

**NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION
FOR FREEDOM SEWER REHABILITATION PROJECT**

In accordance with Section 15072 of the California Environmental Quality Act Guidelines, NOTICE IS HEREBY GIVEN that the County of Santa Cruz has prepared a Mitigated Negative Declaration for the following project.

The Freedom County Sanitation District (FCSD) has proposed the Freedom Sewer Rehabilitation Project. The project includes the replacement of approximately 5 miles of existing wastewater collection lines, located predominately within existing paved roadways in residential neighborhoods. The project area is divided into five improvement area, located along Green Valley and Buena Vista Roads, within the FCSD service area.

The project is needed because existing sewer lines within the project area are 50-60 years old and are deteriorating. Without rehabilitation, the deterioration of these lines could lead to surface spills and leaks along the buried pipelines. Additionally, some of the sewer lines were evaluated in a 2007 Sanitary Sewer System Capacity Evaluation and Assurance Plan, and were identified as having the potential for an overflow or were surcharging within 3 feet of the ground level, particularly during storm events.

Copies of the draft Mitigated Negative Declaration (MND) and accompanying Initial Study (IS) are on file and may be reviewed at the County's Public Works Department public counter (701 Ocean Street, Room 410) in Santa Cruz, CA 95060. The IS/MND may also be viewed on the County's website at the following link. <http://www.sccoplanning.com/PlanningHome/Environmental/CEQAInitialStudiesEIRs/CEQADocumentsOpenforPublicReview.aspx>

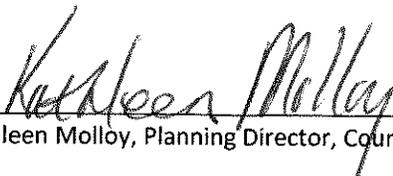
The public review period for the IS/MND is June 11, 2018, to July 10, 2018.

"MITIGATED NEGATIVE DECLARATION" means that the County has tentatively concluded that the project would not have a significant effect on the environment because revisions have been made and required mitigation measures have been agreed to by the County.

NOTE: This project has not been approved or denied. It is being reviewed for environmental impacts only.

Comments regarding this document should focus on the proposed finding that the project would not have a significant effect on the environment because revisions have been made or agreed to by the County. If the commenter believes that the project may have a significant environmental effect, it would be helpful to identify the specific effect, explain why the effect would occur, and why it would be significant.

All comments regarding the MND must be made in writing and received in the Public Works office no later than 5:00 P.M. on the last day of the public review period. Please address comments to: Mr. Kent Edler, Senior Civil Engineer, 701 Ocean Street, Room 410, Santa Cruz, CA, 95060. Comments may also be sent by e-mail to: Kent.Edler@santacruzcounty.us. Please reference "FCSD Sewer Rehabilitation Project IS/MND".



Kathleen Molloy, Planning Director, County of Santa Cruz Planning Department


Date

CEQA PLUS FEDERAL CROSS-CUTTERS INITIAL STUDY/ENVIRONMENTAL CHECKLIST

FREEDOM SEWER REHABILITATION PROJECT

PREPARED BY:

County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95065
Contact: Kent Edler, Senior Civil Engineer, 831.454.2791

TECHNICAL ASSISTANCE PROVIDED BY:

Harris & Associates
450 Lincoln Avenue, Suite 103
Salinas, CA 93901
Contact: Kate Giberson, 831.419.6800

June 2018



Harris & Associates



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Attachments

- Attachment 1. Mitigation Monitoring and Reporting Program
- Attachment 2. Air Quality Conformity Analysis
- Attachment 3. Assessment of Biological Resources



County of Santa Cruz

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

KATHLEEN MOLLOY, PLANNING DIRECTOR

www.sccoplanning.com

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

INITIAL STUDY/ENVIRONMENTAL CHECKLIST

Date: April 23, 2018

Application Number: N/A

Project Name: Freedom Sewer
Rehabilitation Project

Staff Planner: Juliette Robinson

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Freedom County Sanitation
District

APN(s): Various

OWNER: Freedom County Sanitation
District

SUPERVISORAL DISTRICT: 2 and 4

PROJECT LOCATION:

The proposed project is located in the unincorporated community of Freedom in southern Santa Cruz County, just north of the City of Watsonville (**Figure 1**). Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito Counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

SUMMARY PROJECT DESCRIPTION:

The Freedom County Sanitation District (FCSD) is proposing the Freedom Sewer Rehabilitation Project (“proposed project” or “project”). The project includes the replacement of approximately five (5) miles of existing wastewater collection lines, located predominately within existing paved roadways in residential neighborhoods. The project area is divided into five improvement locations within the FCSD service area, as shown in **Figure 2**.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

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

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

- | | |
|--|--|
| <input type="checkbox"/> General Plan Amendment | <input type="checkbox"/> Coastal Development Permit |
| <input type="checkbox"/> Land Division | <input type="checkbox"/> Grading Permit |
| <input type="checkbox"/> Rezoning | <input type="checkbox"/> Riparian Exception |
| <input type="checkbox"/> Development Permit | <input type="checkbox"/> LAFCO Annexation |
| <input type="checkbox"/> Sewer Connection Permit | <input checked="" type="checkbox"/> Other: Encroachment Permit |

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., permits, financing approval, or participation agreement):

<u>Permit Type/Action</u>	<u>Agency</u>
Funding approval through the Clean Water State Revolving Fund Program	California State Water Resources Control Board (in conjunction with the United States Environmental Protection Agency)
Funding approval through the USDA Rural Utilities Services Program	United States Department of Agriculture, California State Office of Rural Development

This project is considered “Project” under CEQA because it is an activity directly undertaken by a public agency, and because it is supported through assistance from one or more public agencies (CEQA Statute 21065). Also, because the project may receive federal funding, it is subject to federal environmental regulations as well as CEQA. The federal “cross-cutting regulations” applicable to this project include the Clean Air Act, Endangered Species Act,

Migratory Bird Treaty Act, and National Historic Preservation Act. These are addressed in Section III, Environmental Review Checklist, under Air Quality, Biological Resources, and Cultural Resources, respectively.

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 or agreed to by the project proponent (Freedom County Sanitation District), as outlined in Attachment 1, Mitigation Monitoring and Reporting Program. 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.


KATHLEEN MOLLOY, Planning Director
County of Santa Cruz Planning Department


Date



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GENERAL PLAN BOUNDARIES

SANTA CRUZ COUNTY, CALIFORNIA

Legend

APTOS HILLS	[Light Purple]
APTOS	[Light Pink]
BONNY DOON	[Light Olive]
CARBONERA	[Light Brown]
EUREKA CANYON	[Light Green]
LIVE OAK	[Red]
LA SELVA	[Pink]
NORTH COAST	[Light Blue]
PAJARO VALLEY	[Light Blue-Gray]
SAN ANDREAS	[Light Green]
SKYLINE	[Light Cyan]
SAN LORENZO VALLEY	[Light Yellow]
SUMMIT	[Light Orange]
SOQUEL	[Light Cyan]
SALSIPUEDES	[Light Yellow-Green]
CITY LIMITS	[Gray Outline]



180-07
 PREPARED BY SANTA CRUZ COUNTY
 GEOGRAPHIC INFORMATION SYSTEM STAFF
 November 2007

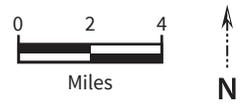


Figure 1
 Regional Location
 Freedom Sewer Rehabilitation Project

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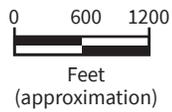
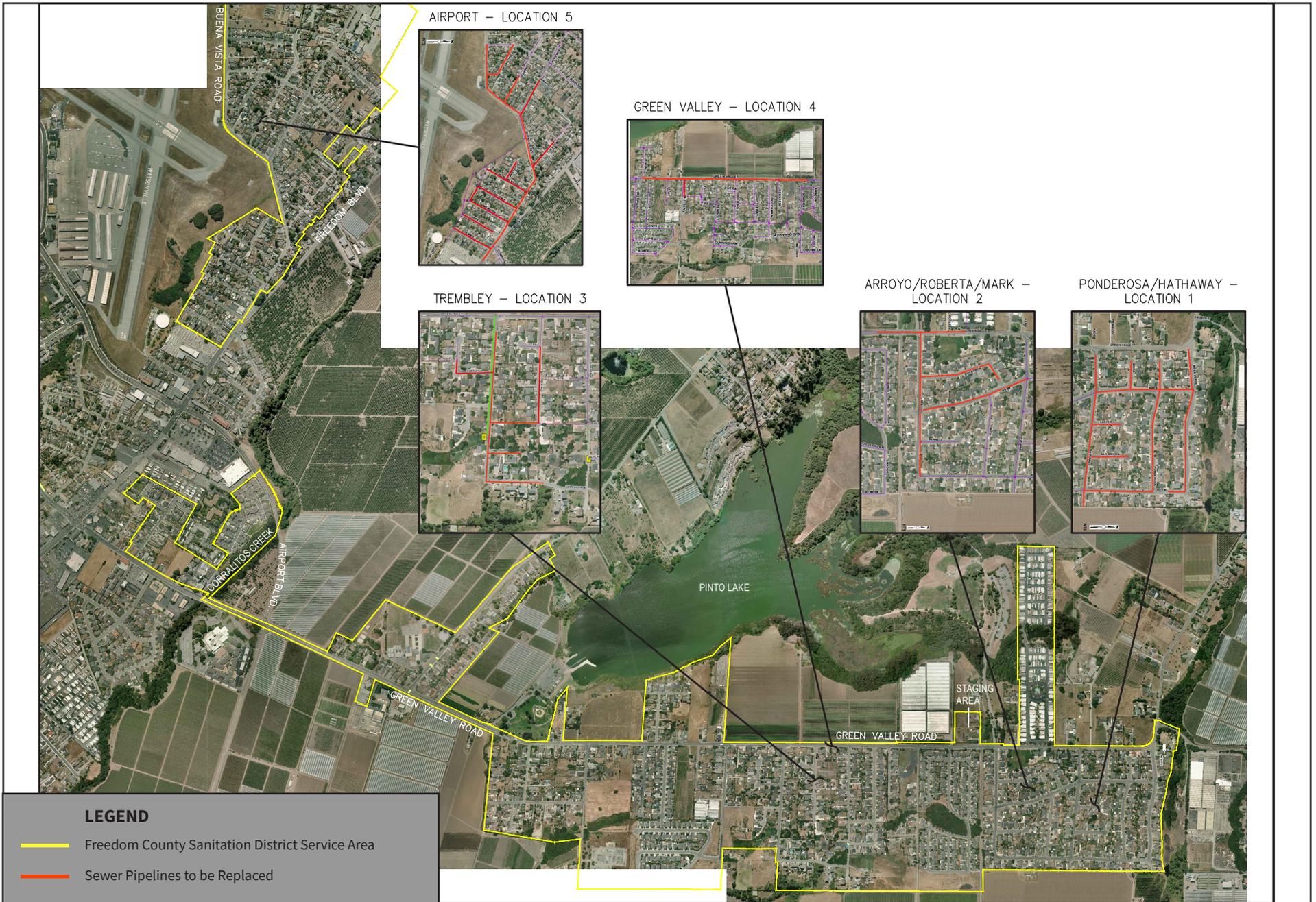


Figure 2
Five Improvement Locations
Freedom Sewer Rehabilitation Project



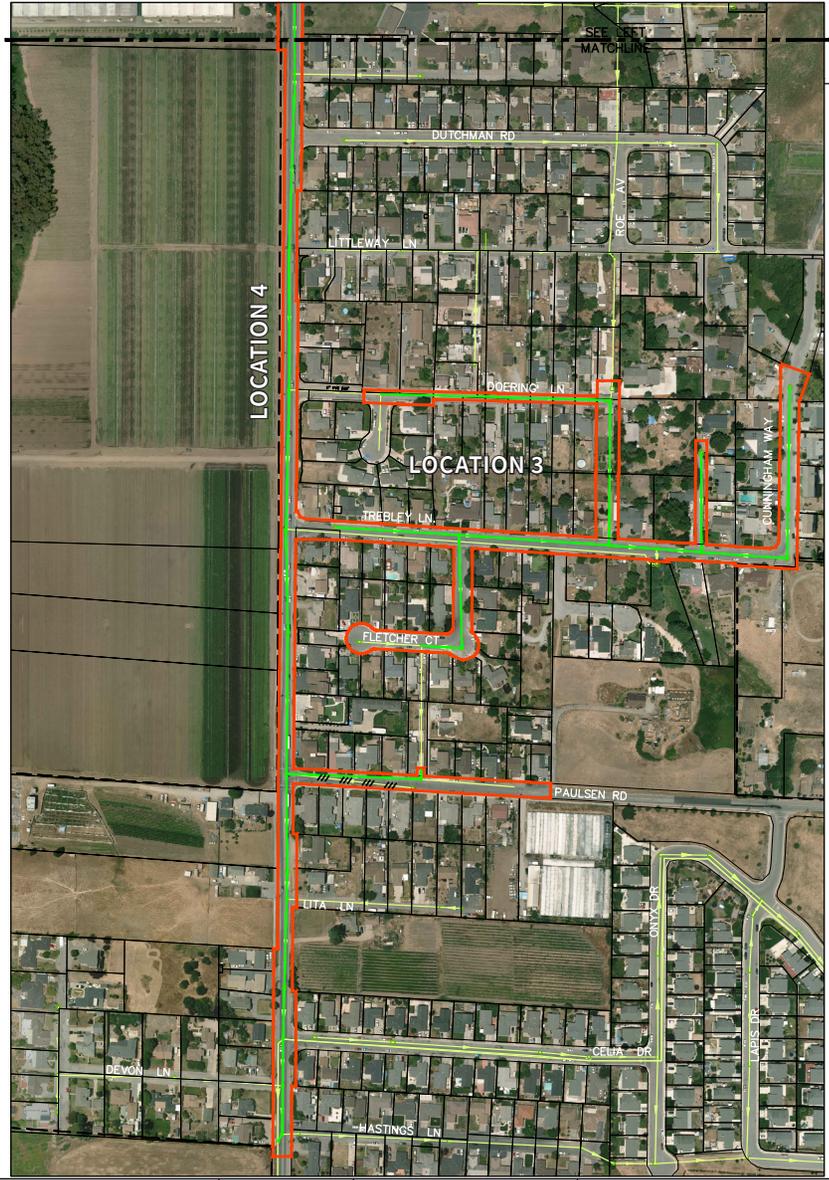
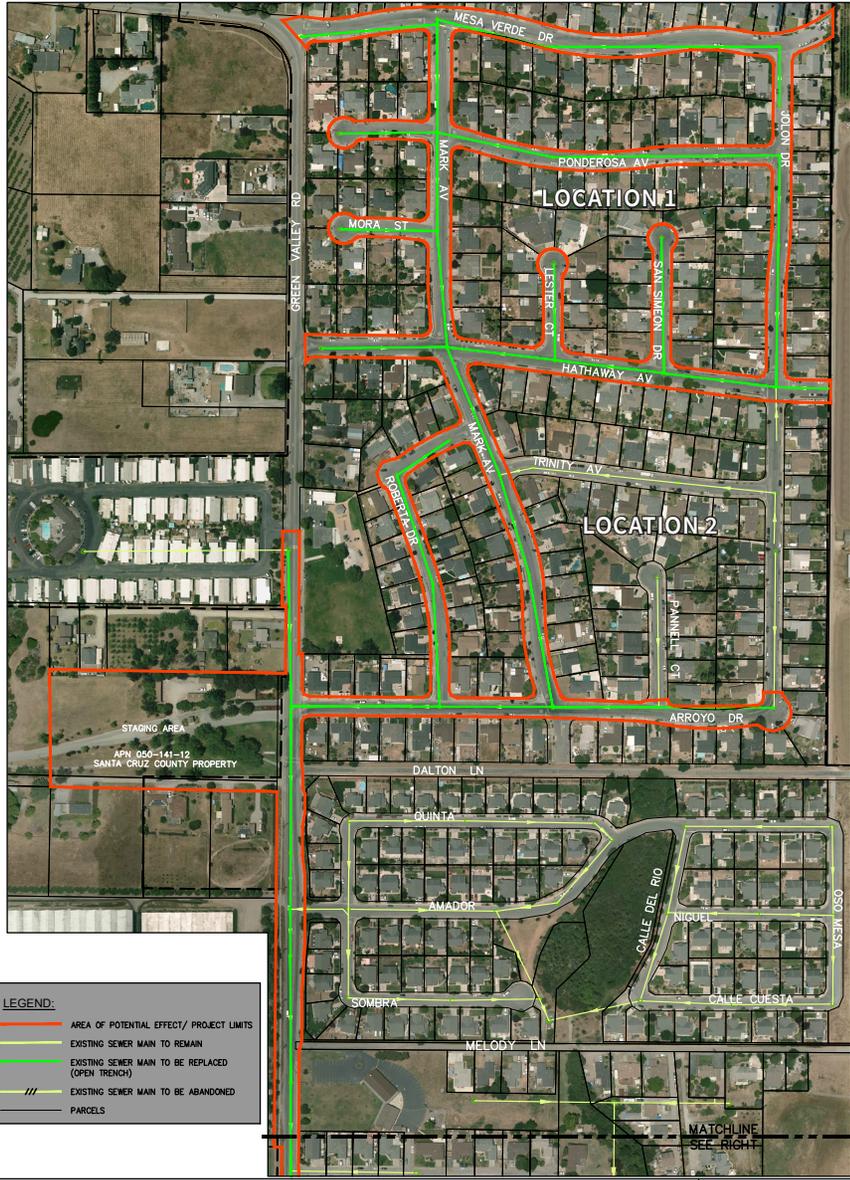
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APN 056-141-12 SANTA CRUZ COUNTY PROPERTY

