaceae), that blooms between April and September. This species is endemic to California and is known to occur in sandy or gravelly openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub. Kellogg's horkelia is not state or federally listed, but is a CNPS Rank 1B.1 species, threatened by coastal development.

An historic record (1896) for this species is documented in the vicinity of the project site (exact location is unknown) (CNDDDB Occurrence No. 15). The southwestern portion of the

project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Kellogg's horkelia. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Beach Layia (Layia carnosa)

Beach layia is a white and yellow-flowered annual herbaceous member of the sunflower family, that blooms between March and July. This species is known to occur coastal dunes and coastal scrub in California and Oregon. Beach layia is state and federally endangered, and is a CNPS Rank 1B.1 species, threatened by coastal development, foot traffic, vehicles, and non-native plants.

This species is known to occur on the same quad as the project site (Monterey Quad). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to beach layia. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Carmel Valley Bush-Mallow (Malacothamnus palmeri var. involuocratus)

Carmel Valley bush-mallow is a white to pale-pink-flowered perennial deciduous shrub member of the hibiscus family (Malvaceae), that blooms between April and October. This species is endemic to California and is known to occur in chaparral, cismontane woodland, and coastal scrub. Carmel Valley bush-mallow is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by development.

An historic record (1955) for this species is documented approximately 2.6 miles east of the project site (exact location is unknown) (CNDDDB Occurrence No. 30). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Carmel Valley bush-mallow. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Carmel Valley Malacothrix (Malacothrix saxatilis var. arachnoidea)

Carmel Valley malacothrix is a white-flowered perennial rhizomatous herbaceous member of the sunflower family, that blooms between March and December. This species is endemic to California and is known to occur in rocky chaparral and coastal scrub. Carmel Valley malacothrix is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by road maintenance.

This species is known to occur near the project site. The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Carmel Valley malacothrix. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Oregon Meconella (Meconella oregana)

Oregon meconella is a white-flowered annual herbaceous member of the poppy family (Papaveraceae), that blooms between March and April. This species is known to occur in coastal prairie and coastal scrub in California, Oregon, and Washington. Oregon meconella is not state or federally listed, but is a CNPS Rank 1B.1 species, threatened by alteration of fire regimes.

This species is known to occur on the same quad as the project site (Monterey Quad). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Oregon meconella. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Marsh Microseris (Microseris paludosa)

Marsh microseris is a yellow-flowered perennial herbaceous member of the sunflower family, that blooms between April and July. This species is endemic to California and is known to occur in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. Marsh microseris is not state or federally listed, but is a CNPS Rank 1B.2 species.

An historic record (1901) for this species is documented in the vicinity of the project site (exact location is unknown) (CNDDDB Occurrence No. 30). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not

sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to marsh microseris. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Northern Curly-Leaved Monardella (Monardella sinuata ssp. nigrescens)

Northern curly-leaved monardella is a lavender to purple-flowered annual herbaceous member of the mint family (Lamiaceae), that blooms between April and September. This species is endemic to California and is known to occur in sandy chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest. Northern curly-leaved monardella is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by on-native plants, development, habitat loss, habitat fragmentation, and climate shifts.

This species is known to occur on the same quad as the project site (Monterey Quad). The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, even though the surveys were conducted during the blooming season, they were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to northern curly-leaved monardella. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Yadon's Rein Orchid (Piperia yadonii)

Yadon's rein orchid is a green and white-flowered perennial herbaceous member of the orchid family (Orchidaceae), that blooms between February and August. This species is endemic to California and is known to occur in sandy coastal bluff scrub, closed-cone coniferous forest, maritime chaparral. Yadon's rein orchid is federally endangered, and is a CNPS Rank 1B.1 species, threatened by urbanization, recreational development, non-native plants, road maintenance, and herbivory.

The closest record for this species occurs in a Monterey pine/coast live oak woodland approximately 0.7-mile northeast of the project site (CNDDDB Occurrence No. 24) The southwestern portion of the project site is comprised of coastal sagebrush scrub and provides suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Yadon's rein orchid. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Hickman's Cinquefoil (Potentilla hickmanii)

Hickman's cinquefoil is a yellow-flowered perennial herbaceous member of the rose family, that blooms between April and August. This species is endemic to California and is known

to occur in coastal bluff scrub, closed-cone coniferous forest, vernal mesic meadows and seeps, and freshwater marshes and swamps. Hickman's cinquefoil is state and federally endangered, and is a CNPS Rank 1B.1 species, threatened by urbanization, recreational activities, non-native grasses, and grazing.

This species is known to occur on the project site. The coastal sagebrush scrub and the wetland habitat that occur on the project site provide suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Hickman's cinquefoil. These impacts can be reduced to a **less than significant** level with implementation of the mitigation measures presented below.

Saline Clover (Trifolium hydrophilum)

Saline clover is a white, pink, red, and/or purple-flowered annual herbaceous member of the pea family (Fabaceae), that blooms between April and June. This species is endemic to California and is known to occur in marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools. Saline clover is not state or federally listed, but is a CNPS Rank 1B.2 species, threatened by development, trampling, road construction, and vehicles.

This species is known to occur on the same quad as the project site (Monterey Quad). The onsite wetlands provide suitable habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to saline clover. These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Pacific Grove Clover (Trifolium polyodon)

Pacific Grove clover is a pink to white and purple-flowered annual herbaceous member of the pea family, that blooms between April and July. This species is endemic to California and is known to occur in mesic closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland. Pacific Grove clover is a state-listed rare species, and is a CNPS Rank 1B.1 species, threatened by urbanization, recreation, foot traffic, trampling, and non-native plants.

This species is known to occur in the project area. The project site provides marginal habitat for this species. While this species was not observed on the project site during the September 2017 site investigation, the surveys were not conducted during the blooming season and were not sufficiently thorough to be considered adequate to rule out presence of special-status plant species. In the absence of protocol-level rare plant surveys on the project site, the proposed project may result in adverse impacts to Pacific Grove clover.

These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

State and Federally Listed Wildlife

A total of 11 special-status wildlife species are known to occur in the vicinity of the project site (Table 2): black legless lizard (*Anniella pulchra* ssp. *nigra*), California red-legged frog (*Rana draytonii*), black swift (*Cypseloides niger*), California brown pelican (*Pelecanus occidentalis* ssp. *californicus*), California tiger salamander (*Ambystoma californiense*), coast range newt (*Taricha torosa* ssp. *torosa*), monarch butterfly (*Danaus plexippus* ssp. *plexippus*), Smith's blue butterfly (*Euphilotes enoptes* ssp. *smithi*), steelhead (*Oncorhynchus mykiss* ssp. *irideus*), western pond turtle (*Emys marmorata*), white-tailed kite (*Elanus leucurus*). Four of these species require specialized habitats that do not occur on the project site, such as steep, rocky cliffs (black swift), offshore islands (California brown pelican); grasslands adjacent to sufficiently deep freshwater seasonal wetlands and ponds (California tiger salamander); tall stands of eucalyptus (*Eucalyptus* sp.), Monterey cypress, Monterey pine (*Pinus radiata*), and western sycamore trees (*Platanus racemosa*) [monarch butterfly].

Of the 10 special-status wildlife species known to occur in the vicinity of the project site, four have been recorded on the project site (California red-legged frog, steelhead, western pond turtle, and white-tailed kite). While not detected on the project site, the site provides suitable habitat for black legless lizard and coast range newt, and potentially suitable habitat for Smith's blue butterfly. A description of these species is included below, including the species' distribution, habitat, life cycle, threats to the species, current habitat conservation efforts, and potential impacts to the species resulting from implementation of the proposed project.

Black Legless Lizard (Anniella pulchra ssp. nigra)

The black legless lizard (BLL) is a small, slender lizard, with smooth, shiny scales, a blunt tail, and no legs. The BLL burrows in loose, sandy soils, and is known to occupy sand dunes as well as other sandy-soiled areas such as oak or pine-oak woodland, chaparral, wooded stream edges, and desert-scrub.

BLL is known only from the Monterey Bay area and is a state Species of Special Concern. Major threats to this species include habitat loss due to agriculture, development, sand mining, recreation, and the introduction of exotic plants such as ice plant.

The closest record for this species occurs in the immediate vicinity of the project (the exact location is suppressed by CNDDDB and is unavailable for public viewing) (CNDDDB Occurrence No. 22). The project site provides suitable habitat for this species, and as such, the implementation of the proposed project has the potential to result in adverse impacts to BLL, both directly (physical impacts to individual BLL) and indirectly (temporary alteration of suitable habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

California Red-legged Frog (Rana draytonii)

The California red-legged frog (CRLF) has coarsely granular skin, with coloring that ranges from brown, to grey, to olive, to reddish, with dark, irregular blotches. CRLF is a highly

aquatic species, generally staying close to their aquatic habitat: streams and creeks, ponds, marshes, seeps, and springs. Ideal CRLF habitat includes aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Dispersal habitat generally includes moist, shaded areas with vegetation that provides cover as a protection from predators and to prevent desiccation; these frogs often travel along riparian corridors and can be found adjacent to aquatic habitats (USFWS 2002).

CRLF has sustained a 70 percent reduction in its geographic range as a result of degradation and loss of its habitat through agriculture, urbanization, mining, overgrazing, recreation, timber harvesting, non-native plants, impoundments, water diversions, degraded water quality, use of pesticides, and introduced predators (Jennings et al. 1992). CRLF was listed as federally threatened in 1996 (Federal Register 61:25813-25833), with critical habitat originally designated for this species in 2001 (Federal Register 66:14626-14674). RLF is currently state-listed as a Species of Special Concern.

A 2001 record for this species documented CRLF at multiple sites throughout the project site (CNDDDB Occurrence No. 472). The implementation of the proposed project has the potential to result in adverse impacts to CRLF, both directly (physical impacts to individual CRLF) and indirectly (temporary alteration of habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Coast Range Newt (Taricha torosa ssp. torosa)

The coast range newt (CRN) is a stocky, medium-sized newt with rough, granular skin. CRN is a largely fossorial species, spending much of the year in underground refugia in upland mesic woodlands, but can be found travelling overland in moist conditions year-round. Migration to/from breeding areas is generally initiated by the first rains of fall, with many individuals migrating from their upland habitat as far as 2 miles to breeding areas. Breeding occurs in ponds, reservoirs, and streams. CRN is known to occur in scattered populations along the coast from Monterey County southward through southern California. It is a state Species of Special Concern, threatened by habitat loss and degradation, and predation by non-native introduced fish and crayfish.

The closest record for this species occurs approximately 2.4 miles southeast of the project site (CNDDDB Occurrence No. 70). The project site provides suitable habitat for this species, and as such, the implementation of the proposed project has the potential to result in adverse impacts to CRN, both directly (physical impacts to individual CRN) and indirectly (temporary alteration of suitable habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Monterey Dusky-Footed Woodrat (Neotoma macrotis ssp. luciana)

The Monterey dusky-footed woodrat (MDFW) is a large-sized wood rat with a blunt nose, long whiskers, and a scantily haired tail. MDFW build large houses of sticks, leaves, and other debris on the ground or in trees; with the exception of females with young, each stick house generally supports just one adult. MDFW is known to occur in dense oak woodlands, riparian woodlands, and cooler chaparral habitats in coastal California from Monterey Bay

to Morrow Bay. It is a state Species of Special Concern, threatened by habitat loss and degradation due to coastal development.

While no records for MDFW occur within 3 miles of the project site, several woodrat nests were observed on the project site during the September 2017 site investigations. As such, the implementation of the proposed project has the potential to result in adverse impacts to MDFW, both directly (physical impacts to individual CRN) and indirectly (temporary alteration of occupied habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Smith's Blue Butterfly (Euphilotes enoptes ssp. smithi)

Smith's blue butterfly (SBB) is a small-sized butterfly with a wing span of just under 1 inch. SBB's life history is tied to its host plant(s): seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*). Larvae feed on the flowers of these host plants, adults feed on the nectar and use them as mating sites (Black and Vaughn 2005). Adult SBBs can be seen between late mid-June through early September (this timing is synchronized with the flowering of their host plants). Historically, SBB occurred in scattered populations along the California coast from Monterey Bay to Point Gorda. However, this range has been greatly reduced due to habitat loss from development and recreation, and invasion of exotic plants introduced for beach stabilization purposes.

SBB was listed as federally endangered in 1976 (Federal Register 41:22041-22044). Critical habitat was proposed for SBB in 1977 (Federal Register 42:7972-7976), but was never designated. The *Smith's Blue Butterfly Recovery Plan* (SBB Recovery Plan) was approved and published in 1984 (USFWS 1984). The SBB Recovery Plan identifies existing populations and strategies to preserve and protect the species. Specifically, when the 18 existing population locations (or 18 equivalent sites) listed in the SBB Recovery Plan are protected, managed, and appear to support healthy populations of SBB, the species can be determined "recovered," and be delisted. The project site does not occur within any of the 18 identified sites and does not provide the quality of coastal dune or cliff/chaparral habitat necessary to be considered an equivalent site.

SBB is not known to occur on or adjacent to the project site, however four records for this species occur within 3 miles of the project site. The closest record of SBB is for individuals observed approximately 1.3 miles east of the project site on preserved land within the Palo Corona Regional Park. Dune buckwheat, one of SBB's host plant species, has been observed in close proximity to the project site (0.3-mile north of the project site, adjacent to the Carmel River State Beach parking lot). While the project site provides marginal habitat for SBB, no buckwheat species of any kind were observed on the project site during the September 2017 site investigation. The presence of SBB is correlated with the presence of their host plant. The presence of the host plant, however, is not indicative of presence of SBB, as the range of the host plant species is much larger than the range of the butterfly. Regardless, in the absence of thorough botanical surveys, the presence of SBB host plants and the presence of SBB cannot be ruled out. The potential for this species to occur on the project site is low. As such, the implementation of the proposed project has the potential to result in adverse impacts to SBB, both directly (physical impacts to individual SBB) and

indirectly (temporary alteration of occupied habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Steelhead (South-Central California Coast DPS) (Oncorhynchus mykiss ssp. irideus)

In North America, steelhead are found in the Pacific Ocean and associated tributaries from southern California to Alaska. Steelhead are anadromous, with two-year-old smolts generally migrating from freshwater to sea and returning to freshwater after two years to spawn. The steelhead species is divided into 10 Distinct Population Segments (DPSs) based on location. The locally occurring population is the South-Central California Coast DPS (SCCC Steelhead). In the Carmel River, adult migration in the river is delayed until the sandbar at the mouth of the Carmel River is breached in January to April but may start as early as December and extend into May. The fish then travel upstream to spawning habitat in the Carmel River and peak spawning occurs from December through April. After spawning, eggs incubate 3 weeks to 2 months and fry emerge post-hatch 2 to 6 weeks in spring or early summer. Juvenile steelhead rear in the Carmel River and Carmel River Lagoon for 1 to 2 years before smolting and entering the ocean (Alley 2013). The southern arm of the lagoon is usually the deepest portion of the lagoon during the summer months, thus the area is likely to provide refuge for juvenile steelhead when the river flows cease and the lagoon size decreases. Following smolt migration, the Carmel River Lagoon provides steelhead rearing habitat from March to early June and primarily in April and May. Smolts reside in the lagoon approximately 2-3 weeks or more before entering the ocean (Alley 2014).

Threats to SCCC steelhead include the loss of fresh water and estuarine habitat, periodic poor ocean conditions, and land-use practices impacting watershed processes. The SCCC steelhead was listed as federally threatened in 2006 (Federal Register 71:834-862), with critical habitat designated for the species in 2005 (Federal Register 70:69348-69350).

The species has been well documented within the Carmel River and within the Carmel River Lagoon. SCCC steelhead smolt migrate downstream from the Carmel River to the Carmel River Lagoon where they reside prior to entering the ocean; this migration is heaviest from March to May. As the proposed project will temporarily impact the south arm of the Carmel River Lagoon, implementation of the proposed project has the potential to result in adverse impacts to SCCC steelhead, both directly (physical impacts to individual fish) and indirectly (temporary alteration of occupied habitat and acoustic impacts). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Western Pond Turtle (Emys marmorata)

The western pond turtle (WPT) is a small, fairly flat-bodied turtle, with an olive, brown, or black carapace (dorsal “shell”) with yellow dots, splotches, or lines and a plastron (ventral “shell”) that is generally yellow with dark splotches. WPT generally overwinter in upland habitats near permanent or intermittent waters such as rivers, creeks, small lakes/ponds, marshes, and reservoirs. WPT is a state Species of Special Concern and was petitioned for federal listing in 2012. Threats to the species include habitat loss and degradation,

competition with non-native invasive turtle species (red-eared sliders and painted turtles), and predation by bullfrogs.

A 2001 record for this species documented two individuals on the project site (CNDDDB Occurrence No. 1108). The project site provides suitable habitat for this species, and as such, the implementation of the proposed project has the potential to result in adverse impacts to WPT, both directly (physical impacts to individual WPT and their nests) and indirectly (temporary alteration of suitable habitat). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

White-tailed Kite (Elanus leucurus)

The white-tailed kite (WTK) is a medium-sized raptor with a wing span of approximately 39 inches. This species is easily identified by its primarily white body with a grey back and wings and red eyes. WTK forage predominantly in open grasslands, agricultural fields, and emergent wetlands. It is a state Fully Protected species, threatened by habitat loss and degradation due to development and agriculture.

Several WTK were observed on the project site during the September 2017 site investigations. While no nesting WTK or active or abandoned raptor nests were observed onsite during these surveys, the surveys were not conducted during the nesting season and were not sufficiently thorough to be considered protocol-level nesting raptor surveys. The project site provides suitable nesting habitat for this species, and as such, the implementation of the proposed project has the potential to result in adverse impacts to nesting WTK, both directly (physical impacts to individual WTK) and indirectly (disturbances that would cause abandonment of eggs or young). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

Other Nesting Birds

The trees, shrubs, and bulrush on the project site provide suitable nesting habitat for a variety of raptors and passerines. As such, the implementation of the proposed project has the potential to result in adverse impacts to MBTA protected- and California Fish and Game Code protected-species, both directly (physical impacts to individuals) and indirectly (disturbances that would cause abandonment of eggs or young). These impacts can be reduced to a **less-than-significant** level with implementation of the mitigation measures presented below.

b. Riparian or Other Habitats - *Less than Significant Impact.*

The proposed project would require work within the Carmel River Lagoon and associated riparian habitat and would accordingly result in impacts to waters/habitats regulated by CDFW. As such, it is assumed that project authorization from CDFW pursuant to section 1602 of the California Fish and Game Code would be required.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) (50 CFR § 600.920(b)), requires all federal agencies to consult on activities or proposed activities that may adversely affect Essential Fish Habitat (EFH) of federally managed marine and

anadromous fish species. EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (Magnuson-Stevens Act: 16 U.S.C. 1802 (10)).

The waters of Carmel Lagoon are designated as EFH. The fish species using the lagoon are both resident and anadromous species and therefore year-round utilization is expected. The southern arm of the lagoon is usually the deepest portion of the lagoon during the summer months, thus the area is likely to provide refuge for fish species when the river flows cease and the lagoon size decreases. The lagoon is utilized as a forage area for juveniles and adults and nursery area for larvae and juveniles. As the project includes construction activities that would impact EFH, it is likely that NMFS would include provide conservation recommendations on minimizing impacts to EFH as part of consultation.

The State Water Resources Control Board (SWRCB) and its nine regional water boards (Regional Water Quality Control Boards) have been charged with the protection and enhancement of water quality in the state of California. Pursuant to Section 401 of the CWA and the Porter Cologne Water Quality Control Act (Porter Cologne), the Regional Water Quality Control Board (RWQCB) has authority to regulate discharges of fill and dredged material into Waters of the State. Pursuant to Porter Cologne, waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” This is generally taken to include all waters of the U.S., all surface waters not considered to be waters of the U.S. (non-jurisdictional wetlands), groundwater, and territorial seas (with territorial boundaries extending 3.0 nautical miles beyond outermost islands, reefs, and rocks and includes all waters between the islands and the coast).

The project site contains approximately 1.813 acres of waters that would be regulated by the state government, including 5 wetland features (totaling 1.482 acres) and two linear features (totaling 266 linear feet, 0.331 acre). The implementation of the proposed project would result in impacts to a total of approximately 0.29 acre of waters of the State. As such, it is assumed that project authorization from the RWQCB pursuant to Section 401 of the CWA would be required.

With compliance with State and Federal requirements, the project’s impact on riparian and other special status habitats would be **less than significant**.

c. Wetlands - *Less than Significant Impact with Mitigation.*

Section 404 Clean Water Act (CWA): Section 404 of the Clean Water Act (CWA), administered by the Corps, establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Per Section 404, a permit is required prior to discharge of fill material into waters of the United States, unless the activity is exempt from Section 404 regulation.

Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands. Wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and

that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. 328.3(b), 51 F.R. 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 C.F.R. 328.3(a), 51 F.R. 41250, November 13, 1986].

The project site contains approximately 1.813 acres of waters that would be regulated by the federal government, including 5 wetland features (totaling 1.482 acres) and two linear features (totaling 266 linear feet, 0.331 acre). The implementation of the proposed project would result in impacts to a total of approximately 0.29 acre of waters of the U.S. Temporary impacts would occur to 0.02 acre of seasonal wetland, 0.21 acre of perennial wetland, 0.0003 acre of drainages, and 0.06 acre of navigable waters. These impacts would consist of temporary wetland fill to facilitate construction access, grading wetlands to create staging areas, and trenching/dewatering for pipeline installation. Adverse impacts to waters of the U.S./State would be considered a significant adverse impact, pursuant to the CEQA. The mitigation measures presented below would reduce these impacts to a **less-than-significant** level.

d. Wildlife Movement Corridors/– *Less than Significant Impact.*

A wildlife corridor is an area of habitat adjoining two or more larger areas of similar wildlife habitat, often connecting wildlife populations separated by natural or created activities, disturbances, or structures. Wildlife corridors are used by individuals and populations for dispersal and migration, allowing for genetic exchange, population growth, and access to larger stretches of suitable habitats, and functionally reduce fragmentation.

The majority of the project site does not represent a regional or local migration corridor for any common or special-status wildlife species. However, the Carmel River Lagoon represents a significant part of the SCCC steelhead Carmel River migration route, with smolt residing in the lagoon (specifically in the southern arm of the lagoon which is usually the deepest portion of the lagoon during the summer months) after their Carmel River downstream migration and prior to entering the ocean.

While the coffer dam installed to isolate the work area from flowing water within the south arm of the Carmel River Lagoon would act as a barrier to SCCC steelhead movement to/from the lagoon to/from the Carmel River during construction, this isolation would be temporary in nature, and would not impact SCCC steelhead migration to the ocean as the construction work window would occur during the period of time prior to the sandbar at the mouth of the Carmel River being breached (i.e., outside of the migration season for the local population of SCCC steelhead). Therefore, the project’s impacts to wildlife movement and migration would be **less than significant**.

e. Local Policies/Ordinances;

g. Results in a conversion of Oak Woodlands that will have a significant effect on the environment - *Less than Significant Impact with Mitigation.*

State and local natural resource ordinances and laws, as well as local land use plans, are applicable to the proposed project; these ordinances, laws, and plans are discussed below.

Coastal Zone Management Act (CZMA) of 1972: The U.S. Congress addressed the regulation of development in the coastal zone by passing the CZMA in 1972. This act, administered by NOAA, provides for the management of the nation's coastal resources. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The CZMA outlined the National Coastal Zone Management Program, of which 34 states including California participate. Section 307 of the CZMA, called the "federal consistency" provision, gives states a role in the federal agency decision making process for activities that may affect a state's coastal uses or resources. The CZMA encourages states to develop coastal management programs and implement the federal consistency procedures of the CZMA. Upon certification of a state's coastal management program, all federal agency activities (including federal development projects, permits and licenses, and assistance to state and local governments) affecting the coastal zone must be consistent with the enforceable policies of the state's certified program.

Coastal Act of 1976: The federal government certified the California Coastal Management Program in 1977. The enforceable policies of that document are Chapter 3 of the California Coastal Act of 1976; these policies address public access, recreation, the marine environment, land resources, development, and industrial development.

The Federal Consistency Unit of the California Coastal Commission (CCC) implements the CZMA and the Coastal Act, however, the Coastal Act was designed to be carried out by local governments through the creation and implementation of Local Coastal Programs (LCPs). The preparation of an LCP (comprised of a Land Use Plan and an Implementation Plan and certified by the CCC) is required from all coastal counties and cities for the portion of their jurisdiction that falls within the coastal zone.

In 1988, the LCP created by and for Monterey County was certified by the CCC. The LCP divided Monterey County's coastal zone into four land segments for the purposes of adequately addressing these different areas' differing characteristics and needs; the four segments are North County, Big Sur, Carmel, and Del Monte. The project area occurs in the Carmel coastal zone land segment.

Carmel Land Use Plan: The project site is located within the Carmel Coastal Segment of the Monterey County LCP. The Carmel Coastal Segment extends from Pescadero Canyon in the north to Malpas Creek in the south. Pursuant to the Coastal Act, development within the Carmel Coastal Segment must comply with the Carmel Area Land Use Plan and the Monterey County Coastal Implementation Plan.

Only policy measures and recommendations regarding impacts to natural resources and deemed pertinent to the proposed project are addressed in this section. Policies regarding specific project requirements such as County implementation of the review process and

specific action recommendations for local, state, or federal agencies are not addressed below. Similarly, policy measures and recommendations that are clearly referring to projects or activities that are not related to the proposed project (e.g., residential, commercial, and recreational development projects) are not addressed below.