LEGEND:

- AREA OF POTENTIAL EFFECT/ PROJECT LIMITS
- EXISTING SEWER MAIN TO REMAIN
- EXISTING SEWER MAIN TO BE REPLACED (OPEN TRENCH)
- - - EXISTING SEWER MAIN TO BE ABANDONED
- PARCELS



FOR REDUCED PLANS ORIGINAL SCALE IN INCHES



SHEET NAME: AREA OF POTENTIAL EFFECT

DRAWING NAME: FREEDOM SEWER REHABILITATION PROJECT NORTHERN PROJECT AREA

DATE	REVISION	PROJECT ENGINEER	ASHLEIGH TRUJILLO
		FREEDOM COUNTY SANITATION DISTRICT	FREEDOM SEWER REHABILITATION PROJECT
		NORTHERN PROJECT AREA	
		AREA OF POTENTIAL EFFECT	
		DRAWN: ADT	CHECKED: KME
		DATE: 12/21/2017	SCALE: 1"=150'
		JOB NO.	SHEET
			EX-2
			OF 3

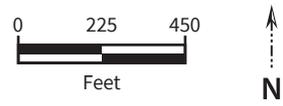


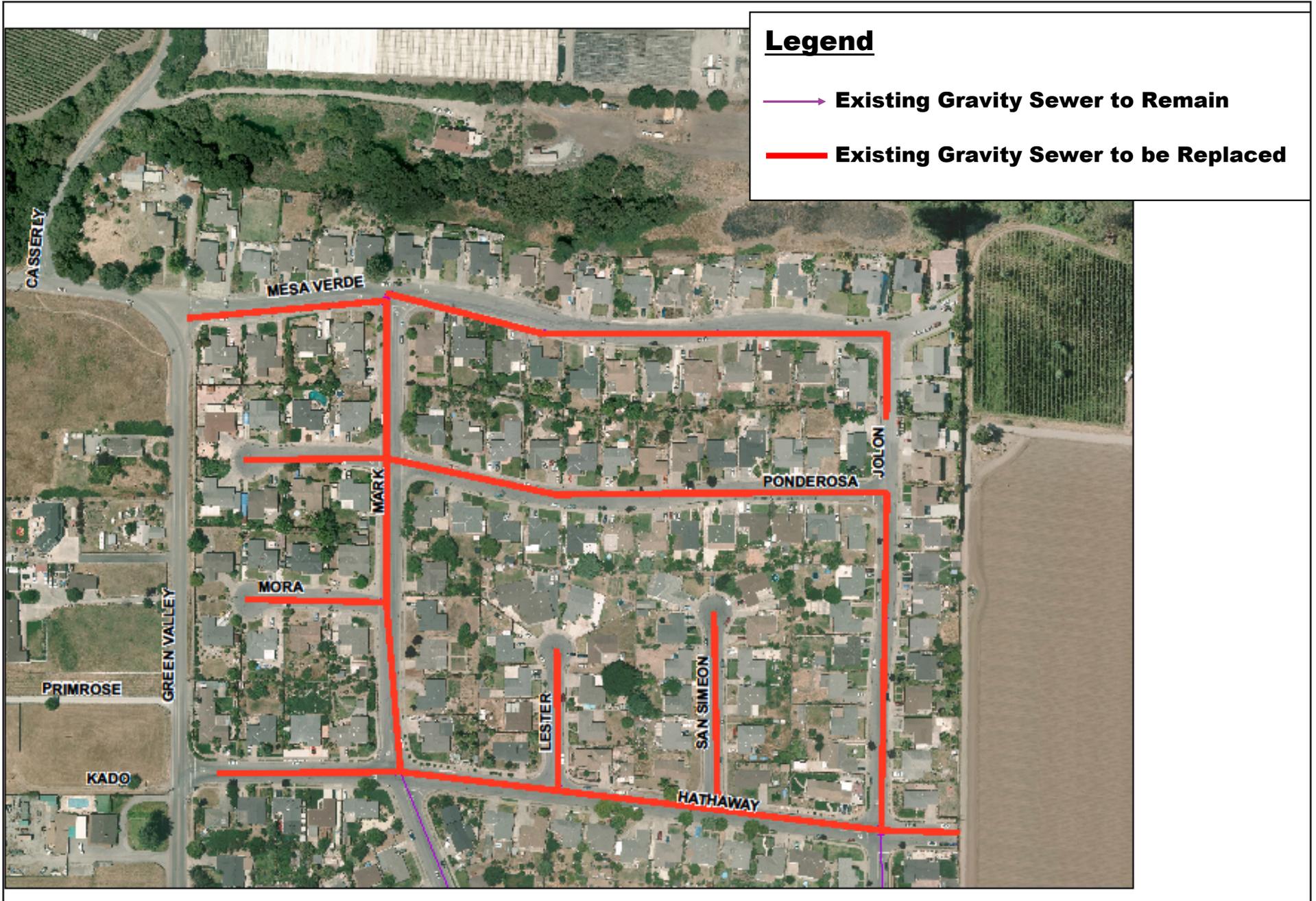
Figure 3
Area of Potential Effect, Northern Portion
Freedom Sewer Rehabilitation Project



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Legend

- Existing Gravity Sewer to Remain
- Existing Gravity Sewer to be Replaced

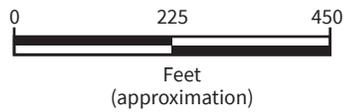


Figure 5
Ponderosa/Hathaway Sewer Rehabilitation – Location 1
Freedom Sewer Rehabilitation Project



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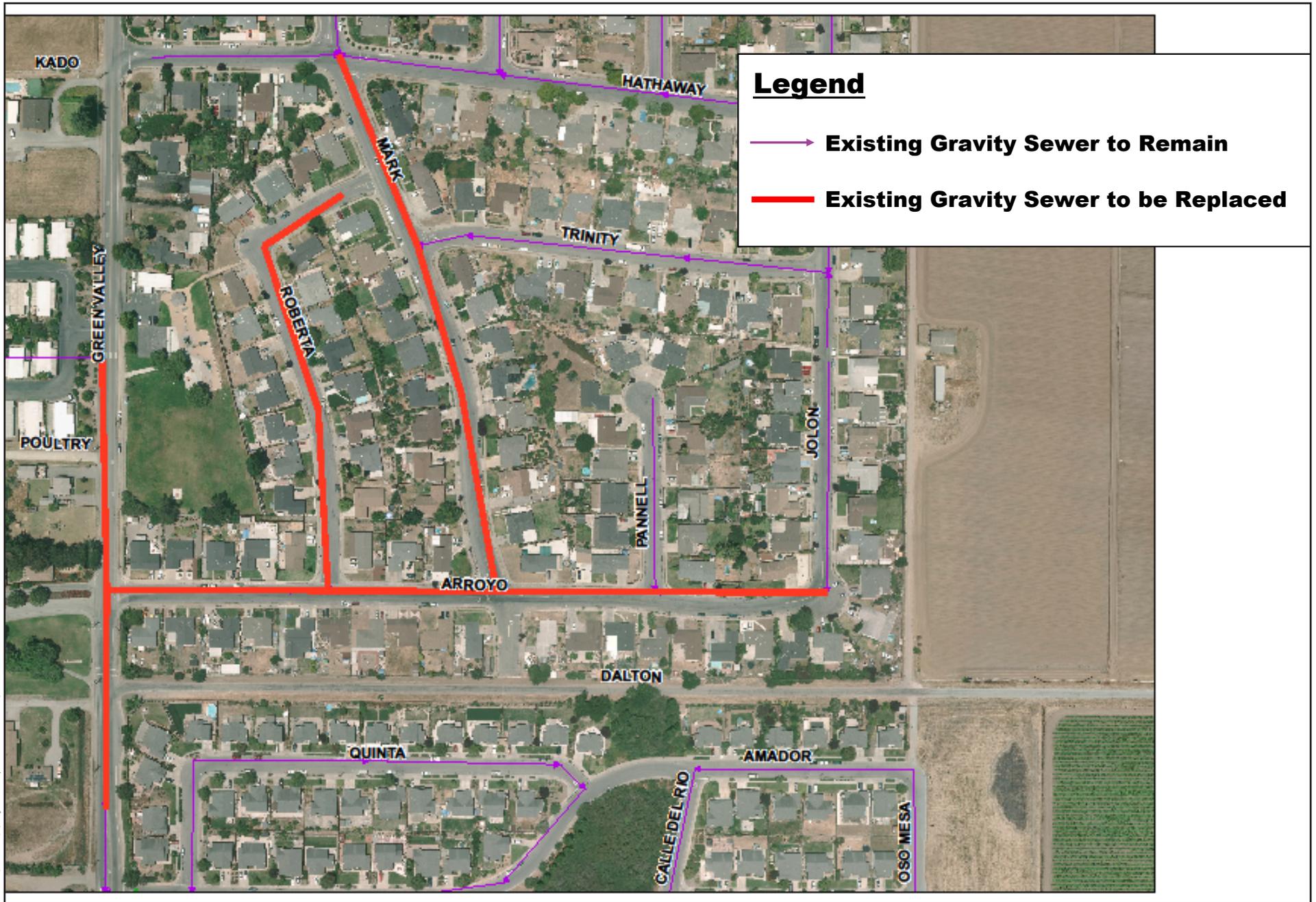
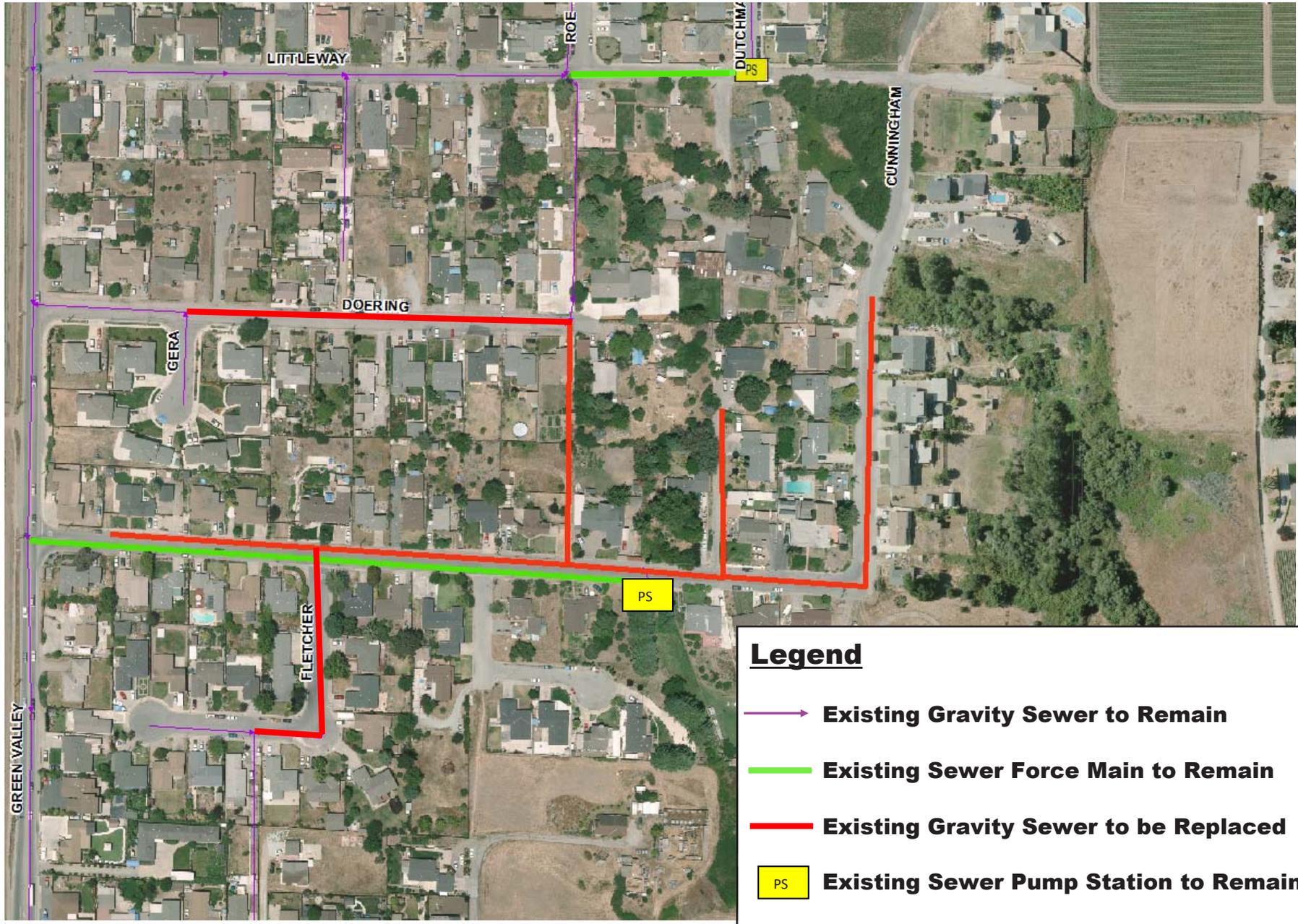


Figure 6
Arroyo/Roberta/Mark Sewer Rehabilitation – Location 2
Freedom Sewer Rehabilitation Project



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Legend

-  **Existing Gravity Sewer to Remain**
-  **Existing Sewer Force Main to Remain**
-  **Existing Gravity Sewer to be Replaced**
-  **Existing Sewer Pump Station to Remain**

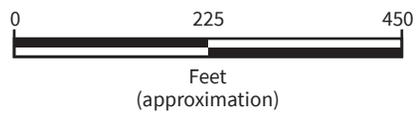


Figure 7
Trembley Sewer Rehabilitation – Location 3
Freedom Sewer Rehabilitation Project



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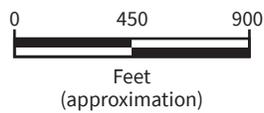


Figure 8
Green Valley Sewer Rehabilitation – Location 4
Freedom Sewer Rehabilitation Project



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Figure 9
Airport Sewer Rehabilitation – Location 5
Freedom Sewer Rehabilitation Project



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II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS:

Parcel Size (acres): Not applicable. Project is predominately in paved roadways (27,440 linear feet or 5.2 miles of roadway)

Existing Land Use: Roadways in residential areas

Vegetation: Largely unvegetated and paved with some small areas of disturbed, ruderal uplands/grasslands and ornamental shrubbery

Slope in area affected by project: 0 - 30% 31 – 100% N/A

Nearby Watercourse: Corralitos Creek, Pinto Lake, College Lake

Distance To: Pinto Lake is approximately 1,000 feet west of the Project Area limit line along Green Valley Road, and Corralitos Creek is approximately 1,000 feet north east of the Project Area limit line at the Airport Area (**Figure 2**). College Lake, a seasonal lake, is located approximately 4,000 feet east of Green Valley Road.

ENVIRONMENTAL RESOURCES AND CONSTRAINTS:

Water Supply Watershed:	No	Fault Zone:	Zayante
Groundwater Recharge:	No	Scenic Corridor:	No
Timber or Mineral:	No	Historic:	No
Agricultural Resource:	No	Archaeology:	Yes
Biologically Sensitive Habitat:	Yes	Noise Constraint:	Yes
Fire Hazard:	No	Electric Power Lines:	Yes
Floodplain:	No	Solar Access:	No
Erosion:	No	Solar Orientation:	No
Landslide:	No	Hazardous Materials:	Yes
Liquefaction:	No	Other:	No

SERVICES:

Fire Protection:	Pajaro Valley Fire Protection District	Drainage District:	Pajaro Storm Drain Maintenance District
School District:	Pajaro Valley Unified School District	Project Access:	Freedom Boulevard and Green Valley Road
Sewage Disposal:	Freedom County Sanitation District	Water Supply:	City of Watsonville

PLANNING POLICIES:

Zone District: PR, R-1-6, R-1-8, R-1-10, RM-2-R (C-1, CA, PF adjacent to project)

Special Designation: Watsonville Municipal Airport Master Plan Area

General Plan: Residential Single Family, Agriculture Commercial (Public Facility/ Institutional adjacent to project)

Urban Services Line: Inside Outside
 Coastal Zone: Inside Outside

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

Regional

Santa Cruz County is uniquely situated along the northern end of the Monterey Bay, approximately 55 miles south of the City of San Francisco along the Central Coast. The Pacific Ocean and Monterey Bay are located to the west and south, the mountains inland, and prime agricultural lands along both the northern and southern coast of the county create limitations on the style and amount of building that can take place. Simultaneously, these natural features create an environment that attracts both visitors and new residents every year. The natural landscape provides the basic features that set Santa Cruz County apart

from other counties and require specific accommodations to ensure project implementation is done in a safe, responsible and environmentally respectful manner.

Santa Cruz County includes a variety of unique geographic features. The California Coastal Zone affects nearly one third of the land in the urbanized area of the unincorporated County with special restrictions, regulations, and processing procedures required for development within that area. Steep hillsides require extensive review and engineering to ensure that slopes remain stable, buildings are safe, and water quality is not impacted by increased erosion. The farmland in Santa Cruz County is among the best in the world, and the agriculture industry is a primary economic generator for the County. Preserving this industry in the face of population growth requires that soils best suited to commercial agriculture remain active in crop production rather than converting to other land uses. These features all are considered when evaluating new projects to be undertaken throughout the County. The project area is located outside the coastal zone and does not include steep hillsides or agricultural land.