Environmentally Sensitive Habitats

General Policy 1

General Policy 1 states that “Development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be avoided in critical and sensitive habitat areas, riparian corridors, wetlands, sites of known rare and endangered species of plants and animals, rookeries and major roosting and haul-out sites, and other wildlife breeding or nursery areas identified as critical. Resource-dependent uses, including nature education and research, hunting, fishing, and aquaculture, shall be allowed within environmentally sensitive habitats only if such uses will not cause significant disruption of habitat values. Only small-scale development necessary to support the resource-dependent uses may be located in sensitive habitat areas if they cannot feasibly be located elsewhere.” The proposed project consists of preemptive work to underground the sewer and outfall pipes in order to prevent future impediments to flow within the Carmel River Lagoon as well as potential damage to pipes by floating debris within the lagoon. This work would require vegetation removal, excavation, and other temporary disturbances to riparian and wetland habitat, as well as the south arm of the Carmel River Lagoon. This development within the environmentally sensitive habitats within the project site cannot be feasibly located elsewhere as the work is location dependent. As such, the development avoidance recommendation presented within this general policy measure does not apply to the proposed project.

General Policy 2

General Policy 2 states that “Land uses adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New land uses shall be considered compatible only where they incorporate all site planning and design features needed to prevent habitat impacts and where they do not establish a precedent for continued land development which, on a cumulative basis, could degrade the resource.”

The proposed project consists of preemptive work to underground the sewer and outfall pipes in order to prevent future impediments to flow within the Carmel River Lagoon as well as potential damage to pipes by floating debris within the lagoon. This project would result in temporary impacts to environmentally sensitive habitats in order to maintain and improve the sustainability of the pipeline within the Carmel River Lagoon area, which is compatible with and beneficial to long-term maintenance of the Carmel River Lagoon habitat.

General Policy 5

General Policy 5 states that “Where private or public development is proposed in documented or expected locations of environmentally sensitive habitats - particularly those habitats identified in General Policy No. 1 - field surveys by qualified individuals or agency shall be required in order to determine precise locations of the habitat and to recommend

mitigating measures to ensure its protection. This policy applies to the entire segment except the internal portions of Carmel Woods, Hatton Fields, Carmel Point (Night heron site excluded), Odello, Carmel Meadows, and Carmel Riviera. If any habitats are found on the site or within 100 feet from the site, the required survey shall document how the proposed development complies with all the applicable habitat policies.”

As detailed in the sections above, field surveys conducted by JMC personnel Ms. McGarvey and Ms. Bingham (trained biologists and ecologists) were conducted on the project site to document natural resources present on and adjacent to the project site. The results of these surveys are included within this report. Mitigation measures are presented below that would ensure the protection of sensitive natural resources found on the project site. In addition, a certified arborist, approved by the County of Monterey, will conduct a tree survey and prepare their findings in a tree survey report to document impacts to trees associated with project implementation. This tree report will be provided to the County upon completion.

General Policy 6

General Policy 6 states that “The County shall require deed restrictions or dedications of permanent conservation easements in environmentally sensitive habitat areas where development is proposed on parcels containing such habitats. Where development has already occurred in areas supporting sensitive habitat, property owners should be encouraged to voluntarily establish conservation easements or deed restrictions.”

The establishment of conservation easements or deed restrictions within the project site is not necessary as the project site occurs within land owned and managed by State Parks. The proposed project would result in temporary impacts within this protected land.

Riparian Corridors and Other Terrestrial Wildlife Habitats Policy 1

Riparian Corridors and Other Terrestrial Wildlife Habitats Policy 1 states that “Riparian plant communities shall be protected by establishing setbacks consisting of a 150-foot open space buffer zone on each side of the bank of perennial streams and 50 feet on each side of the bank of intermittent streams, or the extent of riparian vegetation, whichever is greater. No new development, including structural flood control projects, shall be allowed within the riparian corridor. However, improvements to existing dikes and levees shall be allowed if riparian vegetation damage can be minimized and at least an equivalent amount and quality of replacement vegetation is planted. In addition, exceptions may be made for carefully sited recreational trails. The setback requirement may be modified if it can be demonstrated that a narrower corridor is sufficient to protect existing riparian vegetation. Riparian vegetation is an association of plant species which typically grows adjacent to freshwater courses and needs or tolerates a higher level of soil moisture than dryer upland vegetation.”

Due to the location of the proposed project, impacts to riparian habitat would be necessary in order to establish a staging area for construction equipment and temporary spoils piles necessary for project implementation. Upon completion of the project, riparian vegetation would be replanted as required by state and local permits to be issued for the project.

Riparian Corridors and Other Terrestrial Wildlife Habitats Policy 4

Riparian Corridors and Other Terrestrial Wildlife Habitats Policy 4 states that “To protect important wildlife habitat, all off-road recreational vehicle activity should be discouraged within riparian corridors and public access should be limited to designated areas. Accordingly, roads and trails should be sited to avoid impacts to riparian habitat.”

The access road to be cleared/constructed as part of project-related activities, would be used in order for construction crews and equipment to access the pipeline replacement/undergrounding portion of the project site, and would not constitute a road or trail open for public use. As such, the avoidance recommendation presented within this general policy measure does not apply to the proposed project.

Wetlands and Marine Habitats Policy 1

Wetlands and Marine Habitats Policy 1 states that “A setback of 100 feet from the edge of all coastal wetlands shall be provided and maintained in open space use. No new development shall be allowed in this setback area.”

Unavoidable temporary impacts would be incurred to portions of three wetlands as a part of project-related activities. Restoration plantings and monitoring would be conducted within these temporarily disturbed wetlands as required by local, state, and federal project authorizations. All wetlands adjacent to project work that are not scheduled for disturbance would be protected from incidental disturbances via intervening barriers to placement of fill such as silt fencing. Setbacks around wetlands are not appropriate for this project.

Water and Marine Resources

Water Availability Policy 5

Water Availability Policy 5 states that “Any diversion of surface sources of water shall be required to submit an approved water appropriation permit from the SWRCB prior to approval of any coastal development permit except where such water appropriation permit is not required by applicable State law.”

Project implementation would require the installation of a cofferdam the dewatering of a portion of the south arm of the Carmel River Lagoon in the immediate vicinity of the pipeline replacement and undergrounding area. Project authorizations would be obtained from the RWQCB and the Corps prior to commencement of project-related activities that would impact surface sources of water.

Water Pollution Control Policy 1

Water Pollution Control Policy 1 states that “All dumping of spoils (dirt, garbage, refuse, etc.) into riparian corridors and other drainage courses should be prohibited.”

Project implementation would require that spoils taken from the south arm of the Carmel River Lagoon be temporarily placed within the staging areas. A plastic or wooden barrier would be in place between these spoil piles and the staging area substrate in order to protect keep these substrate materials separate. The wetland and riparian habitats to be temporarily

impacted by the staging areas would be revegetated with wetland and riparian species and monitored, as required by local, state, and federal project authorizations.

Oak Trees

Pursuant to the Monterey County Oak Protection Ordinance, the removal of trees that have been designated as “protected” requires a permission from the County Planning Department. With regard to the proposed project, protected trees include oak trees that are six inches or more in diameter at two feet above ground level. While a tree survey has not been conducted on the project site to date, and as such, impacts to protected trees have not been calculated, as the dominant habitat type on the project site is riparian woodland, it is assumed that implementation of the proposed project would result in unavoidable impacts to trees protected either by the County’s tree ordinance or CDFW policy. Impacts to protected trees would be considered a significant adverse impact, pursuant to the CEQA. The mitigation measures presented below would reduce these impacts to a **less-than-significant** level.

f. Habitat Conservation Plan/Natural Communities Conservation Plan – No Impact

No habitat conservation plans or natural community conservation plans apply to the project site. There would be **no impact** on such plans.

Mitigation Measures

Mitigation Measure BIO-1: General Avoidance and Minimization Measures

- a) Prior to project-implementation, all construction personnel working on vegetation removal, earthmoving, and/or construction activities shall attend a mandatory environmental education program, led by an approved biologist.
- b) All staging, maintenance, and storage of construction equipment will be performed in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into waters of the U.S./State. No other debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete or washings thereof, or other construction-related materials or wastes will be allowed to enter into or be placed where they may be washed by rainfall or runoff into waters of the U.S./State. All such debris and waste shall be picked-up daily and properly disposed of at an appropriate site.
- c) All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a day from the project site.
- d) Firearms shall not be allowed on the project site except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.
- e) Project personnel shall not be permitted to have dogs or cats in the project area.

- f) Pesticides of any kind shall not be used on the project site at any time during project implementation, with the exception of pre-authorized herbicide application to prevent the spread of the invasive pampas grass currently occurring on the project site.
- g) Equipment shall not be operated in areas of flowing or standing water. No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to waters of the U.S./State waters may occur.
- h) All equipment including excavators, trucks, hand tools, etc., that may have come in contact with invasive plants or the seeds of these plants, shall be carefully cleaned before arriving on the site and shall also be carefully cleaned before removal from the site to prevent spread of these plants.
- i) Disturbance or removal of vegetation shall not exceed the minimum necessary to complete construction.
- j) To minimize harassment, injury, death, and harm in the form of temporary habitat disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, equipment staging, parking, and stockpile areas.
- k) The work area shall be delineated with orange wildlife exclusion fencing in order to minimize impacts to habitat beyond the work limit. A biological monitor shall supervise the installation of protective fencing and shall conduct preconstruction inspections of the fencing daily until construction is complete to ensure that the protective fencing remains intact. Orange cyclone fencing, or other materials that can entrap small amphibians and reptiles and other special-status species, shall not be used.
- l) Wetlands temporarily impacted by construction activities shall be protected with a layer of filter fabric and clean crushed gravel to prevent unnecessary adverse effects to vegetation or wetland hydrology. This temporary fill shall be removed at the end of construction activities.
- m) Prior to any instream work, sheet pile coffer dams shall be installed both up- and downstream from the area to be trenched in order to isolate the work area from the flowing stream. Water removed from within the cofferdam shall be pumped back to the CAWD treatment facility or a sediment basin to remove suspended sediments. At the completion of instream work, all water-diversion systems shall be removed from the work area.
- n) After construction completion, any installed by-pass pipe, cofferdam, or other related construction materials installed within the project boundary shall be removed in its entirety.
- o) Site conditions shall be returned to pre-construction contours and shall be revegetated with native habitat-appropriate species.

- p) Prior to commencement of work each day, the biological monitor shall check for animals under any equipment such as vehicles and stored pipes. In order to prevent inadvertent entrapment of terrestrial wildlife during the proposed project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials. Alternatively, an additional 2-foot high vertical barrier, independent of exclusionary fences, may be used to further prevent the inadvertent entrapment of terrestrial wildlife. If it is not feasible to cover an excavation or provide an additional 2-foot high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. Similarly, in order to prevent inadvertent entrapment of special-status aquatic wildlife during the dewatering of the work area, the intake of all pumps shall be installed outside of emergent vegetation and shall be screened.
- q) An approved biologist(s) shall be onsite during all work within the south arm of the Carmel River Lagoon and during all activities that could result in impacts to special-status species. The approved biologist shall have the authority to stop any work that may result in adverse impacts to special-status species. If determined to be necessary for project implementation and wildlife safety, only approved biologists shall capture, handle, and monitor special-status species observed onsite. Otherwise, all wildlife shall be allowed to leave the site of their own accord.
- r) All project-related ground moving activities shall be restricted to between June 15 and November 1 in order to avoid the time period when locally occurring special-status species are most likely to be migrating through the project site and the immediately surrounding area.

Mitigation Measure BIO-2: Special-Status Plants

In the Spring and Summer immediately prior to project implementation, protocol-level rare plant surveys will be conducted on the project site. Rare plant surveys will be conducted by a qualified botanist, in accordance with all applicable survey guidelines including those published by USFWS (USFWS 1996), CDFW (CDFW 2000, 2009) and CNPS (CNPS 2001). If determined to be necessary, reference site surveys will be conducted to confirm plant phenology (flowering periods).

Mitigation Measure BIO-3: Special Status Amphibians and Reptiles

The following measures are standard avoidance measures prescribed for special-status amphibians and reptiles by state and federal agencies and have been deemed appropriate to protect special-status amphibian and reptile species potentially occurring on the project site:

Within 48 hours prior to the initiation of work that may impact special-status amphibians and reptiles, a preconstruction survey for special-status amphibians and reptiles will be conducted by an approved biologist within the boundaries of the project site. The approved biologist shall investigate all areas that could be used by the special-status amphibians and reptiles for feeding, breeding, sheltering, movement, and other essential behaviors. This survey shall be likewise conducted immediately prior to commencement of project-related work that may impact special-status amphibians and reptiles. If any adults, sub adults, juveniles, tadpoles, or eggs are found, the approved biologist will contact the appropriate agencies to determine next steps.

Mitigation Measure BIO-4: Monterey Dusky-footed Woodrats

Within 30 days prior to project-related activities that could impact MDFW, an approved biologist shall conduct a preconstruction survey to locate and map the locations of all existing MDFW nests. As all of the MDFW nests on the project site are in areas that cannot be avoided by project-related activities, they shall be relocated according to standard woodrat nest relocation procedures.

Active nests shall be sufficiently disturbed to cause individual woodrats to leave the nest and seek refuge elsewhere. After nests have been thus disturbed, they shall be dismantled and reassembled outside of the project site at a sufficient distance to proposed impact areas to remain undisturbed by project-related activities. Due to work-window constraints imposed on the project by hydrologic and federal-listed species concerns, nest dismantling will take place during the breeding season. If during nest dismantling a litter of young is observed or suspected, the removed nest material shall be replaced, and the nest shall be left alone for 2-3 weeks to allow for further maturation of young. After the 2-3-week period, the nest shall be rechecked to determine if the young are capable of survival on their own, before proceeding with nest dismantling and relocation.

Mitigation Measure BIO-5: Smith's Blue Butterfly

During protocol-level rare plant surveys conducted on the project site, a qualified botanist shall also search for SBB host plant species. If no SBB host plants are observed on the project site, SBB shall be surveyed for during preconstruction surveys and the biological monitor shall stop any work that may result in take of SBB. If SBB host plants are observed on the project site, unavoidable impacts to those host plants shall be mitigated by 1) hand-removal and onsite preservation of individual plants and the soils/duff beneath them, and 2) replanting of preserved SBB host plants, and 3) inclusion of SBB host plants in the revegetation plan in the disturbed areas wherein SBB host plants had occurred (with SBB host plants planted at a 2:1 ratio [mitigation:impacts]).

Mitigation Measure BIO-6: SCCC Steelhead

In order to avoid auditory impacts to SCCC steelhead, all sheet piles shall be installed using only a vibratory hammer; no impact hammer will be used. Prior to installation of

cofferdam sheet piles, the area shall be cleared of all potential fish species. This operation shall be overseen by an approved fisheries biologist. The approved fisheries biologist shall likewise be present during dewatering of the cofferdam to ensure fish are not entrapped within the work area. Any fish observed shall be removed by the fisheries biologist and placed in the Carmel Lagoon, upstream of the work area.

Mitigation Measure BIO-7: Nesting Birds

If tree removal or ground disturbance are scheduled to occur between February 15 and August 31, a preconstruction nesting bird survey of all suitable nesting habitat on the project site shall be conducted by a qualified biologist within 14 days prior to commencement of tree removal or ground disturbance. If no nesting birds are observed during the survey, the tree removal and/or ground disturbance may commence as planned. If nesting birds are observed during the survey, a non-disturbance buffer of 50 feet for passerine birds and 250 feet for raptors shall be established. This buffer shall remain in place until such a time as the young have been determined (by a qualified biologist) to have fledged.

Mitigation Measure BIO-8: Aquatic Resources

All impacts to waters of the U.S. would be temporary and result in no net loss. In locations where wetlands would be temporarily impacted to facilitate construction access and staging, appropriate BMPs (e.g., filter fabric and gravel) shall be placed over the wetland. Following construction activities, all temporary fill shall be removed, and all trenched and graded areas would be returned to pre-construction grades. All temporary impacted waters shall be re-planted with appropriate native vegetation.

Mitigation Measure BIO-9: Protected Trees

A County-approved arborist shall conduct a tree survey of the project site to document all existing trees and to determine impacts to trees that are protected by the County's tree ordinance as well as those that are protected due to their location within the riparian canopy (CDFW jurisdiction). Information regarding protected oak trees shall be compiled in a tree survey report and submitted to the County. Information regarding riparian canopy impacts will be provided to CDFW. It is likely that tree replacement would be required to mitigate impacts from the removal of protected trees; this replacement ratio shall be determined in coordination with the County and CDFW. In addition, all trees not scheduled for removal or trimming shall be protected from damage by the installation of exclusion fencing around the trees' dripline.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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V. CULTURAL RESOURCES – Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Disturb any human remains, including | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Background:

A cultural resources study was prepared for the project by Pacific Legacy (January 2018 – on file at CAWD offices or review by authorized persons). The Pacific Legacy study included archival and records search was conducted within a 0.25-mile buffer area around the Project area by staff at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University and site inspections. The literature search included a review of:

- The Historic Properties Directory (California Office of Historic Preservation 2015);
- The California Inventory of Historic Resources (State of California 1976);
- California Historical Landmarks (California Office of Historic Preservation 1996);
- California Points of Historical Interest listing May 1992 (State of California 1992); and
- The National Register of Historic Places (Directory of Determinations of Eligibility, California Office of Historic Preservation, Volumes I and II, 1990; Office of Historic Preservation Computer Listing 1990 and updates).

The archival and records search revealed that 12 prior cultural resources studies encompassed portions of the Project area, while a further 52 studies had been conducted outside of the Project area but within the 0.25-mile buffer. Of the 12 prior studies that covered a portion of the Project area, seven involved reconnaissance, one involved a cultural inventory, three involved archaeological monitoring, and one involved excavation.

Archival and records searches revealed that a portion of one cultural resource (P-27-000150) intersected the Project area while a further five resources had been previously recorded within the 0.25-mile buffer (see Table 2). P-27-000150 (CA-MNT-14) is a prehistoric shell midden. The site was subject to subsurface excavation by Garlinghouse et al. (2009) and recommended eligible for the California Register of Historical Resources (CRHR). Site constituents include marine and freshwater shell, fish and mammal faunal bone, groundstone implements (handstones and hammerstones), and fire-affected rock. Other lithic material recovered during the 2009 excavations includes flaked stone tools, Monterey and Franciscan chert flaking debris, and obsidian debitage from Northern California and Central Sierra sources. Based on obsidian hydration rim readings and one radiocarbon date, the resource was thought to have been occupied during the Early Period (5500 – 2600 B.P.) with intermittent occupation in later periods. Two other shell middens exist within 0.25 miles of the Project area (P-27-000562; P-27-000714). P-27-000714 is thought to be associated with P-27-000150. The two sites are thought to have been separated by the original installation of the underground wastewater pipeline being modified during the current Project. The remaining three resources within 0.25 miles of the Project area are mission period associated structures and sites, including Mission San Carlos (P-27-000154), the Mission Orchard House (P-27-002116), and the Mission Ranch (P-27-002087H).

Pedestrian archaeological survey of the Project area was conducted by Pacific Legacy archaeologist Christopher Peske on December 18, 2017, and January 15, 2018. The January 15 survey was completed after the sandbar was breached although a large portion of the survey was still inundated. The purpose of the surveys was to identify cultural resources that may be adversely impacted by ground disturbing activities associated with the Project. The survey determined that the Project area does not directly intersect the midden within P-27-000150; however, shell material from the midden has tumbled downhill into the Project area. Approximately 4.4 acres of the Project area were not observed due to dense vegetation in portions and inundation of portions of the Project area.

Further inspection of the area around P-27-000150 near the Project, when the Carmel River sandbar was breached and waters receded, was conducted on January 15, 2018. This study included subsurface probing to determine the presence or absence of cultural materials in this area that are otherwise obscured by sedimentation or marsh vegetation. Two auger bores were placed in the section of the Project area that overlaps the boundary of site P-27-000150. Both bores were placed where the presence of shell material was noted on the surface and were designed determine if subsurface cultural material extended into the Project area. The bores were excavated to a depth of 150 centimeters. No cultural material was identified beneath the surface in either bore.

a. Historic Resources – No Impact.

As described in Item a), above, the only historic resources within 0.25 miles of the Project area are mission period associated structures and sites, including Mission San Carlos (P-27-000154), the Mission Orchard House (P-27-002116), and the Mission Ranch (P-27-

002087H). The project does not propose any construction activities that have the potential to affect any of these resources. Therefore, it would have **no impact** to historic-era resources.

b, d. Archaeological Resources and Human Remains – *Less than Significant with Mitigation*

Although the site investigations did not find evidence of archaeological materials or human remains on the site, there is the potential that ground disturbing activities may reveal subsurface deposits not readily visible during our field inspection. An evaluation of the site conducted by Garlinghouse et al. (2009) showed that an intact sub-surface portion of the site exists on the northern portion of the resource adjacent to the mouth of the Carmel River. The site has been recommended as significant under the CEQA, making it eligible for inclusion in the CRHR (Garlinghouse et al. 2009). The project's construction activities could impact this resource, if encountered during earth-moving activities. Borings did not find evidence of this resource on the project site. However, due to the limited extents of auger bore testing, there is the potential that further ground disturbing activities may reveal subsurface deposits not identified during the field investigation. Mitigation Measures CULT 1 and CULT-2 would reduce this impact to a **less-than-significant** level.

c. Paleontological Resources - *Less than Significant*

Due to the location of the project in an active river channel, the likelihood of encountering paleontological resources is low. Therefore, this impact is considered **less than significant**.

Mitigation Measures

Mitigation Measure CULT-1 - Archaeological Resources. Prior to initiating ground disturbing activities associated with the Project area, construction personnel should be alerted to the possibility of encountering buried prehistoric or historic period cultural material. Personnel should be advised that, upon discovery of buried archaeological deposits, work in the immediate vicinity of the find should cease and a qualified archaeologist should be contacted immediately if one is not already present.

In addition, archaeological monitoring by a professional archaeological monitor shall be conducted during vegetation removal and grubbing to allow for inspection of areas not observed during the cultural resources survey.

If a find is identified, plans for the treatment, evaluation, and mitigation of impacts to the find shall be developed if it is found to be NRHP and/or CRHR eligible. Potential cultural materials include prehistoric and historic period artifacts and remains. These may consist of, but are not limited to:

- Historic period artifacts, such as glass bottles and fragments, tin cans, nails, ceramic and pottery sherds, and other metal objects;

- Historic period features such as privies, wells, cellars, foundations or other structural remains (bricks, concrete, or other building materials);
- Flaked-stone artifacts and debitage, consisting of obsidian, basalt, and/or chert;
- Groundstone artifacts, such as mortars, pestles, and grinding slabs;
- Dark, almost black, soil with a “greasy” texture that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire-affected rock; and,
- Human remains.

Mitigation Measure CULT-2 – Human Remains. If human remains are encountered during construction, work in that area shall cease and the Monterey County Coroner must be notified immediately. If the remains are determined to be Native American, the NAHC shall be notified within 48 hours as required by Public Resources Code 5097. The NAHC shall notify the designated Most Likely Descendant, who shall in turn provide recommendations for the treatment of the remains within 24 hours.

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Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to 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 California Geologic Survey Special Publication 42.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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ii) Strong seismic ground shaking?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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iii) Seismic-related ground failure, including liquefaction?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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iv) Landslides?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Result in substantial soil erosion or the loss of topsoil?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Background:

Geology

The project area in the Carmel Lagoon and east of the Lagoon is comprised of younger floodplain deposits laid down by the Carmel River, comprised of fine silt and sand with occasional discontinuous clay layers. These deposits are typically less than 20 feet thick, and are underlain by older floodplain deposits. The pumping plant area on the west side of the lagoon is underlain by granodiorite (granitic rock).

Seismicity

The greater San Francisco/Monterey Bay Area is seismically dominated by the active San Andreas Fault system, the tectonic boundary between the northward moving Pacific Plate (west of the fault) and the North American Plate (east of the fault).

The proposed project vicinity is transected by the Cypress Point Fault, which is not considered active. The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone and no mapped active faults are known to cross the proposed project site. The nearest fault is the Monterey Bay/Tularcitos Fault approximately 4.6 miles to the northeast. The probability of ground surface rupture at the proposed project site due to displacement is considered low. However, the proposed project site is located in a region of high seismicity. It is anticipated that during the useful life of the proposed project, the proposed project area will be subject to strong ground shaking. It is also anticipated that the area will periodically experience small to moderate magnitude earthquakes¹³.

Discussion:

a) i, ii, iii Fault Rupture, Ground Shaking, Ground Failure - *Less than Significant Impact*. No fault rupture is likely at the site. The project area is subject to high ground shaking in the event of a major earthquake on nearby faults. The young alluvium has a “high” liquefaction susceptibility, while the older alluvium has a “moderate” liquefaction susceptibility. Bedrock and upland areas are mapped as having a “low” liquefaction susceptibility. There are no known historic liquefaction sites from the 1906 and 1989 earthquakes. The proposed project lies within moderate to high liquefaction susceptibility zones¹⁴. Lateral spreading is horizontal movement of soil toward a free face, such as a creek bank, typically associated with liquefaction. Lateral spreading generally occurs in shallow groundwater areas with unsupported embankments including natural creek banks, fill slopes, and levees, and is possible at the edge of the lagoon.