Project Area

The project area includes several paved roadways, which have been grouped into five improvement locations, all of which are located within developed residential areas of Freedom, adjacent to the City of Watsonville’s northern boundary (**Figures 2-9** and **Table 1**). The roadways are surrounded by residential development, with the exception of agricultural fields located west of Improvement Location 4 (**Figures 2 and 3**), the Watsonville Airport located south of Improvement Location 5 (**Figures 2 and 4**), and the County’s Pinto Lake Park west of the potential staging area and Green Valley Road (**Figures 2 and 3**).

Improvement Locations ¹		Existing Land Uses	Adjacent Land Uses
1	Ponderosa/Hathaway	Paved roadway	Residential development
2	Arroyo/Roberta/Mark	Paved roadway	Residential development
3	Trembley	Paved roadway, unpaved residential yards (in the existing easement)	Residential development
4	Green Valley	Paved roadway, unpaved residential yard (in existing easement)	Residential development, agricultural fields
5	Airport Area	Paved roadway, ruderal grasslands	Residential development with some mixed use, Watsonville Municipal Airport
Potential Staging Area		Disturbed ruderal grasslands, shrubbery	Residential development, paved roadway, Pinto Lake County Park

¹ Improvement Locations 1-5 are shown in **Figures 2 through 9**. The potential staging area is shown in **Figure 3**.

PROJECT BACKGROUND:

The FCSD is a non-profit public agency providing sewage collection, treatment and disposal service to the Freedom area. The FCSD sanitary sewer system facilities include approximately 15 miles of collection pipelines and 8 pump stations. The FCSD's customers

generate approximately 1.35 million gallons of sewage a day, which is transported to the wastewater treatment plant on Beach Street, owned and operated by the City of Watsonville. This plant has a capacity to treat a total of approximately 16.5 million gallons of wastewater per day to a quality level that meets stringent Environmental Protection Agency and State standards for discharge into Monterey Bay. Revenues to operate the District are collected yearly from residents and businesses that are connected to the sanitary sewer system.

The existing sewer lines within the project area are 50-60 years old and are deteriorating. Without rehabilitation, the deterioration of these lines could lead to surface spills and leaks along the buried pipelines. Therefore, the project includes replacement of several pipelines throughout the service area.

Additionally, some of the sewer lines were evaluated in a 2007 Sanitary Sewer System Capacity Evaluation and Assurance Plan¹, and were identified as having the potential for an overflow or were surcharging within 3 feet of the ground level, particularly during storm events. Therefore, the pipelines in Green Valley Road (**#4 in Table 1, Figure 8**) would be upsized from 8-inch diameter to 10- or 12-inch diameter to accommodate existing wet weather flows, as identified in the 2007 report. In other locations sewer mains that are 6-inch diameter would be increased to the current industry standard of 8-inch diameter to better facilitate future maintenance on the mains. The 8-inch lines also allow closed-circuit television cameras (to be used by maintenance crews) to fit inside the line.

The project would improve the overall reliability of the conveyance system. Although some sewer lines would be upsized, increasing the capacity of the individual lines, the overall sewer system capacity for sewage collection and treatment would not change substantially.

DETAILED PROJECT DESCRIPTION:

The project includes the replacement of 27,440 linear feet or 5.2 miles of existing wastewater (sewer) collection lines located within existing residential roadways in the unincorporated community of Freedom (**Figure 1**). The project area is divided into five improvement locations, based on residential neighborhoods, as shown in **Figure 2**.

The project would replace existing sewer lines, including modifications to existing associated manholes and to the two existing tie-ins on airport property, as described in **Table 2** and shown in **Figures 2 through 9**. The project would not include the rehabilitation of any pump stations.

The project limits (i.e., areas of ground disturbance) would be within existing paved public roadways, except a very small portion that extends onto airport property and two private residential properties in pre-existing easements, as noted in **Table 2**.

¹ Sanitary Sewer System Capacity Evaluation and Assurance Plan. February 2007. Prepared by MWH, Walnut Creek, CA, in coordination with City of Watsonville, Pajaro County Sanitation District, Freedom County Sanitation District, and Salsipuedes Sanitary District.

Table 2. Freedom Sewer Rehabilitation Project – Improvement Locations

Improvement Locations ¹		Description	Planned Construction Method	Planned Construction Timeframe
Northern Portion of Project Area				
1	Ponderosa/Hathaway	Replace 6,360 linear feet of 8-inch sewer line	Open trench in paved roadway	2020/21
2	Arroyo/Roberta/Mark	Replace 3,900 linear feet of 8-inch sewer line	Open trench in paved roadway	2020/21
3	Trembley	Replace 3,340 linear feet of 6-inch sewer line with 8-inch line ²	Open trench in paved roadway, and lining in one section outside the roadway in an existing easement on residential property	2020/21
4	Green Valley	Replace/upsized 4,110 linear feet of 8-inch sewer line with a 10-inch or 12-inch line ³	Open trench in paved roadway, and in an existing easement on residential property	2020/21
Southern Portion of Project Area				
5	Airport Area	Replace 9,730 linear feet of 6-inch and 8-inch sewer line with 8-inch line ²	Open trench in paved roadways and, in two locations, in existing easements onto airport property	2019/21
¹ The improvement locations are shown in Figures 2 through 9 . ² The 6" pipelines would be replaced with 8" lines to meet the current industry standard and thus better facilitate future maintenance, allow closed-circuit television (CCTV) camera access and would not substantially increase system capacity. ³ The 8" pipelines would be replaced with 10" or 12" pipelines to prevent sewage spills of existing flows during large storm events per recommendations in the 2007 Sanitary Sewer System Capacity Evaluation and Assurance Plan, and would not substantially increase system capacity.				

Construction activities include open trench excavation and the use of typical construction equipment, including dump trucks, excavators, front-end loaders, scrapers, and compactors. A trench width of 1.67 feet is assumed for all segments, which is the width of the proposed pipelines plus an additional foot. Sewer lines that would be installed four (4) to eight (8) feet deep would be installed at an average rate of 125 linear feet per day. For lines that would be installed four (4) to 23 feet deep, installation would average 100 linear feet per day. The average daily disturbance would be 208 square feet.

Staging. Construction staging areas would be located on paved or heavily disturbed areas within the road right-of-way where there is an adequate shoulder to support construction vehicles and/or materials. Additionally, there could be equipment and materials staging on the County-owned property located west of the Green Valley Road/Arroyo Drive intersection near Pinto Lake County Park (**Figure 3**). Staging areas would not extend into residential yards, private property or airport property; and would be at least 50 feet away from any drainage courses. Following project implementation, the staging areas and all roadways and affected areas within the project area would be returned to pre-project conditions and normal use.

Schedule. Project construction activities would occur over the course of a two-year period, and would generally occur from April 15 to October 15 of 2019-2021, outside of the rainy season and when it is dry, to fully implement the project (i.e., complete all five improvement locations). Any work outside this window would be completed with the proper best management practices described below. The construction duration in each improvement location would be 12 to 22 weeks, as shown in **Table 3**. The hours of construction activities would be limited to between 8:00 a.m. to 5:00 p.m., Monday through Saturday, excluding holidays.

Table 3. Estimated Construction Duration at Each Improvement Location		
Improvement Locations	Estimated Construction Duration	
	Construction Days	Construction Weeks
1. Ponderosa/Hathaway	80	16
2. Arroyo/Roberta/Mark	60	12
3. Trembley	60	12
4. Green Valley	60	12
5. Airport Area ¹	110	22

¹ Construction within airport property where the two replacement tie-in locations are would be less than one week.

Traffic Control. Daily construction activities could require up to 23 worker vehicle trips per day, in addition to 7-10 additional truck deliveries for the import and export of materials. This would result in an approximate increase in 33 daily vehicle trips throughout the project area over the course of project implementation.

During construction, individual traffic lanes within the public roadways where the sewer line is being replaced would be intermittently closed. To minimize project effects on local traffic, the construction contractor would prepare a traffic control plan prior to issuance of the encroachment permit. The control plan would ensure that roadways within the project area remain open (i.e., one lane of traffic would be open) throughout project implementation to the greatest extent possible, and that lane closures would be safely and effectively managed with appropriate safety flags and signage. Prior to the start of construction activities, signage would be installed that includes the dates for construction, contact information for the FCSD liaison to answer project specific questions, and detour information to minimize the effects of temporary closures. The control plan would also include coordination with local safety personnel to maintain effective emergency service access throughout the duration of the project.

Continuous Service and Spill Protection. During construction, the existing sewage conveyance system would be kept in continuous operation. The contractor would determine whether parallel trenches would be utilized to allow the existing sewer system to remain in

² In accordance with Santa Cruz County Code 8.30
<https://www.codepublishing.com/CA/SantaCruzCounty/html/SantaCruzCounty08/SantaCruzCounty0830.html>

place throughout construction of the new system, or if the new sewage conveyance pipelines would be constructed in the existing trenches with concurrent sewer bypass systems in place that would connect an existing upstream manhole with a downstream manhole, past each incremental length of construction activities. If the bypass system was installed, an alarm system would be included in the design that would ensure that adequate capacity and reliability were retained throughout project implementation. The alarm system would be connected to the FCSD's operation's center, and would provide advanced notice if there was pump failure or malfunction, so that the risk of sewage spills from the project would be minimized.

To further minimize potential impacts that may occur to the environment from the accidental spill of sewage and other hazardous materials, the contractor would develop a hazardous materials spill prevention and containment plan for the project. The plan would not allow any wastewater discharge from the sewage collection system to enter adjacent lands or waters. In the event of accidental discharge, the contractor would be responsible for containment and the immediate cleanup and disposal of all contaminated materials, in accordance with the requirements of the Santa Cruz County Health Department. The contractor would also notify the appropriate regulatory agencies (e.g. U.S. Army Corps of Engineers, California Department of Emergency Services, California Department of Fish and Wildlife, Central Coast Regional Water Quality Control Board) to determine the appropriate permits that would be required to ensure that the project area was returned to pre-spill conditions following cleanup activities, and that all impacts were adequately mitigated.

Best Management Practices. The construction contractor would be required to implement Best Management Practices (BMPs) in accordance with the *County of Santa Cruz Construction Site Stormwater Pollution Control BMP Manual (October 2011 edition)*. The construction specifications would include BMPs to control erosion, sediment and stormwater pollution (e.g. storm drain inlet protection, sand bags around the perimeter of the staging area and/or straw bales, watering down the site to minimize excess dust, and covering stock piles of excavated dirt). Additionally, the construction specifications would include testing any groundwater encountered during excavation to ensure all water leaving the site and entering the storm drain system is not contaminated with hazardous materials and meets RWQCB requirements. All surplus asphalt and rubble from the project area would be removed and transported to the local landfill.

This project does not require a Stormwater Pollution Prevention Plan (SWPPP) because it is a linear project that involves operations and maintenance activities, including pipeline replacement, on existing lines and facilities within an existing right of way (2009-0009-DWQ Construction General Permit³).

³ State Water Resources Control Board, Storm Water Program, Section II.C.2 of 2009-0009-DWQ Construction General Permit as amended by 2010-0014-DWQ & 2012-0006-DWQ.
https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

To reduce the generation of fugitive dust, the construction contractor would be required to implement the following dust control measures at the construction and staging sites: water all active construction areas as needed based on the type of construction activity, soil, and wind exposure; maintain at least 2-feet of free board or cover dirt and loose materials in haul trucks; cover inactive storage piles and stock piles of dirt; and sweep streets if visible soil material remains at the end of the work day. Following sewer and pipeline installation, the project area would be returned to pre-project conditions. The trenching, sewer installation, and paving would be inspected by a County inspector to ensure it meets County standard detail, as required by the encroachment permit. Disturbed areas that are not re-paved would be seeded or planted with native groundcover to maintain minimal surface erosion.

To reduce greenhouse gas emissions and comply with the County's adopted Climate Action Strategy, all construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment.

To protect biological resources in the airport area, the construction contractor would implement the following recommendations from the *Assessment of Biological Resources within the Freedom County Sanitation District Sewage Rehabilitation Project* (Ecosystems West 2018), prior to and during construction at the two replacement tie-in locations in Improvement Location 5, Airport Area: 1) Install silt fencing along the drainage ditch located 40 feet south of the tie-in location to avoid disturbance to the drainage. 2) Remove the top 12 inches of soil (maintaining the existing soil horizon and avoiding disturbance to the seedbank), which may contain seeds for Santa Cruz tarplant; stockpile with protective covering; and then, after tie-in construction, return the topsoil and area to existing conditions.

The County would perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained. The County would notify the contractor immediately if there was a violation that would require immediate compliance.

III. ENVIRONMENTAL REVIEW CHECKLIST

A. AESTHETICS AND VISUAL RESOURCES

Would the project:

1. Have a substantial adverse effect on a scenic vista?

Discussion: The project area is not located in any areas that have been designated as public scenic resources, as designated in the County General Plan (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016), or that could be considered to have scenic vistas. Furthermore, implementation of the project would replace underground pipelines that are located under public roadways and are not visible. Following project implementation, all roadways and disturbed lands would be returned to existing conditions, and views within and of the project area would remain largely unchanged. Therefore, this impact would be **less than significant**. No mitigation would be required.

2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Discussion: The project area is not located along a County designated scenic road, public viewshed, scenic corridor, within a designated scenic resource area, or within a state scenic highway (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016) (Caltrans, 2008). Furthermore, there are no scenic resources located within or visible from the project area, including trees, rock outcroppings or historic buildings. Therefore, there would be **no impact**.

3. Substantially degrade the existing visual character or quality of the site and its surroundings?

Discussion: The existing visual setting is suburban and rural development. Land uses within the project area are primarily single family residential development, with a few small commercial land uses scattered on the outskirts of the residential development. The area is surrounded largely by agricultural land uses, as well as Pinto Lake County Park northwest of the project area and Watsonville Municipal Airport southwest of the project area (Figure 2).

Throughout project implementation, construction equipment and disturbed local roadways would be visible throughout the project area between the months of April and October of the years of 2019 through 2021. Because implementation of the project would involve replacing deteriorating sewage pipelines, the area of disturbance throughout the project area

would move along the pipeline alignments, and no individual area would remain disturbed for extensive periods of time.

The construction methodology would be open trenching; following the replacement of the sewer pipelines, all roadways and disturbed soils would be returned to the existing conditions that occurred prior to project implementation. Therefore, changes in the existing visual character and quality of the project area would be temporary in nature, and the project area would retain the existing residential, agricultural setting. The visual character and quality of the project area would not be permanently changed. Therefore, this impact would be **less than significant**. No mitigation would be required.

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

Discussion: Implementation of the project would not result in the addition of any structures or features aboveground that would create new sources of light or glare. The replacement of the underground sewer pipelines would result in the presence of construction equipment throughout the project area that may produce additional glare throughout implementation of the project. This glare would be similar to cars and trucks that are associated with the existing residences and commercial development, and to those vehicles that normally travel throughout the project area. Therefore, the glare created by construction crews and equipment would not be significantly different from those sources that already occur within the project area.

Any additional glare that resulted through construction equipment would be short in duration, and would move throughout the project area, as the project is implemented in the five improvement locations (**Figure 2**). All construction would also be undertaken during daylight hours, and therefore would not create additional light into the project area through nighttime hours. Although the Santa Cruz County General Plan does not define construction hours, the project would remain consistent with standard working hours of 8:00 a.m. to 5:00 p.m. Monday through Saturday, excluding holidays. Therefore, this impact is considered **less than significant**. No mitigation would be required.

B. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and

forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area does not contain any lands that have been designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance, as shown on the maps prepared by the Farmland Mapping and Monitoring Program of the California Resources Agency (California Resources Agency, 2014). The entire project area has been mapped as Urban and Built Up Land, which is defined as land that is occupied by structures with a building density of at least 1 unit to 1.5 acres. The project area has also not been identified through the Santa Cruz County General Plan as an area that supports Farmland of Local Importance (Santa Cruz County GIS Mapping, 2016). The project area supports predominantly single family residential development, and the pipeline replacement would occur largely within the public roadways that support these residences. Therefore, there would be no change in land use as a result of project implementation that would reduce agricultural resources, or convert existing agricultural land uses to non-agricultural uses. Therefore, there would be **no impact**.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. 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"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area is zoned as Single Family Residential, which is not considered to be an agricultural zone (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016). Furthermore, the project area is not under a Williamson Act Contract (California Department of Conservation, 2016). Implementation of the project would occur largely within the public roadways of residential development and would not impact agricultural land uses, or any lands that are under a Williamson Act contract. Furthermore, project implementation would not impact adjacent lands that support agricultural land uses. Therefore, there would be **no impact**.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area is not located on or near lands that have been zoned for forest lands, timberland, or Timberland Production (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016). The project area is predominately single family residential development, and does not support large stands of trees outside of those that have been planted for landscaping. Implementation of the project would be largely limited to the public roadways within the project area, and the project would not result in any impacts to, or the removal of, any trees that are within the project area. Therefore, the project would not affect any forest or timber resources, or access to or the harvest of timber resources in the future. There would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 4. <i>Result in the loss of forest land or conversion of forest land to non-forest use?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: No forest land occurs within the project area, or within the immediate vicinity of the project area (Santa Cruz County GIS Mapping, 2016). The project area is predominately single family residential development, as discussed above. Any trees within the project area are associated with landscaping within the residential development, and would not be impacted as a result of the project. Therefore, there would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. <i>Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area does not support lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, timberlands or forest lands (California Resources Agency, 2014) (Santa Cruz County GIS Mapping, 2016). Although the project area is surrounded by lands that support agricultural production, there are no timberlands or forest lands located near the project area. Implementation of the project would occur largely within the streets of the residential development within the project area, and would not impact adjacent land uses. The project area would remain unchanged following project implementation. Therefore,

implementation of the project would not result in the conversion of any agricultural, forest or timberland land uses to alternative land uses. Therefore, there would be **no impact**.

C. AIR QUALITY

The significance criteria established by the Monterey Bay Air Resources District (MBARD) has been relied upon to make the following determinations. Would the project:

1. Conflict with or obstruct implementation of the applicable air quality plan?

Discussion: Santa Cruz County is located in the North Central Coast Air Basin (NCCAB), which is comprised of Monterey, Santa Cruz, and San Benito Counties, covering an area of 5,159 square miles along the central coast of California. The Monterey Bay Air Resources District (MBARD) consists of all three counties within the NCCAB; therefore, the county is within the jurisdiction of the MBARD. MBARD is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, education and public information activities related to air pollution, as required by the California Clean Air Act (CCAA) and Amendments, and the Federal Clean Air Act (CAA) and Amendments.

The MBARD Air Quality Management Plan (AQMP) is the applicable air quality plan for the project area. MBARD was required under the CCAA to develop an attainment plan to address ozone violations by July 1991. The CCAA requires MBARD to periodically prepare and submit a report to the California Air Resources Board (CARB) that assesses its progress toward attainment of the state ambient air quality standards (AAQS). The most recent update (2012-2015) is the seventh update to the 1991 AQMP. It shows that the region continues to make progress toward meeting the state ozone standard.

As described in the MBARD CEQA Air Quality Guidelines, construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone [i.e., volatile organic compounds (VOC) or oxides of nitrogen (NOx)], are accommodated in the emission inventories of the AQMP. Projects that propose use of typical construction equipment and practices would not have a significant impact on the attainment and maintenance of ozone AAQS and would therefore not conflict with the AQMP. As described in the Detailed Project Description above, implementation of the project would not require any non-typical construction equipment or practices. Additionally, the project would not create long-term emissions. Therefore, the project would not conflict with or obstruct any long-range air quality plans, and the impacts to the applicable air quality plan would be **less than significant**. No mitigation would be required.

2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Discussion: The CAA of 1970 required the EPA to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants with states retaining the option to adopt more stringent standards or to include other specific pollutants. The US EPA has classified air basins (or portions thereof) as being in “attainment,” “nonattainment,” or “unclassified” for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data was available as a basis for a nonattainment or attainment designation. **Table AQ-1** lists the attainment status of the NCCAB for the criteria pollutants. The US EPA classifies the NCCAB as in attainment or unclassified for all pollutants with respect to federal air quality standards. The NCCAB is not in nonattainment status for any pollutant.

The state of California, under the CCAA, has established standards for criteria pollutants that are generally stricter than federal standards. The CARB establishes air quality standards in the state and measures progress in reducing pollutant emissions. As shown in **Table AQ-1**, the NCCAB is currently in nonattainment status for respirable particulate matter (PM₁₀), and transitional nonattainment status for ozone. An area is designated transitional nonattainment if, during a single calendar year, the state standard is not exceeded more than three times at any monitoring location within the applicable district.

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone (O ₃)	1 Hour	Nonattainment – Transitional	No Federal Standard
	8 Hour		Attainment
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	No Federal Standard
	24 Hour		Unclassified ⁽¹⁾
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Attainment	Attainment
	24 Hour	No State Standard	
Carbon Monoxide (CO)	8 Hour	Unclassified	Unclassified/Attainment
	1 Hour		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	Calendar Quarter	No State Standard	Attainment
	30 Day Average	Attainment	No Federal Standard
	Rolling 3-Month Average	No State Standard	Attainment
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard
Visibility Reducing Particulates	8 Hour (10:00 a.m. to 6:00 p.m., PST)	Unclassified	No Federal Standard

⁽¹⁾ Unclassified; indicates data are not sufficient for determining attainment or nonattainment.
Source: CARB 2017, EPA 2017a

An Air Quality Conformity Analysis was prepared to determine the potential for the proposed project to violate any air quality standards (Harris & Associates, 2017). The analysis is included as **Attachment 2**.

Construction

Construction activities would result in temporary increases in air pollutant emissions. Project construction emissions were estimated using the CalEEMod Model, version 2016.3.2, based on construction information provided by Santa Cruz County Sanitation District in 2017. Detailed assumptions and modeling data sheets are provided in **Attachment 2**. Maximum daily emissions levels associated with construction of the proposed project are shown in **Table AQ-2**. Annual emissions are shown in **Table AQ-3**.

The MBARD identifies a quantitative threshold for PM₁₀ emissions of 82 pounds per day (lbs/day). The MBARD identifies general earthmoving screening values to determine consistency with this threshold. Projects that propose grading of up to 8.2 acres total, with minimal earthmoving or grading of 2.2 acres per day or less, are considered not to exceed the threshold of 82 lbs/day of PM₁₀. An average daily disturbance of 208 square feet is anticipated for the proposed project, which is less than one percent of the MBARD screening level. Additionally, as shown in **Table AQ-2**, the project is estimated to generate a maximum of 6 lbs/day of PM₁₀.

The MBARD does not identify quantitative thresholds for other criteria pollutants during construction. Construction projects using typical construction equipment, such as dump trucks, scrapers, bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone [i.e., volatile organic compounds (VOC) or oxides of nitrogen (NO_x)], 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 AAQS. However, a project that would use non-typical equipment would have the potential to result in a significant impact related to emissions of VOCs or NO_x.

The proposed project would employ typical construction equipment. It would not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories. Further, as described in Section II under Detailed Project Description, the construction contractor would be required to implement dust control measures at the construction and staging sites, which would include: water all active construction areas as needed based on the type of construction activity, soil, and wind exposure; maintain at least 2-feet of free board or cover dirt and loose materials in haul trucks; cover inactive storage piles; and sweep streets if visible soil material remains at the end of the work day. Therefore, the proposed project would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. No mitigation would be required.

Table AQ-2 Estimated Construction Daily Maximum Air Pollutant Emissions						
Improvement Location	VOC	NOx	CO	SOx	PM10	PM2.5
Pounds per Day (lbs/day)						
Ponderosa/Hathaway	3	32	20	<1	6	3
Arroyo/Roberta/Mark	3	29	19	<1	5	3
Trembley	3	37	21	<1	6	4
Green Valley	2	25	18	<1	5	3
Airport Area	3	34	20	<1	6	3

Note: Emission quantities are rounded to the nearest whole number. Exact values are provided in **Attachment 2**.
 PM10 – Particulate Matter less than 10 microns
 PM2.5 – Particulate matter less than 2.5 microns
 NOx – Oxides of Nitrogen
 SOx – Oxides of Sulfur
 CO – Carbon Monoxide
 VOC – Volatile organic compounds

Operation

Following construction, operation of the pipelines would be passive and would not result in an increase in criteria pollutant emissions. Future operations would be similar to existing conditions, with a reduction in maintenance trips that are currently required as a result of the degrading state and inefficiency of the existing pipelines. Therefore, operational impacts related to emissions of criteria pollutants would be **less than significant**. No mitigation would be required.

Federal Cross-Cutting Regulation: Clean Air Act

With regard to conformity to Federal standards, the Code of Federal Regulations (CFR) provides guidance to document Clean Air Act Conformity Determination requirements. 40 CFR Part 93.153(b)(2) defines de minimis levels, that is, the minimum thresholds for which a conformity determination must be performed for criteria pollutants for which an air basin is in nonattainment or maintenance. The NCCAB is in attainment or designated as “unclassified” for all pollutants under federal standards. As such, a comparison to federal de minimis thresholds to determine CAA consistency is not required. As shown in **Table AQ-3** and previously discussed, annual emissions from construction of the proposed project would be minimal and would not exceed emissions inventories for the basin. Therefore, the project would not have the potential to significantly impact the ability of the NCCAB to maintain attainment status. This impact is **less than significant**. No mitigation would be required.

Table AQ-3 Estimated Construction Annual Pollutant Emissions						
Improvement Location	VOC	NOx	CO	SOx	PM10	PM2.5
Tons per Year (tons/year)						
Ponderosa/Hathaway	<1	1	1	<1	<1	<1
Arroyo/Roberta/Mark	<1	1	1	<1	<1	<1
Trembley	<1	1	1	<1	1	<1
Green Valley	<1	1	1	<1	<1	<1
Airport Area	<1	2	1	<1	<1	<1

Emission quantities are rounded to the nearest whole number. Exact values are provided in **Attachment 2**.
 PM10 – Particulate Matter less than 10 microns
 PM2.5 – Particulate matter less than 2.5 microns
 NOx – Oxides of Nitrogen
 SOx – Oxides of Sulfur
 CO – Carbon Monoxide
 VOC – Volatile organic compounds

3. *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)?*
-

Discussion: The NCCAB is in non-attainment of the state PM₁₀ standard and transitional nonattainment of the state ozone standard. The MBARD CEQA Guidelines state that the 82 lbs/day threshold for construction emissions of PM₁₀ is the threshold for both individual and cumulative impacts on local air quality, since the background concentration reflects the collective contribution of PM₁₀ from nearby sources. Projects that are inconsistent with the AQMP would result in a significant cumulative impact related to ozone emissions, as discussed above. Project construction would result in very limited and temporary emissions of ozone and PM₁₀. Emissions would not exceed the threshold of 82 lbs/day for PM₁₀ or conflict with the AQMP for ozone. Following construction, the project would have no impact on existing ambient air quality, as there are no ongoing emissions that would be generated from the sewage pipelines. Therefore, the proposed project would not result in a cumulatively considerable net increase in criteria pollutants. The impact on ambient air quality would be **less than significant**. No mitigation would be required.

4. *Expose sensitive receptors to substantial pollutant concentrations?*
-

Discussion: MBARD defines sensitive receptors for CEQA purposes as any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. Sensitive receptors also include long term care hospitals, hospices, prisons, and dormitories

or similar live-in housing.

The proposed project would replace existing degraded sewer pipelines in primarily residential areas. As such, project construction activities would occur in close proximity to sensitive receptors associated with residences, and potentially expose these receptors to short-term criteria pollutant emissions. However, as shown in **Table AQ-2**, emissions from the construction of each project alignment would be minimal. Emissions of PM₁₀ would be well below the MBARD threshold. Additionally, project construction would be linear, with an average of 100 to 125 feet of pipeline installed per day. An individual receptor at any location within the project area would be exposed to project construction for only a few days. Following construction, the project would not generate any long-term criteria pollutants. Impacts to sensitive receptors would therefore be **less than significant**. No mitigation would be required.

5. *Create objectionable odors affecting a substantial number of people?*

Discussion: Construction of the proposed project would potentially expose residents along the pipeline alignments to odors from diesel construction equipment exhaust. However, as shown in **Table AQ-2**, emissions of sulfurous gases (SO_x), the main source of odors from construction equipment, would be extremely limited (MBARD, 2008). Sewage odors during construction may be greater than under existing conditions as pipelines are exposed and replaced; however, this would be short-term in nature, occurring during construction activities on a segment by segment basis. Individual receptors would be adjacent to construction activities for only a few days. Following construction, sewage odors would be contained within the pipelines, similar to the existing condition. Therefore, the replacement of the sewer pipelines would have a **less than significant** impact through the creation of minimal, short term odors to sensitive receptors within the project area. No mitigation would be required.

D. BIOLOGICAL RESOURCES

Would the project:

1. *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 Wildlife, or U.S. Fish and Wildlife Service?*

Discussion: The analysis in this section is based on the *Assessment of Biological Resources for the FCSD Sewer Rehabilitation Project*, prepared by qualified biologists with

EcoSystems West (EcoSystems West, 2018) (**Attachment 3**).

EcoSystems West biologists reviewed relevant background information pertaining to the project, including available site photographs, U.S. Fish and Wildlife Service (USFWS), CDFW, the California Natural Diversity Database (CNDDDB), and California Native Plant Society (CNPS) occurrence records for special-status plants and wildlife occurrences within or near the project area, and other relevant documents or communications from resource specialists. Distribution information for special-status wildlife species was reviewed to determine which species have the potential to occur in or near the project area. The biologists then conducted surveys of the project area on May 15 and June 9, 2017, and on January 12, 2018. The entire project area was evaluated for the potential to support sensitive biological resources.

Because the majority of the project area occurs within paved public roadways within residential development, survey efforts were focused on those sites located adjacent to open spaces, including: 1) the airport property where two replacement tie-ins would be installed to connect the replaced sewer pipelines with the existing sewage conveyance system (**Figure 9**), and 2) the potential staging area located on County-owned property along Green Valley Road near Pinto Lake Park (**Figure 3**). The following impact analysis is focused on these areas as well, as there are no biotic resources that were identified within the public roadways or residential neighborhoods.

Airport Property

The project includes installation of two replacement tie-ins, between the replacement sewer lines and the existing sewer conveyance system, located along the north-eastern airport property boundary (**Figure 9**). The tie-ins are located just inside the airport property boundary within pre-existing easements at the ends of Coffey and Emme Streets.

The two replacement tie-in locations are within grasslands, comprised almost entirely of non-native grasses and other ruderal non-native plants. Biologists observed a few individual plants of California oatgrass (*Danthonia californica*), a handful of other native plants [poison oak (*Toxicodendron diversilobum*) and Pacific blackberry (*Rubus ursinus*)], and scattered coast live oak trees (*Quercus agrifolia*) south of the tie-in locations. There were no special-status plants observed within or immediately adjacent to the project area during project surveys. A complete list of plant species that were observed is included in the full biotic report, included in **Attachment 3**.

All of the grassland habitat on the airport property is considered “Critical Habitat”⁴ for Santa Cruz tarplant (*Holocarpa macradenia*), listed by the State of California as Endangered and by the Federal Government as Threatened. However, the northeastern boundary of the airport provides

⁴ Designated Critical Habitat for plants or animals, determined and published in the Federal Register as a formal rule, receives protection under section 7 of the ESA, through the prohibition of destruction or adverse modification of critical habitat by actions carried out, funded, or authorized by a Federal Agency.

only marginal habitat for the plant because of the presence of dense non-native grasses and associated thatch. The tarplant was observed approximately 250 feet southwest and uphill from the project area, as described below.

To the southwest and uphill from the sewer line alignment and replacement tie-in locations, coastal terrace prairie habitat is present with California oatgrass (*Danthonia californica*), Santa Cruz tarplant, and Muehlenberg's centaury (*Zeltnera muehlenbergii*). Choris' popcorn flower (*Plagiobothrys chorisianus* var. *chorisianus*) and San Francisco popcorn flower (*Plagiobothrys diffusus*) are also known to occur on the airport property further to the west. These species were not observed during the field surveys associated with the project, which were limited to the airport property immediately adjacent to the tie-in locations.

One replacement tie-in location would be located approximately 40 feet from a storm water drainage ditch that supports hydrophytic vegetation such as watercress (*Nasturtium officinale*), cattail (*Typha latifolia*), bristly ox-tongue (*Helminthotheca echioides*), and curly dock (*Rumex crispus*). The ditch, which flows to the storm drain system, receives surface water runoff from the surrounding grasslands and wetland located approximately 150 feet south of the tie-in location. The wetland to the south supports a suite of associated native and non-native wetland plants including Pacific willow (*Salix lasiandra* ssp. *Lasiandra*), white alder (*Alnus rhombifolia*), dock (*Rumex* sp.), and pennyroyal (*Mentha pulegium*). A formal wetland assessment (of the wetland located south of the tie-in location) was not conducted as part of the project as there would be no impacts to this feature. However, based on the surveys performed by EcoSystems West's qualified biologists on May 15 and June 9, 2017, and on January 12, 2018, it was determined that there were no federally protected wetlands, as defined by Section 404 of the Clean Water Act, within or immediately adjacent to the project area.

At the time of the project area surveys, there were numerous bird species and other common wildlife species utilizing the boundaries between the grassland and wetland on airport property. It is likely that birds utilize the willows, alders, and oak trees for nesting throughout the bird breeding season⁵.

Staging Area

The potential staging area located west of Green Valley Road at Arroyo Drive (**Figure 3**) could be utilized for equipment and materials storage throughout project implementation. No other construction activities would occur within this area. The staging area currently supports an existing County maintenance yard, mowed grassland and scattered trees, and does not provide habitat for sensitive biological resources. It is likely that birds utilize the trees in the staging area

⁵ Nesting birds, their nests, and eggs are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13).

and surrounding lands for nesting during the bird breeding season⁶, which is further discussed below. The staging area is also located adjacent to Pinto Lake Park, which is known to support western pond turtle (*Actinemys = Emys marmorata pallida*), a CDFW ‘Species of Special Concern’, as well as bird rookeries³.

Impacts

During construction, potential impacts to biological resources would be less than significant, with mitigation identified to protect nesting birds in the airport area and listed species (western pond turtle) near the staging area. Once the sewer pipelines have been replaced and construction activities are complete, there would be no impacts to biological resources.