¹³ Denise Duffy & Associates, Inc., Carmel Lagoon EPB, SRPS, and ISMP Project Public Draft Environmental Impact Report, December 2016.

¹⁴ Ibid

Any damage to the proposed pipeline due to seismic shaking and localized liquefaction would be temporary and would be repaired as needed.

a. iv. Landslides – No Impact. Most of the proposed pipeline would be buried on nearly level topography in a lagoon bottom. No landslides are possible in this area. The portion of the pipeline climbing up the west bank to the pumping station would be on bedrock, which also is not subject to landslide hazards. The landslide potential on the project site is considered to be low, as indicated by Monterey County’s Landslide Hazard Map.

b. Soil Erosion - Less than Significant Impact. Soil erosion hazards could occur during construction, especially during subsurface trenching and prior to revegetation of the access road and staging areas. Soil exposed by roadway and staging area clearing and leveling activities could be subject to erosion if exposed to heavy rain. The project applicant would create and implement an erosion control plan prior to the start of grading activities, as described in BMP-3 in the Project Description. Potential for soil erosion in the lagoon during trenching is addressed in the Hydrology and Water Quality section of this document. Soil erosion and/or loss of topsoil during construction and grading activities would be reduced to a *less-than-significant* level with implementation of this BMP.

c. Unstable Soil - Less than Significant Impact. See discussion of potential soil instability associated with seismic shaking in response to Item a, above. The pipeline would not result in, or be subject to, non-seismically induced differential settlement or other soil instabilities. Therefore, this impact would be *less than significant*.

d. Expansive Soil - Less than Significant Impact. Site soils would be used as trench backfill. Because the project trench would be in alluvium under the lagoon, soils would be continually wetted and expansion/contraction cycles would not be likely to occur. Any unsuitable soils would be stabilized or replaced by suitable imported fills. Therefore, this impact would be *less than significant*.

e. Inadequate Soils for Disposal - No Impact. The project would not include the installation of septic tanks or alternative wastewater disposal systems, and would therefore have *no impact* on soils related to septic tanks or alternative wastewater disposal systems.

	Potential y Significan t Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**VII. GREENHOUSE GAS EMISSIONS –
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 checked="" type="checkbox"/> | <input type="checkbox"/> |

Background

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, CO₂, CH₄, and N₂O are also emitted from human activities, accelerating the rate at which these compounds occur within earth’s atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in units of “carbon dioxide-equivalents” (CO₂e).¹⁵

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity (California Climate Change Portal, accessed September, 2015.)

The MBARD has not developed a threshold of significance for GHG emissions. The MBARD recommends using an adopted GHG significance threshold from an adjacent air district, such as the Bay Area Air Quality Management District (BAAQMD) or the San Luis Obispo

¹⁵ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in “carbon dioxide-equivalents,” which present a weighted average based on each gas’s heat absorption (or “global warming”) potential.

County Air Pollution Control District (SLOCAPCD). The BAAQMD does not have an adopted GHG emissions threshold for construction, therefore the SLOCAPCD Bright-line threshold of 1,150 metric tons of CO₂e per year was used in this analysis. The SLOCAPCD recommends quantifying emissions from construction-only projects (e.g. roadways, pipelines, etc.), amortizing construction emissions over the life of the project and comparing the amortized construction emissions to the Bright-line threshold.¹⁶ The SLOCAPCD recommends using a 25-year project life for industrial facilities.

a. Generate greenhouse gas emissions – *Less than Significant Impact.*

The proposed project would temporarily generate GHG emissions from construction equipment, haul trucks, and worker automobiles. The proposed project would not generate new GHG emissions from operations. Construction emissions were estimated with the SMAQMD Road Construction Emissions Model (Version 8.1.0). Estimated GHG emissions from construction of the proposed project would be approximately 313 metric tons of CO₂e in 2018 or approximately 12.5 metric tons of CO₂e per year amortized over the lifetime of the proposed project (assumed to be 25 years). Thus, construction emissions would be below the Bright-line significance threshold of 1,150 metric tons of CO₂e per year and the impact would be *less than significant*.

b. Conflict with an applicable plan – *Less than Significant Impact.*

Monterey County does not have an adopted Climate Action Plan therefore, the proposed project would result in a significant impact if it would be in conflict with AB 32 State goals. The proposed project is a replacement project and would only temporarily generate GHG emissions over the four-month construction period. The proposed project has been reviewed relative to AB 32 measures and it has been determined that the proposed project would not conflict with the goals of AB 32. Thus, the proposed project would have a *less-than-significant impact*.

¹⁶ SLO County APCD, *Greenhouse Gas Thresholds and Supporting Evidence*.
<http://www.slocleanair.org/images/cms/upload/files/Greenhouse%20Gas%20Thresholds%20and%20Supporting%20Evidence%204-2-2012.pdf>

VIII. HAZARDS AND HAZARDOUS MATERIALS – would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the 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 checked="" 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 for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) 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"/>

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Background:

Portions of the project corridor have historically been used as a utility corridor and railroad line, and some soils contamination may be present.

Discussion:

a. Hazardous Materials Transport – No Impact. The proposed project is the replacement of an existing wastewater pipeline and treated wastewater outfall pipe, and would not involve the transport of any new hazardous materials. The project would eliminate the potential hazards associate with rupture of the existing degraded pipelines.

b. Hazardous Materials Accidental Release - Less than Significant Impact. Project construction may involve the use of equipment, fuels, solvents, welding equipment, and other sources of potentially hazardous materials. BMP-4 in the Project Description, which is incorporated into the project, includes measures to minimize the risk of release of hazardous materials, and contamination of soil or groundwater by any such releases. This BMP would reduce the potential impact of release of hazardous materials to a **less-than-significant** level.

c. Hazardous Materials Emissions – No Impact. Two schools are located within one quarter mile of the proposed project’s access road: Junipero Serra School and Carmel River Elementary School. The project is replacement of the degraded treated-wastewater outfall and sewage force main, which is intended to reduce the hazards of accidental emissions of these wastes to the surrounding Carmel River and Lagoon waters, and to the Pacific Ocean immediately downstream. Therefore, the project would reduce this potential impact compared to existing conditions, and **no impact** would occur.

d. Hazardous Site List – No Impact. Historic and current land uses within the proposed project area could be associated with the use, generation, or disposal of hazardous materials. Designated land uses within the proposed project area are a mix of agriculture and open space surrounded by commercial and residential use in the surrounding urban area. The proposed project area has historically been used for agricultural production that has now been converted to open space, wetland and riparian habitat. Past agricultural operations may have involved the use of petroleum fuels, pesticides, and fertilizers. Pesticides and fertilizers are applied directly to the soil, and potential releases of petroleum fuels can occur through spills and leaks from storage tanks. The CAWD Wastewater Treatment Facility is located adjacent to the proposed project access road. Chemicals

associated with the treatment plant may be considered hazardous materials and are subject to appropriate regulations. The project would have no impact to these materials.

A regulatory database search for past hazardous material spills on properties within 1-mile of proposed project components was conducted¹⁷. The State Water Resources Control Board (SWRCB) database shows two incidents of leaking underground storage tanks (UST) near the site, at the CAWD Treatment Plant. Gasoline was discovered in the monitoring well, adjacent to the UST. Subsequently, the tanks were removed, the area remediated, and the case has been closed since April 2003. There are no instances of open and ongoing cases reported. The database search also found no reported incidents of hazardous materials being released in the immediate vicinity of the proposed project.

e. Public Airport Hazards - No Impact. The closest public use airport to the project site is Monterey regional Airport, approximately 6-7 miles northeast of the project site. The project is a sewer line replacement that would underground existing above-ground lines. Therefore, it would not affect or be affected by airport uses and **no impact** would result.

f. Private Airport Hazards - No Impact. There are no private airstrips in the project vicinity. The project is a sewer line replacement that would underground existing above-ground lines. Therefore, it would not affect or be affected by private airport uses and **no impact** would result.

g. Emergency Response Plan - No Impact. The project is a sewer pipeline replacement, mostly in a lagoon. The primary construction access would be via a private roadway. Therefore, it would not interfere with any roadways or other emergency access-ways. Therefore, **no impact** would result.

h. Wildland Fires - No Impact. California Department of Forestry and Fire Prevention (CAL FIRE) maps identify fire hazard severity zones in the State. Portions of nearby City of Carmel are designated a very high fire hazard severity zone (CAL FIRE, 2007)¹⁸. The proposed project area is not in a designated high or very high severity zone. The project itself is sewer line replacement, mostly in a trench under a lagoon, which would have no potential adverse effect on wildfires. Therefore, the proposed project would not expose people or structures to significant risks associated with wildland fires, and **no impact** would result.

¹⁷ California State Water Resources Control Board "GeoTracker" database, available online at: <http://geotracker.waterboards.ca.gov/>, and California Department of Toxic Substances Control "EnviroStor" database, available online at: <http://www.envirostor.dtsc.ca.gov/public/>.

¹⁸ http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY – Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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, in a manner which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Background:

Hydrologic Conditions and Processes

A hydrology and water quality study was prepared for the project by Engeo (January 17, 2018). The report is summarized in this section and provided in full as Appendix C to this IS/MND.

The Carmel River Watershed is located within the California Coast Ranges Geomorphic Province. The entire drainage area of the watershed is located on the western slopes of the Sierra De Salinas. The northwesterly flowing Carmel River originates approximately 35 miles upstream from Carmel Bay at an elevation of 3,500 feet above sea level. Streamflow in the Carmel River is directly attributed to rainfall. According to the National Weather Service, average annual precipitation is estimated between 18 to 20 inches. Like many other watersheds along the Central California Coast, the Carmel River watershed has a typical coastal California wet-dry seasonal pattern that can vary significantly. More than 90 percent of the annual rainfall typically occurs over the watershed during the six-month period between November and April.

Before entering the Pacific Ocean, the Carmel River enters a Lagoon, located at the bottom of the watershed. The Lagoon and associated wetlands, which are located immediately south of the City of Carmel-by-the-Sea, cover an area of approximately 100 acres. The Lagoon is generally not connected to the ocean during times of very low or zero streamflow, when ocean waves build a barrier beach (sandbar) across the mouth of the Lagoon and close the outflow channel.

Therefore, the lagoon is subject to seasonal fluctuations depending on how connected it is to the ocean. When river inflow is relatively low and the Lagoon is not open to the ocean, a dynamic equilibrium is reached between streamflow and groundwater inflows, outflow through the barrier beach, evapotranspiration, and ocean wave overtopping. In summer, this leads to lower water surface elevations. In the fall, prior to opening, potentially abrupt increases in water surface elevations can occur due to overtopping as rainfall begins.

As streamflow increases in the fall and early winter, Lagoon water surface elevations can rise to flood stage depending on precipitation patterns. When flooding does occur,

infrastructure along the northern edge of the Lagoon and within the Lagoon floodplain are threatened with flooding before the sandbar would typically open naturally. This dynamism results in seasonal changes in turbidity and salinity in the lagoon in terms of water quality, as well as seasonal fluctuation of surface water elevations.

The Central Coast Regional Water Quality Control Board (RWQCB) in their Basin Plan (RWQCB, 2016) has designated beneficial uses of the Carmel River as the following: municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); groundwater recharge (GWR); freshwater replenishment (FRESH); water contact recreation (REC1); noncontact water recreation (REC2); commercial and sport fishing (COMM); warm fresh water habitat (WARM); cold water habitat (COLD); wildlife habitat (WILD); preservation of biological habitats of special significance (BIOL); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development (SPWN). Beneficial uses of the surface water from the Carmel River Estuary include the following: GWR; REC1; REC 2; COMM; WILD; COLD; MIGR; SPWN; BIOL; RARE; and estuarine habitat (EST)(RWQCB,2016). General water quality objectives exist for each of the beneficial uses identified. Surface water quality objectives have also been identified for the Carmel River for Total Dissolved Solids, Chlorine, Sulfate, Boron and Sodium.

In terms of baseline hydrologic data related to the south arm of the Lagoon, The Central Coast Watershed Studies Team (CCoWS) monitored water quality in the Lagoon between 2004 and 2007. Salinity, dissolved oxygen, and temperature in the Lagoon vary seasonally and with depth. The CCoWS noted that the topography and lack of mixing in the Lagoon creates a layer of isolated saltwater in the bottom of the south arm of the Lagoon where the project is proposed. Although the south arm of the Lagoon does not directly connect to the Carmel River in low to moderate flow events, it can receive river flows in extreme rainfall events when overtopping of the banks occurs upstream. Schaaf and Wheeler estimated 100-year recurrence interval velocities in the south arm of the Lagoon near the project site as between 2.4 and 4.5 feet per second.

According to a geotechnical report prepared by GTO Inc., surficial slopes upslope of the proposed crossing consist of artificial fill, as well as colluvium and floodplain deposits. Soils consists generally of loose sands intermixed with clay and silt material and should be considered to be potentially fast raveling during rainstorm events. Groundwater elevations are generally between 3 to 8 feet below ground surface upslope of the Lagoon. Groundwater conditions are expected to vary depending on factors such as weather conditions, time of year, and water surface levels in the Lagoon.

Regulatory Conditions

To address the issue of changes in surface water quality as a result of development and construction activities, the federal government implemented the National Pollution Discharge Elimination System (NPDES). NPDES is an amendment of the federal Clean Water Act from 1987 that mandates that each population center obtain a permit to discharge stormwater. The limits vary by category of industry and are based on a level of treatment

that uses the best available technology. Stormwater that would be discharged from the site during construction activity would be subject to regulation under the NPDES program. The California State Water Resources Board is responsible for establishing water quality standards statewide and designates the Central Coast Regional Water Quality Control Board (CCRWQCB) for regulation of discharges of wastes and runoff in this area.

Construction activities on one acre or more or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Construction Permit (SWRCB Order No. 2009-09-DWQ; Modified 2010-0014-DWQ). The State Board established the General Construction Permit program to reduce surface water impacts from construction activities. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The Construction General Permit requires the preparation and implementation of a SWPPP for construction activities. The SWPPP must be prepared before the construction begins. The SWPPP must include specifications for best management practices (BMPs) that would need to be implemented during construction. BMPs are measures that are undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from the construction area. Additionally, the SWPPP must describe measures to prevent or control runoff after construction is complete and identify the procedures for inspecting and maintaining facilities and other project elements. The required elements of a SWPPP include:

- Site description addressing the elements and characteristics specific to the site;
- Descriptions of BMPs for erosion and sediment controls;
- BMPs for construction waste handling and disposal;
- Implementation of approved local plans;
- Proposed post-construction controls; and
- Non-stormwater management.

Examples of typical construction BMPs include scheduling or limiting activities to certain times of year, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing, and fueling. The RWQCB has identified BMPs in the California Stormwater Best Management Practice Handbook (California Stormwater Quality Association, 2003) to effectively reduce degradation of surface waters to an acceptable level.

The County of Monterey also has water quality protection regulation in its County Code, as follows:

- Chapter 16.08 of the Monterey County Code identifies rules and regulations to control all grading, including excavations, fills and embankments, and establishes the procedures for the issuances of grading permits. Chapter 16.08 is intended to minimize erosion as a result of ground disturbing activities.
- Chapter 16.12 (Erosion Control) of the Monterey County Code sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing, and winter operations; and establishes procedures for administering those provisions. The code requires that specific design considerations be incorporated into projects to reduce the potential for erosion and that an erosion control plan be approved by the County prior to initiation of grading activities.
- Chapter 16.16 of the Monterey County Code identifies rules and regulations to control development within the floodplain. Chapter 16.16 is intended to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions.
- Chapter 16.16 consists of regulations to: 1) restrict and/or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; 2) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; 3) control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters; 4) control filling, grading, dredging, and other development which may increase flood damage; and 5) prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Discussion:

a and f. Water Quality Standards – *Less than Significant with Mitigation.* Construction and operation of the project could degrade the existing water quality of the estuary. During the construction phase of the project, the project would remove existing concrete-filled steel piles which support the existing pipe structure over the Lagoon, and whose foundations are in the bottom estuary below the mudline.

Due to geotechnical constraints, the project would use trenching methods to install the two new pipelines below the mudline of the estuary. Both of these activities could temporarily increase turbidity of the estuary and potentially impact other indicators of water quality. The trenching activities would also require dewatering of a portion of the Lagoon, which could affect water quality in the upstream portion of the south arm of the Lagoon.

Construction activities at all sites could also result in the accidental release of hazardous construction chemicals, such as adhesives, solvents, lubricants, and fuels. If not managed

appropriately, these chemicals could adhere to soil particles, become mobilized by rain or runoff, and flow to downstream water bodies, including Carmel Bay/Pacific Ocean, degrading water quality.

Lastly, if a breach of the pipes were to occur after the project is finished, wastewater could potentially enter the estuary or groundwater below the estuary through the proposed force main or outfall lines, which could potentially impact and degrade the water quality of the estuary system.

Measures included in the SWPPP (see Mitigation HYDRO-1, below) would reduce construction-related potential impacts associated with the construction phase of the project to a **less-than-significant** level. In addition, there would be a **less-than-significant** impact based on the compliance with regulatory requirements that insure that there would be a lack of substantial pollutants released or disposed at the sites, and the low amount of flow that would carry any pollutants such that contamination of groundwater resources is not expected. The proposed project would have a **less-than-significant** impact on water quality associated with increased inadvertent releases of toxic chemicals during general construction activities. No additional mitigation measures for general construction practices would be required.

With the implementation of the BMPs described in Chapter 2, Project Description, and compliance with regulatory requirements as specified in **Mitigation Measures Hydro 1** through **Hydro-3**, below, this impact would be less than significant by requiring the development and implementation of adequate erosion control, spill prevention, and other construction BMPs that would protect groundwater and surface water quality. This would reduce this impact to a **less-than-significant** level.

b. Groundwater Supplies – Less Than Significant Impact. Implementation of the project could significantly deplete groundwater supplies if long-term groundwater use would occur as a result of implementation of the project. Construction of the proposed project would result in a limited, temporary dewatering operation on either side of the proposed pipe undergrounding in the south arm of the Lagoon. It is anticipated that the minimal amount of water that would be pumped from the excavation while the cofferdam system is in place would originate from groundwater seepage from areas adjacent to where dewatering is being performed. However, the amount of groundwater intrusion is anticipated to be minor in order for the dewatering operation to be successful. No groundwater use is proposed with operation of the proposed project.

Implementation of the project could substantially interfere with groundwater recharge if post-project conditions significantly modified areas on site where existing surface/groundwater exchanges take place. In the operational phase of the project, the undergrounding of the pipe system would create a potential barrier underneath and on the sides of the Lagoon where some groundwater recharge is likely occurring. However, the size of the permanent trench would be up to 8 feet wide, which would be insignificant as compared to the entire south arm of the Lagoon where groundwater/surface water interactions are occurring.

Therefore, impacts related to interference with existing groundwater recharge patterns are considered to be insignificant.

Therefore, impacts related to depletion of groundwater supplies are considered to be **less than significant**.

c, d, and e. Drainage - Less than Significant Impact. Implementation of the project could modify existing drainage patterns to some degree if finished project grades were altered during construction. However, the project does not intend to alter finished grades in areas where temporary construction areas are proposed to any significant degree. Therefore, impacts related to modification of existing drainage patterns are considered to be **less than significant**.

Implementation of the project could exceed capacity of existing drainage facilities if post-project imperviousness was increased as a result of the project leading to greater rainfall runoff, which could potentially raise site water surface elevations during rainstorm events. However, the project does not intend to increase imperviousness of the site after implementation. Rather, the undergrounding of the pipeline system would result in a slight reduction of site imperviousness. Also, by removing the piles that support the existing transmission structure in the south arm of the Lagoon, the capacity of that portion of the Lagoon to transmit flood flows would increase. Pier removal would also slightly lower water surface elevations in the Lagoon as well by removing obstructions. Therefore, impacts related to modification of existing drainage patterns or flooding would be **less than significant**.

g. Housing within Flood Zone – No Impact. The project does not propose any housing. There would be **no impact**.

h. Flooding – No Impact. The project facilities would be buried below the lagoon, and would therefore be protected from flood hazards.

i. Dam failure – Less than Significant Impact. There are no local reservoirs or dams whose failure would inundate the site. Failure of local levees could inundate some or all of the project area. However, the project would have no effect on dam or levee stability, and, most of the project is a subsurface pipe, which would not likely be substantially affected by any such failures. This impact would be **less than significant**.

j. Tsunami, Seiche, or Mudflow - Less Than Significant Impact. Tsunamis are open sea tidal waves generated by earthquakes. Tsunami damage is typically confined to low-lying coastal areas. The proposed project site is located within the mapped tsunami inundation area (California Emergency Management Agency et al., 2009). According to the Monterey County Operational Area Tsunami Incident Response Plan (Monterey County Office of Emergency Services, 2007) a locally generated tsunami may occur if a large enough earthquake occurs in or near Monterey Bay region. Such an earthquake could produce a

tsunami that reaches shore in a matter of minutes. The plan states that, within Monterey County, there is a low likelihood of experiencing a tsunami.

Because the pipeline would be relocated to a subsurface location under the lagoon, mudflow, seiche or tsunami impacts would be minimal. Therefore, impacts from inundation by seiche, tsunami, or mudflow would be ***less than significant***.

Mitigation Measures

Mitigation Measure HYDRO-1: Implementation of SWPPP.

Prior to construction of the proposed project, the applicant shall demonstrate compliance with the State Water Resources Control Board Construction General Permit, including implementation of erosion and stormwater quality control measures set forth in a Stormwater Pollution Prevention Plan (SWPPP) that would prevent substantial adverse effects on water quality during construction. Requirements for SWPPP are discussed in the regulatory section above. The SWPPP shall be prepared by a Qualified SWPPP Developer (QSD).

Mitigation Measure HYDRO-2 – Implementation of Construction Diversion and Dewatering Plan.

Because of the nature of the dewatering operation associated with the proposed project, the applicant would also separately demonstrate that the implementation of a temporary dewatering operation would not adversely impact Lagoon water quality, nor adversely impact biological resources in the south of the Lagoon. The applicant intends to discharge any excess construction water from the dewatering operation into the force main sanitary sewer system. The excess water would then be subsequently delivered to their treatment plant, processed and discharged under their existing NPDES permit to operate the facility. Additional information would be set forth in a Construction Diversion and Dewatering Plan (DDP) approved by the Central Coast Regional Water Quality Control Board as well as other Federal and State agencies that regulate biological resources associated with the Lagoon. The Construction DDP would be prepared by a licensed Civil Engineer in the State of California and include the following:

- Limits of dewatering operation
- Height and length of cofferdams based on estimated Lagoon water surface elevations during time of operation.
- Measures to reduce turbidity during installation of temporary cofferdams.
- General pumping and connection diagrams.
- Estimates of quantities to be discharged.
- Capacity and percentage of capacity used for dewatering estimates.
- Contingency plans for overtopping and pumping failure.
- Additional connectivity measures as required to reduce water quality impacts in the upper portion of the south arm of the Lagoon.

Measures included in the DDP would reduce construction related potential impacts associated with the construction dewatering phase of the project to a less-than-significant level.

Mitigation Measure HYDRO-3 – Compliance with Section 401 and 404 Clean Water Act.

Due to the proposed project's permanent impacts in the Lagoon, a regulated water of the State, under state and Federal law the project shall also demonstrate compliance with CWA Sections 404 and 401, and other waste discharge requirements of the Porter-Cologne Water Quality Control Act. This shall take place upon consultation with the USACE and RWQCBs during the project permitting phase in order to receive a federal and state level clearance prior to performing the project. These applications shall specifically evaluate the permanent proposed alignment, type and thickness of pipe casing, and any potential long-term monitoring measures required for the project to conform to state and Federal Law.

Measures included 401 and 404 permitting process would reduce permanent potential impacts associated with the implementation and operational phases of the project to a less-than-significant level.

Mitigation Measure HYDRO-4 – Grading Permit.

In addition to SWPPP measures outlined in Mitigation Measure HYDRO-1, above, prior to construction of the project, the applicant shall also receive a grading permit from Monterey County. The grading permit shall require that the applicant submit an erosion and sediment control plan specifically describing construction BMPs that shall be implemented to reduce water quality impacts associated with grading and stockpiling activities to less-than-significant levels.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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X. LAND USE AND PLANNING – Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

The project alignment for both the eastern access road and pipeline extends along a California State Parks easement (10 feet on either side of the existing pipeline) through Carmel River State Beach property from where the pipelines exit the treatment plant site to the pump station (sewage force main) and over the hill to the ocean (treated wastewater outfall pipe). Nearby land uses include open space associated with the State Beach, residential uses on the ridge above the pump station, and the CAWD treatment plant facility.

The project alignment is designated as Wetlands and Coastal Strand and Agricultural Preservation in the Monterey County General Plan ¹⁹. It is zoned as RC-D CZ, (Resources Conservation, Coastal Zone) and CAP-D (CZ) (Coastal Agricultural Preserve, Coastal Zone) in the County Zoning Ordinance.²⁰

Discussion:

a. Division of Community – No Impact. The project pipelines would be replacing existing pipelines, would be subsurface and in existing utility easements. Therefore, the project would have no potential to alter or divide any community. There would be **no impact**.