Nesting Birds. As described in Section L, Noise, construction activities could result in short-term noise impacts primarily from the operation of heavy construction equipment to excavate the trenches, lay the pipelines, and backfill the trenches. These activities could disrupt nesting birds if they occur near the airport where the willows, alders, and oak trees are located (Improvement Location 5, Airport Area) during nesting season for migratory birds (which is from February 1st through September 15th). As described in Section II under Detailed Project Description, construction is planned to occur from April to October. With implementation of **Mitigation Measure BIO-1: Implement Protective Measures for Migratory Birds in Improvement Location 5, Airport Area**, the potential impact on breeding birds would be **less than significant with mitigation**.

It is unlikely that the project activities proposed for the staging area, located on County-owned property near Pinto Lake, would impact breeding birds either within or adjacent to the staging area, including Pinto Lake Park. Materials and equipment storage planned for the staging area would not likely generate substantially more noise than current conditions, which includes traffic noise along Green Valley Road and operations within the County maintenance yard.

Listed Species. The project would not result in any impacts to critical habitat for Santa Cruz tarplant, coastal terrace prairie habitat or rare plant species located on the airport property. No “destruction or adverse modification of critical habitat” and no alteration of the primary constituent elements for the species, such as the alteration of watershed characteristics or destruction of coastal terrace prairie, would occur as a result of this project (Federal Register 2002). Construction would be relatively short in duration and contained entirely to the northeastern boundary of the airport property, located immediately around the replacement tie-in locations that are within pre-existing easements and lands that are dominated by non-native plant species. There would be no construction activities adjacent to the drainage, which is approximately 40 feet from the tie-in location on the airport property; and no staging or

⁶ Nesting birds, their nests, and eggs are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13).

stockpiling would take place within the airport property.

Further, as described in Section II under Detailed Project Description, the following BMPs would be implemented to ensure sensitive resources on airport property are protected: 1) Install silt fencing along the drainage ditch located approximately 40 feet south of the replacement tie-in location to avoid disturbance to the drainage. 2) Remove the top 12 inches of soil (maintaining the existing soil horizon and avoiding disturbance to the seedbank), which may contain seeds for Santa Cruz tarplant; stockpile with protective covering; and then, after tie-in construction, return the topsoil and area to existing conditions. Therefore, the impact to listed species in the airport area would be **less than significant**. No mitigation would be required.

The project would not likely result in any impacts to western pond turtles from construction activities in the staging area. Western pond turtles are known to move overland, most often less than 200 meters. The portion of Pinto Lake occupied by western pond turtle is greater than 500 meters from the staging area, and the intermediate disturbed habitat is not likely to be utilized by western pond turtles for movement or egg-laying. To ensure the protection of western pond turtle, **Mitigation Measure BIO-2: Protective Measures for Western Pond Turtle** would be implemented. Therefore, this impact would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure BIO-1: Implement Protective Measures for Migratory Birds in Improvement Location 5, Airport Area. For project implementation in Improvement Location 5, Airport Area, construction activities (such as operation of heavy construction equipment to excavate the trenches, lay the pipelines and backfill the trenches) within or adjacent to the airport property will occur outside of the nesting season for migratory birds (which is from February 1st through September 15th), after birds have fledged and before the rainy season. In the event that the timing of project implementation will not allow the project to follow these parameters, a preconstruction survey will be undertaken by a qualified biologist prior to and within two weeks of the onset of construction activities in this area. If breeding birds are found to be utilizing the tree canopy of the oaks or wetland, the biologist will delineate appropriate buffers to protect nesting activities from disturbance.

Mitigation Measure BIO-2: Implement Protective Measures for Western Pond Turtle at the County-Owned Staging Area. Prior to and during use of the staging area at the County-owned maintenance yard west of the Green Valley Road/Arroyo Drive intersection and near Pinto Lake, the construction contractor will install protective fencing along the western perimeter of the staging area in locations identified by a qualified biologist. This will keep the western pond turtle and other wildlife species from entering the staging area. The project inspector will check the site every morning to ensure that the protective fencing remains in place, and that no gaps or tears are present, through which

an animal may have entered the site, throughout project implementation.

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| 2. <i>Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Discussion: As described under D-1, EcoSystems West’s qualified biologists conducted surveys of the project area on May 15 and June 9, 2017, and January 12, 2018. The entire project area was evaluated for the potential to support sensitive biological resources, including riparian habitat or sensitive natural communities. The drainage ditch located approximately 40 feet from the replacement tie-in location is not considered riparian habitat nor a sensitive natural community; however, the project BMPs include installing silt fencing to protect the drainage, as described in Section II under Detailed Project Description. The wetland located on airport property approximately 150 feet south of the project area would not be affected, directly or indirectly, by the project. Although it was determined that there were no sensitive biological resources within or adjacent to the project area, all of the grassland habitat on the airport property is considered “Critical Habitat”⁷ for Santa Cruz tarplant, listed by the State of California as Endangered and by the Federal Government as Threatened. Therefore, the impact would be **less than significant**. No mitigation would be required.

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| 3. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: Based on the surveys performed by EcoSystems West’s qualified biologists on May 15 and June 9, 2017, and on January 12, 2018, it was determined that there were no federally protected wetlands, as defined by Section 404 of the Clean Water Act, within or adjacent to the project area. The wetland located on airport property approximately 150 feet south of the project area would not be affected, directly or indirectly, by the project. Therefore, there would be **no impact**.

⁷ Designated Critical Habitat for plants or animals, determined and published in the Federal Register as a formal rule, receives protection under section 7 of the ESA, through the prohibition of destruction or adverse modification of critical habitat by actions carried out, funded, or authorized by a Federal Agency.

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| 4 | <i>Interfere substantially with the movement of any native resident or migratory fish or wildlife species or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: The trenching associated with the replacement of the degraded sewer pipelines throughout the project area would be implemented within the rights-of-way of public roadways, which are paved and/or heavily disturbed. The potential staging area, which supports a County maintenance yard, mowed grass and scattered trees, west of the Green Valley Road/Arroyo Drive intersection, and the land within the airport property, where the replacement tie-ins would be installed, are also highly disturbed. It was determined by EcoSystems West’s biologists, who surveyed the project area and reviewed existing information and database searches, that the project area does not contain habitat for native resident, or migratory fish or wildlife species, or preclude the use of a native wildlife nursery site. Therefore, there would be **no impact**.

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| 5. | <i>Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: The project area does not support sensitive biological resources or biotic communities, as discussed above. Furthermore, implementation of the project would not involve the trimming or removal of any trees within the project area. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources. There would be **no impact**.

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| 6. | <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: There are no existing or pending Habitat Conservation Plans or Natural Community Conservation Plans that include the project area. There would be **no impact**.

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| 7. | <i>Produce nighttime lighting that would substantially illuminate wildlife habitats?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: Construction activities would be limited to daylight hours, between 8:00 a.m. and 5:00 p.m. There are no project elements that would contribute nighttime lighting as a

result of project implementation. Therefore, there would be **no impact**.

Federal Cross-Cutting Regulations: Endangered Species Act and Migratory Bird Treaty Act

The Federal Endangered Species Act (FESA) and Migratory Bird Treaty Act (MTBA) require an analysis of the project effects on federally-listed habitats, plant and animal species and their associated habitats, and migratory birds, respectively. The grasslands of the airport property that are located within the proposed project area are considered Critical Habitat for the Santa Cruz tarplant, a federally Threatened species (**Figure 4**). In addition, migratory birds, which are protected under the MBTA, may utilize trees on the airport property and within the staging area west of Green Valley Road (**Figure 3**).

Attachment 3, the *Assessment of Biological Resources for the FCSD Sewer Rehabilitation Project*, includes a review of relevant reports and information from the USFWS, a review of existing aerial photos of the project area, and a species list that was generated in June of 2017 from the CNDDDB database. Using the results of these reports, biologists conducted a biological survey of the proposed project area in both the summer of 2017 and winter of 2018 to assess the direct/indirect impacts to any federally-listed species, critical habitat, sensitive habitats, or migratory birds within the project area, that may result from the proposed project activities.

Based on this evaluation, no impacts to federally-listed species or critical habitat are anticipated. The project would not result in any impacts to critical habitat for Santa Cruz tarplant, coastal terrace prairie, or the rare plant species located on the airport property. No "destruction or adverse modification of critical habitat" and no alteration of the primary constituent elements for the species, such as the alteration of watershed characteristics or destruction of coastal terrace prairie, would occur as a result of this project (Federal Register 2002).

Construction activities at the airport tie-in location would be short in duration (approximately 3 days), and the work would be contained entirely to the northeastern boundary of the airport property, which is dominated by non-native plant species. The project footprint within the airport would be limited to the area immediately around the two replacement tie-in locations. No staging or stockpiling would take place within the airport property. The work would consist of trenching in the roadways (outside of the airport property) to replace existing pipes and exposing the existing sewer line at the junctions to connect the replacement pipes. In addition, BMPs would be in place to prevent any temporary potential impacts to tarplant seedbank, if present.

E. CULTURAL RESOURCES

Would the project:

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| 1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Discussion: The analysis in this section is based on the *Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project*, prepared by professionally qualified staff with Albion Environmental (Albion Environmental, 2018). As part of this effort, Albion conducted archival research at the Northwest Information Center, Sonoma State University (NWIC File No. 17-1164 and 17-1317), and conducted field surveys of the entire project area on January 4, 2018. The archival research identified two precontact archaeological sites and 18 historic sites, structures and monuments within a ½-mile radius of the project area.

The project area was once part of Rancho Corralitos during the Mexican and early American periods. Following this time, the area supported expanding agricultural uses. The area is now highly urbanized, and there were no cultural resources that were discovered through field surveys. Because the project area is developed and paved, only limited areas were available for testing; therefore, field surveys were limited. It is anticipated that due to the proximity of known precontract archaeological and historic sites to the project area, the area may contain archaeological deposits associated with Rancho Corralitos, including the remains of structures and field systems, or agricultural and farm related dwellings, structures and equipment from historic agricultural uses.

Impacts

The existing structure(s) within the project area are predominately modern single family residential structures with a few scattered commercial developments, and are not designated as historic resources on any federal, state or local inventory. Furthermore, the majority of the project would occur within the public right-of-way of the local roadways which were previously disturbed for utility installation. No excavation is proposed for the staging areas. Therefore, impacts to known historical resources are not expected through project implementation. However, construction activities could result in the disturbance of previously undiscovered or unknown historical resources within the project area. With implementation of **Mitigation Measure CR-1: Conduct Awareness Training and Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction**, potential impacts to unknown historic resources would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction.

Pipeline replacement shall occur in one of the five improvement areas at a time. The five improvement areas include: 1) Ponderosa/Hathaway, 2) Arroyo/ Roberta/Mark, 3) Trembley, 4) Green Valley, 5) Airport Area.

Prior to excavation in each of the five improvement locations, a qualified archaeologist (who meets the Secretary of the Interior's Professional Qualifications Standards as promulgated in 36 CFR 61 and who has experience with precontact, historic period, and tribal resources) shall be present at the construction site to: 1) conduct awareness training to inform the construction crew of historic activities that led to the potential presence of cultural resources, and describe the types of resources that may be buried with photographic examples; 2) monitor initial excavation sites and survey for the presence of resources; and 3) determine additional monitoring requirements in the improvement location, based on the initial spot-check monitoring, and conduct said monitoring.

If cultural resources are encountered, the archaeologist shall have the authority to temporarily halt or redirect ground-disturbing activities until the material is evaluated and appropriate course of action is determined by the archaeologist and County lead engineer. The County engineers will work with the archaeologist to determine the extent of the materials encountered, and develop an appropriate course of action. Such actions may include identifying alternative pipeline replacement methods (e.g., lining) that both provide the ability for the project to move forward and protect resources in place.

Potential resources include subsurface historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Potential Native American archaeological materials include obsidian and chert flaked stone tools (such as projectile and dart points), midden (culturally derived darkened soil containing heat-affected rock, artifacts, animal bones, and/or shellfish remains), and/or groundstone implements (such as mortars and pestles).

Within sixty days after completion of excavation activities in each of the five improvement locations, the archaeologist shall prepare and submit a final report to the County for review and approval. Consistent with the Secretary of Interior's Standards, the report shall describe the monitoring program and results, and provide interpretations about any cultural materials that were encountered during construction noting to the extent feasible each item's class, material, function, and origin.

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| 2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Discussion: According to the *Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project*, prepared by professionally qualified staff with Albion Environmental (Albion Environmental, 2018), there is no evidence of pre-historic cultural resources located within or adjacent to the project area. Further, it was found that the Native American Heritage Commission (NAHC) had no information in their files about potential cultural resources in or near the project area, and the reconnaissance level surveys conducted by Albion’s qualified archeologists had negative results. However, there are a number of cultural resource sites located within 0.5 mile of the project area; therefore, the project area is considered sensitive for cultural resources.

Impacts

Ground disturbing activities such as open trenching could reveal previously undiscovered resources of significance. Although it is unlikely resources would be discovered because the project area was previously disturbed when the sewer lines were installed, there is a possibility of the unanticipated and accidental discovery of archeological resources during ground disturbing project-related activities. With implementation of **Mitigations Measure CR-1**, potential impacts to unknown resources would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction. This mitigation measure is described above.

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| 3. Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Discussion: According to the *Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project*, prepared by professionally qualified staff with Albion Environmental (Albion Environmental, 2018), there is no evidence of human remains located within or adjacent to the project area. It was found that the Native American Heritage Commission (NAHC) had no information in their files about potential human remains in or near the project area. Furthermore, reconnaissance level surveys were undertaken by qualified archeologists at Albion that also had negative results. However, there are a number of cultural resource sites located within 0.5 mile of the project area, and

therefore the project area is considered sensitive for cultural resources, which may include human remains and funerary objects.

Impacts

Ground disturbing activities proposed through project implementation could reveal previously undiscovered resources of significance. Although it is unlikely resources would be discovered because the project area has been previously disturbed for sewer line installation, there is a possibility of the unanticipated and accidental discovery of human remains during ground disturbing project related activities. With implementation of **Mitigation Measure CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction**, potential impacts to unknown resources would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction. If human remains and associated/or unassociated funerary objects are discovered during soil-disturbing activities, construction crews will stop work and immediately notify the Santa Cruz County Coroner and a qualified archeologist, in accordance with applicable State laws. In the event that the Coroner determines that the human remains are Native American, the County will notify the Native American Heritage Commission (NAHC) according to the requirements in PRC Section 5097.98. NAHC will appoint a Most Likely Descendent (MLD). A qualified archeologist, County and MLD will make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement will take into consideration the appropriate preservation measures, with the preference to preserve all resources intact and in place. The County will work with engineers to develop an alternative pipeline route, or excavate, remove, record, analyze, take custody of, and finally respectfully dispose of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters.

4. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Discussion:

Implementation of the project would involve ground disturbing activities, including trenching throughout the entire project area to a depth of between 10-23 feet. Paleontological resources are located within geologic deposits or bedrock that underlie the soil layer. Throughout Santa Cruz County, areas that are considered sensitive for paleontological resources have been mapped (Santa Cruz County GIS Mapping, 2016). To

develop this map, a review of relevant scientific literature was undertaken, in addition to a review of local museum records. This information was then evaluated in conjunction with the local geography to identify valuable paleontological and geologic resources that are known to exist, or are likely to be present, throughout the County. Throughout this process, seven areas were identified as supporting, or being likely to support, rare or unique paleontological or geologic resources. These areas are all located within the northern portion of the County (Santa Cruz County GIS Mapping, 2016). Because the project area is not located within an area that has been identified as supporting paleontological or geologic resources or characteristics in which paleontological or geologic resources may occur, ground disturbing activities are not expected to disturb these resources, and this impact would be **less than significant**.

Impacts

Ground disturbing activities proposed through project implementation could reveal previously undiscovered paleontological or geological resources of significance. Although it is unlikely resources would be discovered because the project area has been previously disturbed and evaluated for the potential to support these resources, there is a possibility that unanticipated and accidental discovery of paleontological resources or unique geologic features during ground disturbing project related activities could occur. Through implementation **Mitigation Measure CR-3: Stop Work in the Event of Unexpected Paleontological Resources or Unique Geological Features during Construction**, the impacts to unknown resources would be reduced to a **less than significant level with mitigation**.

Mitigation Measures

Mitigation Measure CR-3: Stop Work in the Event of Unexpected Paleontological Resources or Unique Geological Features during Construction. If paleontological resources or unique geologic features are discovered during soil-disturbing activities, construction crews will stop work and immediately notify the County and a qualified paleontologist. A paleontologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided, no further mitigation will be required. If the resource cannot be avoided, the qualified paleontologist will evaluate the resource and determine whether it meets the definition of “unique”. If the resource is determined to not be unique, work may continue in the area. If the resource is determined to be unique, work will remain halted, and a preservation or recovery plan will be prepared. Preservation in place is the preferred protective measure. If preservation in place is not possible, resources and/or fossils will be recovered, prepared, identified, catalogued and analyzed according to current professional standards under the direction of the qualified paleontologist. Work may commence at the time of completion of the treatment. A final summary report will be completed and submitted to the County. The report will include a discussion of the methods used, stratigraphy

exposed, fossils collected, and the significance of the recovered fossils. The report will also include an itemized inventory of all the collected and catalogued fossil specimens.