¹⁹ Monterey County Land Use Plan, Carmel Area, as amended, March 9, 1995

²⁰ Monterey County Zoning, Coastal Implementation Plan – Title 20 (accessed October 19, 2017)

b. Plan Conflict – *No Impact*. The replacement sewer lines line would be permitted under all of the zoning and General Plan designations along the alignment. Therefore, the project would have ***no impact*** with respect to consistency with plans and policies. The project’s conformance with Biological Resources plans and policies are addressed in item e) in that section of this Initial Study.

c. Habitat Plan Conflict - *No Impact*. No habitat conservation plans or natural community conservation plans apply to the project site. There would be ***no impact*** on such plans.

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Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XI. MINERAL RESOURCES – 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"/> |

Background:

There are no known mineral resources on the site. The Open Space and Conservation Element of the Monterey County General Plan (Figure 10) does not identify any mineral resources at the project site. Sand, gravel, and petroleum are the primary mineral resources extracted in Monterey County. Construction-grade aggregate (sand, gravel, and crushed stone) is the most abundant and commonly used mineral resource.

Discussion:

a. and b. Mineral Resources - No Impact. The proposed project site contains sand; however, the proposed project site does support any mining activities and due to the biologic sensitivity of the area and its inclusion in the State Parks Wetland and Lagoon Preserve and Caltrans biological mitigation bank, future mineral extraction in this area is very unlikely. Therefore, the proposed project would not result in the loss of availability of a known mineral resource. There would be **no impact** from the project.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less than Significant Impact	No Impact
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XII. NOISE - Would the project result in:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive ground-born vibration or ground-born noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 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"/> |
| f) For a project within the vicinity of a private airstrip, 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"/> |

Background:

Environmental Setting

The project site is surrounded by open space and residential uses and is approximately 900 feet east of the Pacific Ocean. The nearest sensitive receptors include residences in the Carmel Meadows neighborhood, immediately south of the southwest edge of the project area. The area of most intense construction would be in the Carmel River Lagoon, no closer than 170 feet from the nearest residences.

To quantify existing ambient noise levels in the immediate project vicinity, RCH conducted short-term (10-minute) measurements at four locations in the project site vicinity. Noise measurements were made using Metrosonics db308 Sound Level Meters calibrated before and after the measurements. Noise measurements are included in Appendix D of this IS/MND.

Figure N-1 in the Noise Appendix shows the location of the noise measurements. The noise measurements are summarized in **Table NOI-1** below. In general, the project site is a quiet location. The dominant source of existing noise in the vicinity of the project is traffic from Highway 1.

As shown in **Table NOI-1**, short-term sound level measurements at the site (conducted on Monday October 23, 2017) measured average short-term noise levels of between 46 and 52 dB in the noise monitoring locations.

Regulatory Setting

State Guidelines

The State Land Use Compatibility standards for Community Noise (Table 4 of the Noise Appendix) indicate that for Low Density Residential, a Community Noise Exposure up to 60 dB (Ldn or CNEL) is Normally Acceptable, and a Community Noise Exposure up to 70 dB (Ldn or CNEL) is Conditionally Acceptable.

Monterey County General Plan

The Safety Element of the Monterey County General Plan (Monterey County 2010) combines the state mandated safety and noise elements. It identifies sources of noise and provides policies addressing existing and foreseeable noise problems. Relevant policies include:

S-7.9: No construction activities pursuant to a County permit that exceed “acceptable” levels [according to the Land Use Compatibility Standards for Community Noise from the State Guidelines] 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;
- 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.

Table NOI-1: Existing Noise Measurements

Location	Time Period	Noise Levels (dB)	Noise Sources
Site 1. Calle La Cruz pump station, 260 feet from the centerline of Calle La Cruz, see Figure N-1 in Noise Appendix	Monday October 23, 2017 10:50-11:00 a.m.	5-minute Leq's: 50, 50	Wind is up to 62 dB. Pedestrian and dogs passing by is 55 dB. Background noise is 42 dB. Quieter noises include birds, back-up beep, distant traffic, and a dog barking.
Site 2. Northeast side of Calle La Cruz cul-de-sac, see Figure N-1 in Noise Appendix	Monday October 23, 2017 11:09-11:19 a.m.	5-minute Leq's: 52, 48	Passing car is 58 dB. Airplane is 57 dB. Wind is up to 56 dB. Background noise is 42 dB. Quieter noises include pedestrians, distant traffic, and birds.
Site 3. West end of trail along the lagoon, 165 feet from the centerline of Calle La Cruz, see Figure N-1 in Noise Appendix	Monday October 23, 2017 11:25-11:35 a.m.	5-minute Leq's: 48, 46	Wind is up to 53 dB. Distant traffic is up to 47 dB. Background noise is 43 dB. Quieter noises include birds and a back-up beeper.
Site 4. Path along ocean side of the neighborhood, 200 feet from the centerline of Ribera Road and 230 feet east of the Pacific Ocean, see Figure N-1 in Noise Appendix	Monday October 23, 2017 11:46-11:56 a.m.	5-minute Leq's: 48, 48	Construction noise is up to 55 dB. Background noise is 44 dB. Quieter noises include waves, pedestrians, birds, and wind.

Source: RCH Group, 2017

Monterey County Noise Ordinance

Chapter 10.60 of the Monterey County Code of Ordinances discusses Noise Control. Relevant Sections include:

10.60.030: Operation of noise-producing devices restricted. 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 exceeding 85 dBA measured 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 2,500 feet from any occupied dwelling unit.

10.60.040: Regulation of nighttime noise. The following regulations shall apply to nighttime noise:

A. 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 10:00 p.m. to 7:00 a.m. the following morning.

B. Within the time period 10:00 p.m. to 7:00 a.m. the following morning, and for the purposes of this Section, a loud and unreasonable sound shall include any sound that exceeds [nighttime exterior noise levels of 45 Leq or 65 Lmax].

Discussion:

a. Exposure to noise in excess of standards – *Less than Significant with Mitigation.*
and

d. Substantial Temporary Increase of Ambient Noise Levels – *Less than Significant with Mitigation.*

The primary noise impact of the project would be from construction of the pipelines on nearby residences. Nearby residences would be sensitive receptors for the construction noise, but are no closer than 170 feet from the area of most intense construction. Project construction activities would cause a temporary increase of ambient noise levels in the project vicinity. After construction, noise in the project vicinity would not differ from existing conditions.

Construction activities would require the use of noise-generating equipment, such as excavating machinery (e.g., bulldozer, excavator, loader, etc.), a vibratory hammer to drive the sheet pile (i.e., sonic pile driver), and other noisy construction equipment (e.g., crane, trucks, air compressor, generator, etc.).

The Monterey County Noise Ordinance prohibits operation of any device which produces a noise level exceeding 85 dBA measured 50 feet therefrom. Table 2 of the Noise Appendix shows maximum noise levels generated by various types of construction equipment, which can range from 75 to 96 dB at 50 feet. Vibratory hammers and jackhammers could exceed

the limit of 85 dB at 50 feet. A jackhammer is not expected to be used for this project, but a vibratory hammer would be used for sheet pile driving.

At the nearest residence (170 feet away), noise levels from the vibratory hammer would be experienced as approximately 83 dB, L_{max}, and typically average 64 to 67 dBA, Leq²¹. High noise levels from the vibratory hammer would not be continuous, but rather periodic, occurring for a few minutes at a time as each sheet pile is driven into the ground, with quieter periods during transitions from one pile to the next. Noise from this equipment would be noticeable and may be annoying to nearby residents, however, given the relatively short duration of the sheet pile portion of the project and the limitations on equipment use and hours of construction in Mitigation Measure NOI-1, this impact would be reduced to a less-than-significant level.

Construction worker traffic and construction-related material haul trips would generate noise and incrementally raise ambient noise levels along local haul routes, depending on the number of haul trips made and types of vehicles used. Construction activities and associated traffic would occur primarily during the daytime.

The implementation of **Mitigation Measure NOI-1** would reduce potentially significant temporary construction noise impacts to a ***less-than-significant*** level.

b. Exposure to excessive vibration – *Less Than Significant Impact.*

As stated above, the area of intense construction would be in the Lagoon, no closer than 170 feet from the nearest residences. As shown in Table NOI-2, the predicted vibration levels from bulldozers and loaded trucks at a distance of 170 feet would not exceed the 0.5 in/sec PPV threshold for residential and commercial structures. The project would involve the use of vibratory hammers, which would have a vibration level substantially below 0.5 in/sec, and the impact would be ***less than significant.***

c. Permanent increase in ambient noise levels – *Less Than Significant Impact.*

As discussed in **a)**, above, construction of the project would be temporary, and operational noise (after construction) would not differ from existing conditions. Therefore, the project would not result in a substantial permanent increase in ambient noise levels in the project vicinity, and this impact would be ***less than significant.***

e. Public Airport Noise - *No Impact.* The closest public use airport to the project site is Monterey Municipal Airport, located about 6-8 miles northeast of the site. Noise from that airport would not be audible at the site, and the project is not subject to noise impacts. Therefore, ***no impact*** would result.

f. Private Airport Noise - *No Impact.* There are no private airstrips in the site vicinity. Therefore, ***no impact*** would result.

²¹ This is based on a reference noise level range of 77 to 80 dBA, Leq at 50 feet, described in Laughlin (2010).

Table NOI-2: Representative Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity at 50 Feet (in/sec)	Peak Particle Velocity at 170 Feet (in/sec)
Pile Driver (impact)	upper range	0.537	0.086
	typical	0.228	0.036
Pile Driver (sonic)	upper range	0.260	0.041
	typical	0.060	0.010
Vibratory Roller		0.074	0.012
Large Bulldozer		0.031	0.005
Loaded Trucks		0.027	0.004
Jackhammer		0.012	0.002
Small Bulldozer		0.001	0.000

Source: Federal Transit Administration, 2006.

Note: Vibration levels at 50 and 170 feet were calculated using the equation provided by FTA that may be used to estimate vibration at different distances based on reference vibration levels at 25 feet for various construction equipment. (See **Table 3** of the Noise Appendix.)

Mitigation Measure

Mitigation Measure NOI-1 -Construction Noise

To reduce noise impacts due to construction at nearby sensitive receptors, the applicant shall employ the following mitigation measures:

1. Construction activities shall only take place during the hours between 8 a.m. and 6 p.m. on weekdays and between 9 a.m. and 5 p.m. on Saturdays. Construction will not be allowed on Sundays or national holidays.²²
2. Construction equipment shall be properly equipped with standard mufflers properly maintained in good working order.
3. If stationary construction equipment would cause a substantial noise impact, it shall be located as far away from sensitive residences as necessary to reduce noise to acceptable levels and/or be equipped with engine-housing enclosures.
4. Designate a “construction noise coordinator” who would be responsible for responding to local complaints about construction noise. The construction

²² These hours are the same as was used in the Pebble Beach Company Project Environmental Impact Report (Monterey County 2012), which was suggested by Monterey County Planning Staff as an example of a recent CEQA document for the County. Also, these hours fall within the permitted hours of construction for the City of Carmel, the neighboring jurisdiction, which according to Chapter 15.08 of the Carmel Municipal Code (City of Carmel, 2017) are 8 a.m. to 6:30 p.m. Monday through Saturday.

noise coordinator shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented. The telephone for the construction noise coordinator shall be conspicuously posted at the construction site.

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Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XIII. POPULATION AND HOUSING – Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, 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 housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

The proposed project would construct a replacement sewage force main and treated wastewater outfall pipe, which would be consistent with the site’s zoning and General Plan designations. No residences would be constructed as part of this project. These pipelines are not a limitation to growth in the project area.

Discussion:

a. Population Growth - No Impact. The project would replace existing degraded sewer outfall and force main lines; no expanded service capacity is proposed. Therefore, the project would have **no impact** on growth inducement.

b, c. Displace Housing or People – No Impact. The project alignment contains no housing, and the proposed project would not displace any housing or people. There would be **no impact**.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| v) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

Fire Protection: The unincorporated Monterey County is within the Cypress Fire Protection District (CFPD). Under contract with the CFPD, the California Department of Forestry and Fire Protection (CAL FIRE) provides primary fire protection service to the vicinity of the proposed project site. The closest CAL FIRE station to the proposed project area is the Rio Road Station at 3775 Rio Road, Carmel, which is located approximately two miles east of the proposed project site. The Carmel Hill Forestry and CAL FIRE Station are located near the Highway 1 and westbound Highway 68 interchange. The station is approximately three miles north of the proposed project site. In addition, the City of Carmel fire station (with secondary responsibility via a shared service agreement) is located 1-mile to the north.

Police Protection: The proposed project site is in the unincorporated area of Monterey County and would be served from the Monterey County Sheriff's Office Coastal Station located in Monterey on Aguajito Road. The Coastal Station's estimated response time is varied depending on the location, number of personnel on duty, and time of the call; however, the general range is five to ten minutes.

Within Carmel River State Beach, the State Parks employees provide maintenance, waste removal, and public safety/police patrol. The closest ranger station to the proposed project site is at Point Lobos, approximately one mile south. A minimum of one public service patrol ranger is stationed there at all times of the day and night to respond to emergency calls. The

local district of State Parks office is located approximately 6.5 miles north of the site at 2211 Garden Road, Monterey, CA 93940, where the full staff for all local parks is based.

Schools: The public schools closest to the project site are Junipero Serra School and Carmel River Elementary School. These schools are about one quarter mile north of the proposed project's access road.

Parks: The project pipeline alignment, and eastern staging area and access road are within the California Department of Parks and Recreation's Carmel River State Beach property. This park is undeveloped in the project site, but public access to the State Beach to the west of the site is permitted.

Discussion:

i) Fire Protection. *Less than Significant Impact.* No new fire protection services would be required as a result of the proposed project. Upland construction activities (clearing of access roadway and staging areas) would take place near heavily vegetated areas. Operation of power tools and equipment during project construction could provide an ignition source and increase fire risk in the area. Storage of flammable materials (e.g., fuel) during project construction could also increase fire risk. However, project construction activities would follow the requirements for fire safety during construction contained in the California Fire Code that are applicable to outdoor areas. Adherence to the applicable requirements of the California Fire Code would ensure that potential fire risk during construction would be ***less than significant***.

ii) Police Protection. *No Impact.* The new force main and outfall pipelines would have no potential to increase demand on police protection services because it would not result in any new development and its construction would not bring substantial numbers of people to the area.

iii) Schools. *No Impact.* The new force main and outfall pipelines would have no potential to increase demand on school services because it would not result in any new development and its construction would not bring substantial numbers of people to the area.

iv) Parks. *No Impact.* The new force main and outfall pipeline construction would not affect operations of publically accessible areas of the Carmel River State Beach.

v) Other public facilities. *No Impact.* The proposed project would not affect other public facilities by increasing demand beyond anticipated levels. There would be ***no impact***.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XV. RECREATION:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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"/> |

Background:

The proposed project access road, staging areas and pipeline alignment runs through lands of the California Department of Parks and Recreation's Carmel River Lagoon and Natural Preserve (a part of Carmel River State Beach) and a Caltrans biological mitigation bank. The Carmel River State Beach is a 297-acre area, created by flood cycles and the meandering Carmel River that flows into the Pacific Ocean. The Carmel River State Beach features the Carmel River Lagoon and Wetland Natural Preserve, Ohlone Coastal Cultural Preserve, a mile-long beach, a lagoon restoration site, an organic farm with historic buildings, and bird habitat that includes waterfowl and songbirds.

Discussion:

a. Increase Park Usage - No Impact. The project is a treated wastewater outfall and force main replacement for degraded lines on the same alignment. The pipelines would not affect population or park use.

b. Impact of Project Recreational Facilities - Less than Significant Impact. The project construction activities would occur on State Parks Preserve and Caltrans mitigation bank lands, which, although informally accessed by birders and other recreational users, are not designated public use areas; it would not affect operations at the public use areas of Carmel River Beach State Park. Cleared areas of the access roads would be restored once construction is completed. Informal public use of the southern access road would be eliminated during the construction period. This temporary, short-term impact to undeveloped park lands would be *less than significant*.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XVI. TRANSPORTATION AND TRAFFIC –
Would the project:**

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian, bicycle paths and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including but not limited to level of service demands and travel demand measures, or other standards established by the county congestion management agency for designated roads/highways. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a 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"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

The project alignment is accessed via US Highway 1 and the driveway to the CAWD Wastewater Treatment Plant, and a partially overgrown dirt road on California State Parks property.

Discussion:

a. Conflict with an Applicable Plan Regarding Effectiveness of Circulation System - Less Than Significant; b. Conflict with an Applicable Congestion Management Program - Less Than Significant. During construction, the project would generate fewer than 10 daily automobile trips, for project construction workers, and up to an additional 10 truck trips per day for materials and equipment delivery during the four-month construction period. This level of additional trips would not materially affect traffic on Highway 1 or any other local streets. The project would not generate any additional traffic after construction. Therefore, the impact would be *less than significant*.

c. Air Traffic Levels - No Impact. The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Therefore, it would have no impact on air traffic.

d. Hazards - Less Than Significant Impact. The Project would not create any hazards due to design features on the adjacent street system. As noted in Item a, above, a small number of truck trips would occur during construction, with no new trips after construction. Trucks regularly use Highway 1 and the treatment plant access road, with no major safety hazards in this area. Therefore, the impact would be *less than significant*.

e. Emergency Access - No Impact. The project construction would not require any road or lane closures or otherwise impede emergency access.

f. Adopted Plans Supporting Alternative Transportation - No Impact. The project would not conflict with Monterey County policies supporting alternative transportation. It would neither generate demand nor alter any existing or proposed alternative transportation (bus, bike, or pedestrian) routes.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XVII. Tribal Cultural Resources

a) 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:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| I. 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), or | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| II. 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Background:

Pacific Legacy personnel submitted a request to the NAHC for a search of the Sacred Lands File as it encompasses the Project area on November 20, 2017. This report is available for review by authorized persons at CAWD offices. Frank Lienert, Associate Governmental Program Analyst with the NAHC, responded on December 5, 2017 to report that no Native American cultural resources had been previously reported within the Project area. He provided contact information for eight tribal representatives who may have knowledge of the vicinity. Pacific Legacy personnel contacted Mr. Valentin Lopez, Chairperson of the Amah Mutsun Tribal Band; Ms. Irenne Zwierlein, Chairperson of the

Amah Mutsun Tribal Band of Mission San Juan Bautista; Mr. Tony Cerda, Chairperson of the Costanoan Rumsen Carmel Tribe; Mr. Tom Nason of the Esselen Tribe of Monterey County; Ms. Ann Marie Sayers, Chairperson of the Indian Canyon Mutsun Band of Costanoan; Ms. Louise-Miranda Ramirez, Chairperson of the Ohlone/Costanoan-Esselen Nation; and Ms. Karen White, Council Chairperson of the Xolon-Salinan Tribe via certified letter on January 2, 2018 to request any information they might have regarding the Project area.

Responses were received from the Ohlone-Costanoan – Esselen Nation and the Xolon Salinian Tribe. The Ohlone-Costanoan Nation objects to excavation in known cultural lands and requested to be kept informed regarding surveys, reburials, placement of cultural items, and approval of monitoring. The Xolon Salinian tribe did not identify any sensitive sites, and requested that any new ground disturbance within this project, should be evaluated under Phase 1 survey criteria, and that they be informed if any cultural materials are unearthed.

Please see the Cultural Resources section of this Initial Study for a discussion of the site's cultural resources, impacts, and mitigation measures.

Discussion:

a) Tribal Cultural Resources - *Less than Significant Impact with Mitigation.* Tribal representatives contacted as part of the cultural resources assessment did not provide any input regarding tribal cultural resources. One CRHR-eligible site exists on the property. Mitigation measures CULT-1 and CULT-2 would reduce potential impacts to this property to a ***less-than-significant*** level.

XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities; the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) 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"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Background:

The project would generally follow an easement already in use for the existing force main and treated wastewater outfall pipelines.

Discussion:

a. Exceed Wastewater Treatment Requirements - No Impact. b. Required New Water or Wastewater Treatment Facility – No Impact. The project is a replacement of existing degraded force main and treated wastewater outfall pipelines that would not result in any new sewage generation. Portable toilets would be used to provide restroom facilities for project workers during the construction period. The existing CAWD wastewater treatment plant would not be affected by the project.

c. New Stormwater Facilities – No Impact. The proposed project would not increase impervious surfaces or alter any existing stormwater facilities. Therefore, it would not increase runoff and would have **no impact** to stormwater facilities.

d. Water Supplies - Less than Significant Impact. The proposed project would consume small amounts of water for dust control along the access road and in the staging areas during construction, which would be a **less-than-significant** impact.

e. Wastewater Service - No Impact. Please see response to item a, above. The project would not generate any wastewater or affect any wastewater treatment facility. The existing lines would not be removed until after the replacement lines are operational.

f. Landfill Capacity – Less than Significant Impact. The project would generate small amounts of construction wastes associated with the removal and disposal of the existing pipelines, and small quantities of soil may be removed from the site by the project contractor, if needed. This would not substantially affect landfill capacity in the area. The project would generate no wastes after completion of construction. Therefore, this impact would be **less than significant**.

g. Solid Waste Statutes and Regulations – No Impact. As described in item f, above, the project would generate small quantities of solid waste during construction only. Most excavated soils would be reused as backfill. Any contaminated soils encountered would be tested and disposed of at an appropriate facility. Therefore, the project would have **no impact** on solid waste regulations.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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, 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 that 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"/>

Discussion:

a) *Less than Significant with Mitigation.* As discussed in the Biological Resources Section of this document, with the incorporation of mitigation measures, the project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. Similarly, the project’s potential impacts to cultural resources would be mitigated to a **less-than-significant** level.

b) *Less Than Significant.* Cumulative impacts of the project and other planned, approved, or reasonably foreseeable projects have been assessed in this Initial Study. Three related projects have been proposed by Monterey County for the area to reduce flood hazards to

houses to the north of the Carmel River, and were the subject of a Draft Environmental Impact Report prepared in December 2016. These are the Carmel Lagoon Ecosystem Protective Barrier, Scenic Road Protection Structure, and Interim Sandbar Management Plan Project. Project components include:

Ecosystem Protective Barrier (EPB)

The proposed EPB includes a setback of up to 40-feet from the property line with a top of wall elevation of 17.5 feet. This option was recommended because it:

- increases protection of facilities and homes accounting for sea level rise over the next 50 years;
- minimizes ecological impacts by eliminating drainage infrastructure and fill;
- minimizes visual impacts with a lower height and greater area of vegetative cover;
- reduces noise because of smaller pumps with less frequent pumping; and
- increases area that serves as a bioswale to collect urban runoff.

If the proposed project is determined to impact operations of the Mission Ranch, a separate EPB alignment would continue from the eastern boundary of the Carmel River Elementary School and extend across the southern boundary of Mission Ranch development.

Scenic Road Protection Structure (SRPS)

The preferred alternative SRPS would be located at the toe of the sand slope along Scenic Road. This proposed SRPS involves excavation of the beach that would be followed by installation of a geotextile, then by two layers of armor rock. The alignment allows continued use of the beach area located north of the barrier when (if) the beach breaches to the north.

Interim Sandbar Management Plan (ISMP)

Monterey County assumed a lead role in seeking permits for a long-term solution that would avoid performing mechanical breaching for flood control purposes. The process to complete technical feasibility studies, design, environmental review, permitting, and construction is estimated to take up to eight years, depending on resource availability; however, the County is making every effort to reduce this timeframe to five years or less. In the interim, the County has developed the ISMP for managing the Lagoon including winter openings and summer closure in the best possible manner that reduces potential impacts to both wildlife and property.

After receipt of the comments on the DEIR, the process was suspended and none of these projects have been approved.

Another floodplain management project, the **Carmel River Floodplain Restoration and Environmental Enhancement (FREE) Project**, has been proposed by the Big Sur Land Trust and the County of Monterey. The that project consists of two interdependent Project components: the Floodplain Restoration and the Causeway. The Floodplain Restoration Component consists of: (1) remove approximately 1,470 linear feet of non-structural earthen levees on the south side of the Carmel River channel; (2) grading on approximately 103 acres to restore the site's ecological function as a floodplain by creating the hydrogeomorphic characteristics necessary to support floodplain restoration activities; (3) grading to elevate

approximately 23 acres of existing farmland above the 100-year floodplain elevation to create an agricultural preserve; and (4) implementation of a Restoration Management Plan (RMP).

Because of the relatively short construction period for the proposed CAWD project, which would occur in the Spring of 2018, and the time needed for permitting of the various flood-related projects, overlapping construction impacts are unlikely. In addition, if construction were to overlap, cumulative impacts would not be significant with the mitigation measures that would be implemented by both projects. Operationally, the proposed project would have no overlapping environmental impacts with the County or Carmel River FREE projects, and the proposed project would need to occur prior to implementation of the FREE projects.

c) *Less than Significant.* As discussed in Section VIII. Hazards and Hazardous Materials, the project would follow all laws and regulations involving the use and transport of hazardous materials and would not cause potential health risks to the public.

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E. REPORT PREPARERS

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F. REFERENCES

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California Air Resources Board, Area Designation Maps/State and National,
<https://www.arb.ca.gov/desig/adm/adm.htm>

CALFIRE, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones

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Appendices

Appendix A. Air Quality Calculations

Appendix B. Biological Resource Study

Appendix C: Hydrologic Study

Appendix D: Noise Calculations

Appendix E. Mitigation Monitoring and Reporting Program (to be included in Final IS/MND)

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