Federal Cross-Cutting Regulation: National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires an analysis of the effects on “historic properties.” Required documentation includes a cultural resources report on historic properties conducted in accordance with the Secretary of the Interior’s Standards, including: 1) a clearly defined Area of Potential Effect (APE), specifying the length, width, and depth of excavation with a map clearly illustrating the project APE; 2) a records search, less than one year old, extending to a half-mile beyond the project APE; 3) a written description of field methods; 4) identification and evaluation of historic properties within the project’s APE; and 5) documentation of consultation with the Native American Heritage Commission and local Native American tribes.

Additionally, the report must be prepared by a qualified archeologist that meets the Secretary of the Interior’s Professional Qualifications Standards, and must include one of the following four findings: No historic properties affected, No effect to historic properties, No adverse effect to historic properties, or Adverse effect to historic properties.

The required information is included in the *Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project*, prepared by professionally qualified staff with Albion Environmental (Albion Environmental, 2018). The report includes the finding that the project would have “no adverse effect to historic properties” with the assumption that the mitigation measures identified above are implemented. The State Water Board in coordination with the FCSD is seeking letter of concurrence from the State Historic Preservation Officer.

The report also documents the consultation with the Native American Heritage Commission and local Native American tribes, in compliance with Section 21080.3.1(b) of the California Public Resources Code (AB 52). AB 52 requires the lead agency to formally notify a California Native American tribe, which is traditionally and culturally affiliated within the geographic area of the discretionary project, when formally requested by a tribe. No tribes have formally requested AB 52 consultation with the County of Santa Cruz. Nevertheless, the five tribal members that were identified by the California Native American Heritage Commission were consulted. It was determined that the incorporation of Native American monitoring for Native American resources, as described in Mitigation Measure CR-1, would provide adequate protection for unknown resources. This is further discussed under Q. Tribal Cultural Resources.

F. GEOLOGY AND SOILS

Would the project:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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| A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion:

A. and B. The project area is located within the limits of the State Alquist-Priolo Special Studies Zone (Santa Cruz County GIS Mapping, 2016) (California Division of Mines and Geology, 2001) for both County and state mapped fault zones. The northern portion of the project area along Green Valley Road is located within the Zayante-Vergales fault zone for both County and state mapped fault zones. The San Andreas fault zone is located approximately 4 miles to the northeast of the project area, and the San Gregario fault zone is located approximately 10 miles offshore to the west. Other active or potentially active fault zones that could affect the Watsonville area include the Corralitos, Calaveras and Sargent fault zones located in the Pajaro Valley to the north and east, and the Monterey Bay fault zone located to the west (Santa Cruz County GIS Mapping, 2016).

The U.S. Geological Service has estimated that the San Andreas fault could produce an earthquake of 8.5 magnitude on the Richter scale. The San Gregario fault, a major branch of the San Andreas, is considered capable of generating earthquakes of magnitude 7.2 to 7.9. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. On October 17,

1989, the Loma Prieta earthquake occurred in the area (magnitude 7.1), and was the second largest earthquake in central California history. This earthquake caused substantial shaking within the Watsonville area. Consequently, large earthquakes can also be expected in the future.

All of Santa Cruz County is subject to some hazard from earthquakes. Because the project area within and along Green Valley Road is located within the Zayante-Vergales fault zone, there is a relatively high potential for ground surface rupture. The project area is likely to be subject to strong seismic shaking during the life of the improvements. The principal concern related to human exposure to groundshaking and ground surface rupture is that both of these processes can result in structural damages.

The project would not result in new structures within the project area; therefore, the safety of persons occupying new structures is not an issue. Furthermore, the sewer pipeline improvements would be designed in accordance with the Uniform Building Code. There is a very low risk that persons would be on the site checking or maintaining the pipelines during a seismic event. Therefore, project would not expose people to potential substantial adverse effects beyond the current level of exposure, and this impact would be **less than significant**. No mitigation would be required.

C. The project is located in an area that is designated as having low potential for soil liquefaction, which was confirmed by soil borings taken in the project area (Santa Cruz County, 1994; Santa Cruz County GIS Mapping, 2016; Pacific Crest Engineering, 2017). Furthermore, the project would not expose people or structures to potential adverse effects from liquefaction, except possible service disruption. Therefore, this impact would be **less than significant**. No mitigation would be required.

D. The project area is not located in a landslide hazard area, Furthermore, the project would not expose people or structures to potential substantial adverse effects from landslides because the project area is relatively flat, and the project does not involve the construction of any structures. There would be **no impact**.

2. *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?*

Discussion: Following a review of information mapped by Santa Cruz County (Santa Cruz County GIS Mapping, 2016), and a field visit to the project area, there is no indication that the replacement of the sewer pipelines within the relatively flat project area would contribute to any landslides, lateral spreading, subsidence, liquefaction or collapse of soils or

local geologic units. Furthermore, project work would be largely underground in open trenches, and would not create cut or fill slopes that could be unstable. Therefore, impacts related to the potential for project construction to cause or increase geologic instability would be **less than significant**. No mitigation would be necessary.

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| 3. <i>Develop land with a slope exceeding 30%?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Discussion: The project area is relatively flat in nature, and there are no slopes exceeding 30% that are proposed for pipeline replacement. Construction activities would be largely limited to paved public roadways. Once the replacement pipelines are installed underground, the surface of the replacement alignments would be returned to pre-project conditions that are relatively flat in nature. Therefore, there would be **no impact** on slopes exceeding 30%.

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| 4. <i>Result in substantial soil erosion or the loss of topsoil?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Project construction activities would result in the potential for erosion or loss of topsoil from excavation activities required for the replacement of pipelines and tie-in connections. However, any erosion or loss of top soil would be minimal because construction activities would be largely contained to open trenching within existing paved roadways. Additionally, as described in Section II under the Detailed Project Description, the construction contractor would be required to implement BMPs in accordance with the *County of Santa Cruz Construction Site Stormwater Pollution Control BMP Manual (October 2011 edition)*. Following sewer pipeline installation, soils would be replaced into the open trenches to return the entire project area to pre-project conditions. Disturbed areas that are not repaved would be seeded or planted with native ground cover to maintain minimal surface erosion. Therefore, the potential for substantial soil erosion or loss of topsoil would be **less than significant**. No mitigation would be required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 5. <i>Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Expansive soils shrink or swell depending upon water content and can cause damage to structures. Soils with a high clay content are more susceptible to swelling than sand or gravel soils.

The soils within the northern portion of the project area adjacent to Green Valley Road are Pinto and Watsonville loam, with 0 to 2% slopes⁸ The soils within the southern portion of

⁸ <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

the project area adjacent Buena Vista Lane are Pinto loam, with 2 to 9% slopes. These soils all have slow permeability and are moderately well drained, and are unlikely to pond or support flooding. They have low shrink swell potential, and are moderately expansive by nature (Uniform Building Code, 2007). The project area has been mapped as an area in which expansive soils occur within the county (Santa Cruz County GIS Mapping, 2016). Expansive soils would not be used for pipe bedding and backfill. Therefore, risks to life or property as a result of project implementation in expansive soils would be **less than significant**. No mitigation would be required.

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| 6. <i>Have soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: There are no septic tanks, leach fields, or alternative waste water disposal systems proposed as part of or affected by the project. The project would continue to convey sewage through the current collection system in accordance with the requirements of the Santa Cruz County Sanitation District, and would improve the efficiency and reliability of the system through the replacement of existing degraded pipelines with new pipelines. Therefore, there would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 7. <i>Result in coastal cliff erosion?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The proposed project is not located in the vicinity of a coastal cliff or bluff and therefore, would not contribute to coastal cliff erosion. There would be **no impact**.

G. GREENHOUSE GAS EMISSIONS

Would the project:

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. <i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Project construction would result in an incremental increase in greenhouse gas (GHG) emissions by usage of fossil fuels. In accordance with Section 15183.5(b) of the CEQA Guidelines, a plan for the reduction of greenhouse gas (GHG) may be used to analyze whether a project would result in significant GHG emissions provided that the plan includes specific elements. Plans that meet the listed requirements are referred to as Qualified GHG Reduction Plans. Plans are required to include an emissions inventory, establish baselines below which GHG emissions would not be cumulatively considerable, estimate future GHG emissions in the covered geographic area, specify measures to meet emissions reduction targets, establish a mechanism to monitor plan progress, and be adopted

following environmental review.

Santa Cruz County has an adopted Climate Action Strategy (CAS) intended to establish specific reduction goals and necessary actions to reduce GHG levels to pre-1990 levels, and it is consistent with AB 32 goals and meets the standards for a Qualified GHG Reduction Plan (County of Santa Cruz, 2017). The strategy intends to reduce GHG emissions and energy consumption by implementing measures, such as reducing vehicles miles traveled through the County, regional long-range planning efforts, and increasing energy efficiency. All project construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment. As such, if the project is consistent with the CAS, it can be presumed that it would not have significant GHG emission impacts.

At the federal level, the Council on Environmental Quality (CEQ) has proposed 25,000 metric tons (MT) of carbon dioxide equivalent (CO₂e) as the minimum level of annual GHG emissions that would require additional environmental analysis to determine whether the project would result in a significant impact (CEQ, 2014). The FCSO has determined that the CEQ screening level is an applicable significance threshold to use for the proposed project because, as an applicant to the Clean Water State Revolving Fund Loan Program, the project would be subject to federal environmental regulations. For the purposes of this analysis, implementation of the project would result in a significant impact if it would generate annual GHG emissions that would exceed 25,000 metric tons (MT) of CO₂e or conflict with the CAS. The total GHG emissions estimated for construction of each segment of the proposed project were estimated by the CalEEMod model as part of the Air Quality Conformity Analysis (**Attachment 2**). Estimated emissions are provided in **Table GHG-1**.

Table GHG-1 Estimated Total Construction GHG Emissions	
Improvement Location	Metric Tons CO ₂ e
Ponderosa/Hathaway	174
Arroyo/Roberta/Mark	128
Trembley	131
Green Valley	133
Airport Area	242
Total GHG Emissions	808
Note: Emission quantities are rounded to the nearest whole number. Exact values are provided in Attachment 2 .	

As shown in **Table GHG-1**, the maximum emissions from one segment of the proposed project is estimated to be 242 MT CO_{2e}, and the proposed project would result in a total of 808 MT CO_{2e} over the multiple year construction period. Following construction, the proposed project would not include any components that would generate GHG emissions. No impact would occur during operation of the project. Therefore, the proposed project would not result in GHG emissions that would exceed the CEQ threshold of 25,000 MT CO_{2e} annually.

The proposed project would be responsible for an incremental increase in GHG emissions by usage of fossil fuels during construction. The CAS does not include any specific GHG emissions reduction strategies that specifically relate to construction emissions. The CAS strategy primarily intends to reduce GHG emissions by implementing measures such as reducing vehicle miles traveled through the County and regional long-range planning efforts, and increasing energy efficiency in new and existing buildings and facilities. The project would have no impact on vehicle miles traveled or energy use in the county. Additionally, all project construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment. Therefore, the proposed project would not result in a conflict with implementation of the CAS. As a result, impacts associated with the temporary increase in GHG emissions would be **less than significant**. No mitigation would be required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. <i>Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: See the discussion under G-1 above. This impact is considered **less than significant**. No mitigation would be required.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. <i>Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The proposed project would not create a significant hazard to the public or the environment.

During construction, the project could result in the abandonment and some removal of Asbestos Cement Pipe (ACP), also known as “transite”. Asbestos is a regulated substance, and use of ACP ceased in the early 1970s due to health concerns. It is the County’s standard practice to conduct removal of ACP pipelines in accordance with the National Emissions

Standards for Hazardous Air Pollutants 40 Code of Federal Regulations (CFR) 61, Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101, and California Code of Regulation (CCR), Title 8, Section 1529. These regulations require all ACP to be removed and disposed through the use of a registered hazardous waste transporter that would dispose of the pipe at a permitted disposal facility, accompanied by a hazardous waste manifest, which explains the content of the load. All material would be fully contained in closed containers, and each load would consist of just the ACP. The project would also be undertaken by a contractor that is certified to work in asbestos removal and remediation.

During construction, fuel and construction materials would be used throughout the project area, and sewage lines would be exposed during replacement (**Figure 3**).

As described in Section II under Detailed Project Description, BMPs would be implemented to minimize the risk of spills and to control runoff. To keep sewage collection in operation, the contractor would determine whether parallel trenches would be utilized to allow the existing sewer system to remain in place throughout construction of the new system, or if the new sewage conveyance pipelines would be constructed in the existing trenches with concurrent sewer bypass systems in place that would connect an existing upstream manhole with a downstream manhole, past each incremental length of construction activities. If the bypass system was installed, an alarm system would be included in the design that would ensure that adequate capacity and reliability were retained throughout project implementation. The alarm system would be connected to the FCSD’s headquarters, and would provide advanced notice if there was pump failure or malfunction, so that the risk of sewage spills from the project would be minimized.

To further minimize potential impacts that may occur to the environment from the accidental spill of sewage material, the contractor would develop a spill containment plan for the project, and would not allow any wastewater discharge from the sewage collection system to enter adjacent lands or waters. In the event of accidental discharge, the contractor would be responsible for containment and the immediate cleanup and disposal of all contaminated materials, in accordance with the requirements of the Santa Cruz County Health Department.

Therefore, this impact would be **less than significant**. No mitigation would be required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>2. <i>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?</i></p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Please see discussion under H-1 above. Project impacts would be considered **less than significant**. No mitigation would be required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 3. <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project area extends within 0.2 mile of Calabasas Elementary, in the southern portion of the project area where the sewer line in Calabasas Road would be replaced. The project would not generate hazardous emissions. As described under H-1 above, spill prevention and containment measures would be in place in the event that wastewater is inadvertently discharged during replacement of the sewer pipeline. Removal of any ACP pipelines would be in accordance with the National Emissions Standards for Hazardous Air Pollutants 40 Code of Federal Regulations (CFR) 61, Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101, and California Code of Regulation (CCR), Title 8, Section 1529. Therefore, this impact is considered **less than significant**. No mitigation would be required.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 4. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: A government records search conducted in January 2017 revealed that no portion of the project area is listed in the Cortese List, a compilation of information from various sources listing potential and confirmed hazardous waste and hazardous materials sites in California (<http://geotracker.waterboards.ca.gov>) (www.envirostor.dtsc.ca.gov/public).⁹ There are a number of sites within and adjacent to the project area that have been previously reported, remediated, and closed. However, there is one active site adjacent to the southern project area at the Brothers County Corner Market where ongoing monitoring is occurring for a Leaking Underground Storage Tank (LUST) site. The groundwater and wells onsite are undergoing ongoing testing for fuel contamination. This site is located at the corner of Buena Vista Drive and Calabasas Road. In the event that groundwater was encountered throughout construction activities at this site, there is the potential for the

⁹ The Hazardous Waste and Substances Sites (Cortese) List is a planning resource used by the State, local agencies, and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop, at least annually, an updated Cortese List. The Department of Toxic Substance Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies, including the State Water Resources Control Board and the California Integrated Waste Management Board, are required to provide additional hazardous material release information for the Cortese List.

accumulation of waters that contain hazardous materials.

Through implementation of the project Best Management Practices included in the construction specifications, groundwater encountered during excavation would be tested to ensure that all water leaving the site and entering the storm water drainage system is not contaminated with hazardous materials and meets the RWQCB requirements. In the event that it was determined that contaminated groundwater was daylighted as a result of project implementation, including the area adjacent to the Brothers Country Corner Market, this water would be disposed of offsite at an EPA approved facility. Therefore, this impact would be **less than significant**. No mitigation would be required.

5. 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?

Discussion: The Watsonville Municipal Airport is a public airport located immediately south of the project area (**Figure 4**). The Watsonville Airport Master Plan was last revised in 2010 (City of Watsonville, 2010). Although the project area is not within the planning area for the Master Plan, it is adjacent to this area.

The project would not result in a safety hazard, including the addition of above ground structures within the flight zone, nor change the land uses or the population that would be supported by the existing land uses within or adjacent to the master plan area. The project would also not result in conflicts with policies or programs associated with the Watsonville Municipal Airport (City of Watsonville, 2010).

Construction activities associated with the project would be largely contained within public roadways, with the exception of the southern project area where two existing tie-ins to the existing sewage conveyance system would be replaced on airport property (**Figure 9**). The portion of the airport in which this would occur is not open to airplane use, and is adjacent to residential development at the ends of Coffey and Emme Streets.

Further, the project would improve the safety for people residing in the area by replacing deteriorating sewer lines which could be subject to failure and sewage release if not rehabilitated. Therefore, this impact would be **less than significant**. No mitigation would be required.

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| 6. 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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The proposed project is not located within the vicinity of a private airstrip, and there would be **no impact**.

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| 7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Discussion: The proposed project would not conflict with implementation of the County of Santa Cruz Local Hazard Mitigation Plan 2015-2020 (County of Santa Cruz, 2020). During project construction, temporary lane closures and slow-moving construction vehicles could delay or obstruct the movement of emergency vehicles. The project includes implementation of a traffic control plan, which would include measures to notify emergency service providers of construction activities to allow for the retention of emergency access throughout the project area at all times. Emergency personnel would be alerted to the duration of construction activities, and the effects that those activities would have on local traffic. Therefore, implementation of the project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**. No mitigation would be required.

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| 8. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project is located in an area that is predominately residential development, within a largely agricultural community. There are no wildlands located adjacent to the project area.

The CAL Fire Hazard Severity Zone Map designates the project area as being in a Local Service Area (California Department of Forestry, 2008). Santa Cruz County has not identified the project area as being located within a Fire Hazard Area (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016). Furthermore, the project would not include the construction of structures that would expose people to the risk of fires. Therefore, there would be **no impact**.

I. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY

Would the project:

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: There are no waterways within or adjacent to the project area. The project does not include commercial, industrial or other activities that would generate a substantial amount of contaminants or discharge runoff either directly or indirectly into a public or private water supply, or reduce water quality in local water bodies.

During construction, stormwater runoff could contain soil and other pollutants such as fuels, oils, grease, lubricants, solvents and other materials associated with construction equipment and activities. As described in Section II under the Detailed Project Description, the construction contractor would be required to implement BMPs in accordance with the *County of Santa Cruz Construction Site Stormwater Pollution Control BMP Manual (October 2011 edition)*. Following sewer pipeline installation, soils would be replaced into the open trenches to return the entire project area to pre-project conditions. Disturbed areas that are not repaved would be seeded or planted with native ground cover to maintain minimal surface erosion. Further, construction would occur between the months of April and October, outside of the rainy season, to minimize the potential for stormwater runoff. Therefore, no water quality standards or waste discharge requirements would be violated, and the impact would be **less than significant**. No mitigation would be required.

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| 2. 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"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Implementation of the project would not result in an increase in impermeable surfaces throughout the project area, as the majority of the project would occur within existing public roadways, and these areas would be returned to existing conditions. Unpaved lands throughout the project area would remain unpaved following project implementation. Therefore, there would be no change in impervious surfaces throughout the project area, and therefore no change in the ability of the area to support groundwater recharge.

The proposed project would not use groundwater or require any additional water supply throughout the project area above existing conditions. However, there is the potential for ground disturbing activities to result in the daylighting of groundwater throughout project implementation, as trenching depths that would range between 10-23 feet. Previous studies have discovered groundwater at depths as shallow as 10 feet within the project area (Haro, Kasunich & Associates, 1996) (Pacific Crest Engineering, 2017). Although deeper borings, up to 19 feet, have not resulted in the discovery of groundwater, the fluctuating level of the groundwater table throughout the project area indicates groundwater could be encountered during excavation (Reynolds & Associates, 1996) (Rock Solid Engineering, Inc, 2009) (Geri Martin Daliva Engineers, 2009). Because the project is required to comply with a General NPDES, all groundwater that is encountered would be tested and routed through the existing stormwater drainage system to ensure that the groundwater supply would not be substantially depleted and/or contaminated. Further, coordination with the RWQCB would require that adequate measures identified in the permit were implemented to preserve and protect groundwater throughout implementation of the project. Therefore, this impact would be **less than significant**. No mitigation would be required.

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| <p>3. <i>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?</i></p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The proposed project is not located near any watercourses, and would not include grading or changes in topography or new impervious surfaces that would alter the existing overall drainage pattern throughout the project area. During construction, which would employ open trench excavation to replace the sewer pipelines, surface stormwater drainage patterns on the roadways could be temporarily altered. However, this would be minor and would not result in substantial erosion or siltation (also refer to F-4 and I-1 above), nor substantially alter overall drainage patterns. Following project construction, the trenches would be backfilled and graded to return to pre-construction conditions. Therefore, the project would not substantially alter existing drainage patterns, and this impact would be **less than significant**. No mitigation would be required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>4. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site?</i></p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: See the discussion under I-3 above. The impact would be **less than significant**. No mitigation would be required.

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| 5. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project would not result in the addition of impervious surfaces throughout the project area that would create or contribute to additional runoff and impact the capacity of existing or planned storm water drainage systems (see the discussion for I-3 above). The project would also not provide substantial additional sources of polluted runoff (see the discussion for I-1 above). Therefore, this impact would be **less than significant**. No mitigation would be necessary.

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| 6. <i>Otherwise substantially degrade water quality?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: As described in the discussions above (I-1, I-3, F-4), the project area does not contain nor is adjacent to any waterways, and implementation of the project would not result in an increase in impervious surfaces or result in a long-term increase in any pollutants that would degrade local water quality. Therefore, this impact would be **less than significant**. No mitigation would be required.

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| 7. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The proposed project does not include any housing. Furthermore, according to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated May 16, 2012, the project area is not located within a 100-year flood hazard area. Therefore, there would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 8. <i>Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The proposed project does not include the construction of any structures and thus would impede or redirect flood flows. Furthermore, as stated above, the project area is not within a 100-year flood hazard area. Therefore, there would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 9. 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace underground sewer lines below existing roadways. The project area does not contain any local waterways and is not within a flood hazard area or near waterways with a dam or levee. Corralitos Creek is located approximately a ¼ mile to the east from the southern project area; however, it is a small perennial creek that is separated from the project area by agricultural and residential development. The larger Pajaro River is over 2.5 miles to the southeast. The project area is located outside of both the 100-year and 500-year flood zone for both water bodies (Santa Cruz County GIS Mapping, 2017). Therefore, implementation of the project would not expose people or structures to a risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. There would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 10. Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: There are two primary types of tsunami vulnerability in Santa Cruz County. The first is a teletsunami or distant source tsunami from elsewhere in the Pacific Ocean. This type of tsunami is capable of causing significant destruction in Santa Cruz County. However, this type of tsunami would usually allow time for the Tsunami Warning System for the Pacific Ocean to warn threatened coastal areas in time for evacuation (Santa Cruz County, 2010).

The more vulnerable risk in Santa Cruz County is a tsunami generated as the result of an earthquake along one of the many earthquake faults in the region. Even a moderate earthquake could cause a local source tsunami from submarine landsliding in Monterey Bay. A local source tsunami generated by an earthquake on any of the faults affecting Santa Cruz County would arrive just minutes after the initial shock. The lack of warning time from such a nearby event would result in higher casualties than if it were a distant tsunami (Santa Cruz County, 2010).

The project area is located approximately 5 miles inland from the Monterey Bay, and is approximately 4.5 miles beyond the mapped tsunami inundation area (Santa Cruz County GIS Mapping, 2016). Therefore, the project area is not expected to be impacted by a tsunami. In addition, no impacts from a seiche or mudflow are anticipated as a result of the distance and topography between the ocean and the project area (Santa Cruz County GIS Mapping, 2016). There would be **no impact**.

J. LAND USE AND PLANNING

Would the project:

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area includes residential development interspersed with a few small commercial businesses. The proposed project would replace underground sewer pipelines and does not include any elements that would physically divide the existing neighborhoods or the larger Freedom community. Furthermore, the project does not include any barriers or changes in local roadways as a result of implementation. Therefore, there would be **no impact**.

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| 2. 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project area is located within unincorporated Santa Cruz County in the FCSD service area, and is outside the Coastal Zone. The project area is designated and zoned for varying degrees of single family residential development (R), multifamily residential development (RM-2-R), and parks, recreation and open space (PR). The project would replace deteriorating sewer pipelines located below roadways throughout the project area (**Figures 2 through 9**), with no changes to the land uses. The Santa Cruz County General Plan land use and zoning plans, policies and regulations allow for utility replacement, and the project is consistent with general plan objectives and policies to provide necessary and adequate sanitation services and upgrade sewer lines (Santa Cruz County General Plan, Chapter 7, Wastewater Objective 7.19, Sanitation Facilities Within the Urban Services Line, 1994).

The project is consistent with the FCSD Sanitary Sewer Management Plan (adopted by the County October 25, 2011), which includes provisions to provide proper and efficient operation and maintenance of sanitary sewer systems, and with the Rehabilitation and Replacement Plan. Further, the project includes rehabilitation of sewer lines identified as having the potential for overflow in the 2007 Sanitary Sewer System Capacity Evaluation and Assurance Plan.

The southern portion of the project area is adjacent to the Watsonville Municipal Airport, for which a Master Plan has been developed (City of Watsonville, 2010). Although the majority of the project area is not within the planning area for the Master Plan, the two

replacement tie-ins that are proposed within easements on the airport property are within the planning area. Implementation of the project would not result in the addition of any above ground structures within or adjacent to the planning area, and would not change the surface of the planning area in any way that would modify proposed future development. However, through the Airport Master Plan, the development of 60-70 new hangars and taxiways are proposed north of the existing runways. The locations of these proposed structures may overlap with the area that the tie-ins would be located. Based on the existing use of the Watsonville Municipal Airport, it is not anticipated, unless there is a large increase in use of the airport, that this portion of the airport would be developed within the next 5-10 years (Rayvon Williams, pers. comm). If and when development of the additional hangars occurs, it would be determined if the tie-ins would need to be relocated or could be incorporated into the design of the additional hangars. Therefore, the proposed replacement tie-ins would not present a current conflict with the Airport Master Plan, and are not expected to result in a long-term limitation on development within this portion of the airport property. The project would not conflict with any of the policies that have been identified in the Master Plan.

Because the project would not conflict with any planning regulations or policies that have been developed to avoid or mitigate environmental impacts, and would not impede future development plans as outlined in the Watsonville Municipal Airport Master Plan, this impact is considered **less than significant**. No mitigation would be required.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>Conflict with any applicable habitat conservation plan or natural community conservation plan?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: No habitat conservation plans or natural community conservation plans are applicable to the project area, and therefore the project would not conflict with any of these plans. There would be **no impact**.

K. MINERAL RESOURCES

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area has not been identified as an area that contains any known mineral resources that would be of value to the region and the residents of the state (Santa Cruz County GIS Mapping, 2016). The project would involve excavation through the open trenching process in replacing the existing degraded sewer pipelines. However, this would largely occur within public roadways that are already highly disturbed, in areas where no mineral resources have been identified. Therefore, implementation of the project would

not 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. There would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project area is zoned for varying degrees of single family residential (R), multi-family residential (RM-2-R) and parks, recreation and open space (PR), which are not considered to be Extractive Use Zones (M-3) for mineral resources. The project area also does not have a Land Use Designation with a Quarry Designation Overlay (Q) (Santa Cruz County, 1994) (Santa Cruz County GIS Mapping, 2016). Therefore, no potential significant loss of availability of a known mineral resource recovery site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project. There would be **no impact**.

L. NOISE

Would the project result in:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. <i>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?</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

Discussion: The proposed project would replace the degraded sewer pipelines throughout the project area, which is predominately residential; there are no project components that would produce a permanent increase in noise throughout the project area. However, the project would result in short-term noise increases in the immediate vicinity of construction. Although construction in the project area would occur over a two-year period, between the months of April and October 2019-2021, the construction duration of each improvement location would be only 12 to 22 weeks, as shown in **Table 3**.

Impact

Throughout construction activities, the project would have the potential to result in short-term noise impacts primarily from the operation of heavy construction equipment to excavate the trenches, lay the pipelines and to backfill the trenches. Construction of the proposed project would occur during the day, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Saturday. Section 8.30.010 of the County Code states that daytime noise that exceeds 75 db at the property line of the property from which the sound is broadcast should be considered offensive. However, the ordinance also states that the necessity of the noise should be taken into consideration in determining whether a noise is a violation of the

code (8.30.010(C)(5)). Permitted construction is specifically listed as an example.

Construction equipment that may be required for the project includes an excavator, grader, dozer, scraper, loader/backhoe, roller, trucks and pump. The Federal Highway Administration Roadway Noise Model was used to estimate worst-case construction noise. Due to the limited size of the daily construction area (up to 125 linear feet), it is assumed that a maximum of up to two pieces of construction equipment would be operating at the same time. The noise level from simultaneous operation of the two noisiest pieces of construction equipment (dozer and jackhammer) is estimated to be 84.5 dB at 50 feet. Therefore, noise would have the potential to exceed 84.5 dB at 50 feet from the active 125 linear feet of construction area from construction equipment on a daily basis. Residences are located along the pipeline alignments throughout the entire project area, and would potentially be exposed to noise levels in excess of 75 dB. Individual receptors throughout the project area would only be exposed to construction noise for increments of a few days as the project was installed adjacent to their residences.

Operation of the heavy construction equipment necessary for the installation of the replacement pipeline and the construction associated with the project would be in accordance with the Noise Ordinance parameters discussed above. In addition to this, the Santa Cruz County General Plan Policy 6.9.7 requires mitigation measures to be implemented throughout construction to minimize noise impacts on adjacent land uses, as a condition of future project approval. As described in Section II under Detailed Project Description, construction hours would be limited to between the hours of 8:00 a.m. and 5:00 p.m. in accordance with County Code 8.30.010¹⁰. With implementation of **Mitigation Measures NOI-1 through NOI-3**, the impact would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure NOI-1: Ensure Standard Sound-Control Devices on Construction Equipment. Prior to construction, the construction contractor will ensure that all construction and maintenance equipment powered by gasoline or diesel engines are equipped with sound-control devices that are at least as effective as those originally provided by the manufacturer, and all equipment will be operated and maintained to minimize noise generation.

Mitigation Measure NOI-2: Ensure Muffled Exhaust on Construction Equipment. Prior to construction, the construction contractor will ensure that all gasoline or diesel engines that are used for construction activities do not have unmuffled exhaust.

Mitigation Measure NOI-3: Install Noise-Reducing Enclosures Around Stationary Equipment, Where Necessary. Prior to starting construction activities where multiple

¹⁰ <https://www.codepublishing.com/CA/SantaCruzCounty/html/SantaCruzCounty08/SantaCruzCounty0830.html>

pieces of construction equipment will be required to operate simultaneously, the construction contractor will ensure that noise-reducing enclosures are installed around stationary noise-generating equipment capable of 10 dB attenuation.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 2. <i>Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations are considered vibration-sensitive (Federal Transportation Authority, 2006). There are no vibration sensitive land uses within the project area.

The main concern associated with the potential project would be groundborne vibration that results in individual residential annoyance (Federal Transportation Authority, 2006). The FTA has published vibration impact criteria to determine whether vibration would result in an annoyance to residents. Construction vibration is subject to the FTA’s infrequent event criteria because operation of vibration-generating equipment is anticipated to be intermittent throughout the day in the vicinity of an individual receptor. Residences fall into FTA Land Use Category 2, which is a receptor where people normally sleep. The FTA identifies 80 VdB as the generation level from infrequent events that would potentially disturb residents.

Representative typical vibration levels for construction equipment required for the proposed project are provided in **Table NOI-1**. As shown in **Table NOI-1**, vibration levels from all construction equipment would be reduced to a maximum 80 VdB beyond 45 feet from the construction area. Although residential yards provide a 45-foot setback for some homes within the project area, the majority of homes throughout the project alignments are located within 45 feet of the construction area. Therefore, residents would have the potential to be exposed to vibration levels in excess of 80 VdB throughout construction activities. For the proposed project, construction would be linear and individual residences would generally be exposed to construction vibration for only a day or two. Additionally, construction activities would take place during the day, and would adhere to the hours of between 8:00 a.m. and 5:00 p.m., Monday through Saturday. Therefore, exposure to groundborne vibration to individual residents within the project area throughout project implementation would be **less than significant**. No mitigation would be required.

Table NOI-1 Vibration Source Levels for Construction Equipment		
Construction Equipment	Approximate VdB at 25 feet	Approximate VdB at 45 feet ⁽¹⁾
Large Bulldozer	87	79
Loaded Trucks	86	78
Small Bulldozer	58	49
Jackhammer	79	71
<small>⁽¹⁾ Based on the formula $VdB = VdB(25\text{ feet}) - 30\log(d/25)$ provided by the FTA (2006) Source: FTA 2006</small>		

3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Discussion: The proposed project would replace the degraded sewer pipelines throughout the project area, and there are no project components that would produce a permanent increase in noise throughout the project area. The main source of existing ambient noise in the project area is traffic noise along Green Valley Road and Buena Vista Drive. However, no substantial increase in traffic trips would be anticipated as a result of the proposed project, outside of routine maintenance trips which would be similar to existing conditions. Therefore, this impact would be **less than significant**. No mitigation would be required.

4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Discussion: Project construction equipment and activities would result in a temporary increase in ambient noise levels.

Impact

For the reasons discussed above under L-1, noise resulting from construction activities could potentially exceed the County Noise Ordinance. With compliance with County Code 8.30.010 limiting construction to between the hours of 8:00 a.m. and 5:00 p.m., and with implementation of **Mitigation Measures NOI-1 through NOI-3**, temporary or periodic increases in noise above ambient noise levels would be minimized. The impact would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure NOI-1: Ensure Standard Sound-Control Devices on Construction Equipment. This measure is described above.

Mitigation Measure NOI-2: Ensure Muffled Exhaust on Construction Equipment. This measure is described above.

Mitigation Measure NOI-3: Install Noise-Reducing Enclosures Around Stationary Equipment, Where Necessary. This measure is described above.

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 5. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Improvement Area 5 is located in the southern portion of the project area, directly north of the Watsonville Municipal Airport (**Figures 2, 3 and 9**), which is subject to the Watsonville Municipal Airport Master Plan (City of Watsonville, 2010). The proposed project would replace degraded sewer pipelines that support the existing residential development in this area.

Operation of the project would not introduce any new receptors to the airport planning area. During construction in this area, construction workers may experience noise from overflights, but would not be located in areas where airplanes are present on the ground. Because the airport is currently surrounded by sensitive receptors (e.g., residences), the Airport Master Plan has defined noise abatement procedures for arrivals and departures to and from the Watsonville Municipal Airports to minimize noise impacts to the surrounding area. Construction would be limited to these areas in which the noise abatement procedures are in place. Therefore, this impact would be **less than significant**. No mitigation would be required.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 6. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The proposed project is not within two miles of a private airstrip. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels as a result of operations on a private airstrip. There would be **no impact**.

M. POPULATION AND HOUSING

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The proposed project would not induce substantial population growth in the project area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in the project area. The project proposes only to replace the existing degraded sewer pipelines within the project area, increasing the capacity of individual pipes but not substantially changing the system’s operational capacity. Thus, the project would not substantially induce population growth. The impact would be **less than significant**. No mitigation would be required.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. 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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace the existing degraded sewer pipelines in residential neighborhoods throughout the project area, and it would not involve the displacement of housing units or people through construction or operation. There would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. 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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace the existing degraded sewer pipelines throughout the project area, and would not displace any people as a result of project implementation that would necessitate the construction of replacement housing elsewhere. There would be **no impact**.

N. PUBLIC SERVICES

Would the project:

1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other public facilities; including the maintenance of roads?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion: The project would replace existing deteriorating sewer pipelines throughout the residential neighborhoods with limited non-residential development in the project area. The project would maintain the current operational capacity of the sewage conveyance system, and thus would not induce population growth requiring additional public services. The project would not result in any new permanent facilities, structures, or uses that would generate the need for additional fire or police services, or that would generate additional students in the Pajaro Valley Unified School District. The project would also not generate new or increased demand for parks or other public facilities. There would be **no impact**.

O. RECREATION

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. 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"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: As described above, the project would not result in an increase in sewage system capacity or population; therefore, there would not be an increase in the use of existing neighborhood and regional parks or other recreational facilities as a result of the project, or subsequent degradation of the existing neighborhood and regional parks as a result of project implementation. There would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 2. 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace deteriorating pipelines in existing roadways and does not include any recreational facilities. The project would not result in a population increase or otherwise require the expansion of existing or the generation of new recreational facilities. There would be **no impact**.

P. TRANSPORTATION/TRAFFIC

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>1. 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 and bicycle paths, and mass transit?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project would result in a minor increase in construction-related traffic in and near the improvement locations identified in **Figures 2 through 9**, when sewer line replacement occurs in those areas. The construction duration in each improvement location would be 12 to 22 weeks, as shown in **Table 3**, and is planned to occur between April and October, 2019-2021. Once project construction activities are complete, the number of trips to and from the project area would be similar to existing conditions, as operation of the project would require similar maintenance trips to and from the area as are currently required.

Construction activities would require construction vehicles for site preparation, excavation, materials delivery, installing pipelines, backfilling of the open trenches and paving. There would also be workers commuting to the project area. Workers and construction vehicles would access the project area primarily from Green Valley Road and Buena Vista Drive. As described in Section II under Detailed Project Description, it is estimated that there would be up to 23 worker vehicle trips per day working at each site, and an average of 7 to 10 truck deliveries (for import and export of materials) per day, resulting in an increase of up to 33 vehicles trips per day on roadways around the Improvement Location area where construction activities would occur.

Construction vehicles entering or exiting the project area could cause temporary delays or stoppage of through traffic on Green Valley Road and Buena Vista Drive, and within the vicinity of the general project area, which could adversely affect traffic circulation and safety. The increase in vehicles on the roadway would be relatively small, dispersed throughout the day, and short term (i.e., limited to the construction period for one Improvement Location at a time). Further, as described in Section II under Detailed Project Description, the County would require the contractor to prepare and implement a traffic control plan, which would minimize construction-related impacts. Therefore, the impact from construction-related traffic would be **less than significant**.

Pedestrians and bicyclists may also be impacted by construction related traffic. Limitations in pedestrian and bicyclist access would be temporary and intermittent, depending on the extent that that roadways were altered to ensure public safety during construction. Throughout the northern project area, there are sidewalks within the residential development. There are no designated bikeways; however, the streets within the residential development are wide and can accommodate both vehicle and bicycle traffic. Along the extent of Green Valley Road within the northern project area, there is an asphalt path that is approximately 4 feet wide along the western portion of the roadway. This path may support both pedestrian and bicyclist traffic, extends beyond the project area to the north and south, and connects to trails within the Pinto Lake Park. Throughout the southern project area, there are limited sidewalks within the residential development, the streets are narrow, and this area does not support wide shoulders that would support regular pedestrian or bicyclist traffic. In order to maintain pedestrian and bicyclist access throughout the duration of construction, the path along the western border of Green Valley Road and residential sidewalks would remain open to the greatest extent possible to ensure public safety. As part of the traffic control plan discussed under Section II, Detailed Project Description, alternative pedestrian and bicyclist routes would be identified to continue to provide access throughout the project area. Because impacts to pedestrian and bicyclist access would be intermittent and alternative routes would be identified to ensure access throughout project implementation, this impact would be **less than significant**.

For operations and maintenance, the public works maintenance staff who currently visit pipelines would continue to visit the project area for periodic inspections with no substantial increase in trips compared with current conditions. Because the number of trips attributable to operations and maintenance would be similar to existing conditions, there would be no substantial change in trips and the project would not degrade the operation on local roadways. Therefore, the impact from operations and maintenance traffic would be **less than significant**.

Therefore, anticipated traffic would not conflict with applicable plans or policies measuring effectiveness of the circulation system or programs supporting alternative transportation. This impact would be **less than significant**. No mitigation would be required.

2. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Discussion: In 2000, at the request of the Santa Cruz County Regional Transportation Commission (SCCRTC), the County of Santa Cruz and other local jurisdictions exercised the

option to be exempt from preparation and implementation of a Congestion Management Plan (CMP) per Assembly Bill 2419. As a result, the County of Santa Cruz no longer has a Congestion Management Agency or CMP. The CMP statutes were initially established to create a tool for managing and reducing congestion; however, revisions to those statutes progressively eroded the effectiveness of the CMP. There is also duplication between the CMP and other transportation documents such as the Regional Transportation Plan (RTP) (Santa Cruz Regional Transportation Commission, 2014) and the Regional Transportation Improvement Program (RTIP) (Santa Cruz Regional Transportation Commission, 2017). In addition, the goals of the CMP may be carried out through the Regional Transportation Improvement Program and the Regional Transportation Plan. Any functions of the CMP which are useful, desirable and do not already exist in other documents may be incorporated into those documents.

The proposed project would not conflict with either the goals and/or policies of the RTP or with monitoring the delivery of state and federally-funded projects outlined in the RTIP. Therefore, there would be **no impact**.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace the existing degraded sewer pipelines throughout the project area that are all located underground, and therefore there would be no change in air traffic patterns as a result of project implementation as there would be no change in any above ground features throughout the project area. Therefore, there would be **no impact**.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 4. <i>Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The project includes replacement of sewer pipelines below existing roadways, and does not include any permanent design features that would increase any types of traffic hazards throughout the project area. Project construction would involve open trenching within the public roadways, and, the roadways would be repaved and returned to existing conditions following pipeline replacement. Implementation of the traffic control plan during project implementation would include safety features to be implemented on local roadways to minimize any risks that could occur through open trenching and construction equipment. Therefore, the impact would be **less than significant**. No mitigation would be required.

5. *Result in inadequate emergency access?*

Discussion: The project would not alter the public roadways throughout the project area in any way that would impair implementation of an adopted emergency response plan or emergency evacuation plan. Throughout project construction, temporary lane closures and slow-moving construction vehicles could delay or obstruct the movement of emergency vehicles. The project includes the implementation of a traffic control plan, which would include notifying emergency service providers of construction activities and retaining emergency access at all times throughout the project area. Therefore, this impact would be **less than significant**. No mitigation would be required.

6. *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Discussion: The proposed project design would not permanently alter the public roadways throughout the project area in any way that would not comply with current road requirements to prevent potential hazards to public transit, bicyclists, and/or pedestrians.

Throughout project construction, temporary lane closures and slow-moving construction vehicles could delay or obstruct the movement of public transit, bicycles and/or pedestrians. The residential development in the northern portion of the project area supports sidewalks throughout the neighborhoods in which the project would be implemented. There is also an asphalt pedestrian/bicycling path located along the western side of Green Valley Road. This pathway extends throughout the extent of the project area and beyond to the north and south, connecting with local trails within Pinto Lake Park. Within the southern portion of the project area, the streets are narrow, there are limited sidewalks within the residential development, and the area does not support the infrastructure to safely support extensive use by pedestrian or bicycle traffic.

Throughout the project area, there are also three active public transit lines affiliated with the Santa Cruz Metro Watsonville Transit Center, including routes 72 (Hospital/Pinto Lake), 72W (Corralitos Weekend), and 75 (Green Valley). As discussed under Section II, Detailed Project Description, the project includes implementation of a traffic control plan to ensure the maintenance and safety of bicycle and pedestrian users and public transit throughout the project area during construction activities. As part of the traffic control plan, alternative routes to support ongoing pedestrian and cyclist traffic would be identified and posted. Therefore, this impact would be **less than significant**. No mitigation would be required.

Q. TRIBAL CULTURAL RESOURCES

1. *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:*

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

Discussion: The project would replace deteriorated sewer pipelines located predominately under paved roadways in developed residential areas. Section 21080.3.1(b) of the California Public Resources Code (AB 52) requires a lead agency to formally notify a California Native American tribe, which is traditionally and culturally affiliated within the geographic area of the discretionary project, when formally requested by a tribe. Resources of interest might include archaeological deposits, traditionally important plants, or locales that have been or are currently used for tribal activities.

As described in Section E, Cultural Resources, the County has not received a formal request for consultation from a Tribe under AB 52. However, the County did consult with the Native American Heritage Commission and local Native American tribes, as part of Section 106 Consultation for this project in compliance with AB 52. As part of this outreach process, the California Native American Heritage Commission was contacted in October 2017 for information from the Commission’s Sacred Lands File and a list of respondents, as

included in the *Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project*, a confidential report kept on file with the County (Albion, 2018).

In summary, the Commission found no information in their files and provided the names of five tribal representatives. Each representative was contacted by letter, describing the project and asking for information or comments; and subsequently with emails and phone calls. The responses from three members of the Ohlone-Costanoan Tribe include a request for formal consultation regarding the project, presence of a monitor during ground disturbance within 400 feet of a known archaeological site, construction crew training to recognize an archaeological site, and contacting an archaeologist or Native American if any artifacts are exposed during construction. No additional comments or concerns had been received as of January 24, 2018.

Impact

AB 52 established that a substantial adverse change to a Tribal Cultural Resource would have a significant impact on the environment. Based on archival and field based research of the project area, it is not anticipated that tribal resources would be impacted through project implementation. However, there always remains the potential for ground-disturbing activities to expose and/or impact unknown tribal cultural resources, which could result in significant impacts to tribal cultural resources. With implementation of **Mitigation Measures CR-1 and CR-2** identified in Section E, Cultural Resources, the impact would be **less than significant with mitigation**.

Mitigation Measures

Mitigation Measure CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction. This measure is described in Section E, Cultural Resources, above.

Mitigation Measure CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction. This measure is described in Section E above.

R. UTILITIES AND SERVICE SYSTEMS

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. 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 checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion: The proposed project would replace existing deteriorating sewer pipelines and would not generate wastewater. As described in Section II under Detailed Project Background, although some sewer lines would be upsized (increasing the capacity of the individual lines), the overall sewer system capacity for sewage collection and treatment would not change substantially. Implementation of the project would not generate additional wastewater, would not affect nor require water or wastewater treatment facilities, nor result in the construction of new water or wastewater treatment facilities. Therefore, the project would not exceed wastewater treatment requirements of the RWQCB. The impact for both questions 1 and 2 would be **less than significant**. No mitigation would be required.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 3. <i>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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: The project would replace deteriorating sewer pipelines beneath existing roadways, and would not require nor result in the construction of new stormwater drainage facilities or expansion of existing facilities. As described in Section I Hydrology, Water Supply and Water Quality, the project would not result in any additional structures or impervious surfaces that would change drainage patterns or otherwise generate additional stormwater runoff. Therefore, the project would not result in the need for new or expanded stormwater drainage facilities. There would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 4. <i>Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: The proposed project would use small amounts of water throughout construction related activities (e.g., dust control), which the construction contractor would obtain through approved sources and entitlements. No additional water use would be required to implement the project, and no new or expanded entitlements would be needed. Therefore, the impact would be **less than significant**. No mitigation would be required.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 5. <i>Result in 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?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: As described under R-1 and R-2 above, the project would replace existing wastewater collection lines and would not generate additional wastewater or otherwise affect wastewater treatment plant capacity. Additionally, sewage conveyance would continue during construction, so there would be no change in flows to the treatment plant. There would be **no impact**.

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 6. <i>Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Discussion: Implementation of the project would generate solid waste during construction, including asphalt from open trench excavation and the old sewer pipelines being replaced, that would be disposed and recycled. Other dirt and small rock materials excavated during pipeline replacement would be backfilled into the open trench. The project area falls within the jurisdiction of the Santa Cruz County Public Works Service Area Number 9, Zone C, that funds landfill and resource recovery efforts in Santa Cruz County. Zone 9 operates the Buena Vista Landfill and the related recycling and resource recovery activities. The Buena Vista Landfill is a Class III landfill that accepts non-hazardous residential, commercial and industrial waste. After it reaches capacity and closes (anticipated to be 2035), the County plans to use the Marina landfill which has capacity for 100 years.

According to County staff, the Buena Vista landfill has adequate space to accommodate the project's construction and demolition debris (Kasey Kolassa pers. comm). Once constructed, the project would not generate solid waste. The impact would be **less than significant**. No mitigation would be required.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 7. <i>Comply with federal, state, and local statutes and regulations related to solid waste?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion: All solid waste generated by the removal of the existing degraded sewer lines would be hauled off site by the contractor to the Buena Vista Landfill in compliance with relevant statutes and regulations. There would be **no impact**.

S. MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. <i>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</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

restrict the range of a rare or endangered 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?

Discussion: The discussions presented in Section III (A through R) above address 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.

The following mitigation has been included that reduces potential effects on these resources to a level below significance.

- BIO-1: Implement Protective Measures for Migratory Birds in Improvement Location 5, Airport Area
- BIO-2: Implement Protective Measures for Western Pond Turtle at the county-Owned Staging Area
- CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction
- CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction
- CR-3: Stop Work in the Event of Unexpected Paleontological Resources or Unique Geologic Features during Construction

As a result of this evaluation, there is no substantial evidence that, after mitigation, significant effects associated with this project would result. Therefore, the project impacts would be **less than significant with mitigation**.

2. *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)?*
-

Discussion: In addition to project specific impacts, this evaluation considered the potential incremental effects of the project that could contribute to a significant cumulative impact. The significant cumulative impacts to which the project would contribute are air quality, greenhouse gas/climate change, and traffic.

Both air quality and greenhouse gas analyses above (in Sections 3, Air Quality and 7, Greenhouse Gas) are cumulative in nature in that the analysis of individual impacts is undertaken in the context of the air quality basin and global climate change arena, respectively. The short-term construction emissions would be minimized through best management practices and measures described in Section II under Detailed Project Description, and the project would not exceed MBARD emissions thresholds for criteria pollutants. Therefore, the project would not result in a considerable contribution to significant cumulative impacts for air quality and greenhouse gas.

As discussed in Section 16, Transportation/Traffic, none of the roads serving the project area are expected to be significantly affected by project implementation. Short term impacts that would occur during construction would be minimized through the traffic control plan, as described in Section II under Detailed Project Description.

Therefore, the project would not result in a considerable contribution to significant cumulative impacts, and the impact would be **less than significant**.

3. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Discussion: The potential for adverse direct or indirect effects to human beings was considered in the evaluation of environmental impacts in Section III. Based on this evaluation, construction-related noise could adversely affect human beings due to the proximity of construction activities to residences. The following mitigation has been included that reduces potential effects on these receptors to a level below significance.

- NOI-1: Ensure Standard Sound-Control Devices on Construction Equipment
- NOI-2: Ensure Muffled Exhaust on Construction Equipment
- NOI-3: Install Noise-Reducing Enclosures Around Stationary Equipment, Where Necessary

Through implementation of these measures the project would not cause substantial adverse effects on human beings, and the impact would be **less than significant with mitigation**. Further, the project would replace deteriorating sewer lines, substantially reducing the risk of sewage leaks in residential areas, which is beneficial to human beings.

In summary, for all three questions, the County has determined that this project does not meet this Mandatory Finding of Significance.

IV. REFERENCES USED IN THE COMPLETION OF THIS INITIAL STUDY

- Albion Environmental, Incorporated, 2018
Phase I Archaeological Investigations for the FCSD Sewer Rehabilitation Project
- California Department of Conservation, 2016
Santa Cruz County Williamson Act Mapping 2015/2016.
ftp://ftp.consrv.ca.gov/pub/dlrp/wa/SantaCruz_15_16_WA.pdf
- California Department of Conservation, 2014
Farmland Mapping and Monitoring Program Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance Santa Cruz County U.S. Department of Agriculture, Natural Resources Conservation Service, soil surveys for Santa Cruz County, California, August 1980.
- California Department of Conservation, 2001
Division of Mines and Geology, Soil Mapping for Santa Cruz County
- California Department of Forestry, 2008
Cal Fire Hazard Severity Zone Map, Santa Cruz County
- California Department of Toxic Substances Control, 2016
Database query of EnviroStor for toxic waste sites in Watsonville, CA. Completed January, 2018. <https://www.envirostor.dtsc.ca.gov>
- California Department of Transportation, 2008
Scenic Highway Guidelines, October 2008.
- City of Watsonville, 2010
City of Watsonville 2010 Watsonville Airport Master Plan 2001-2020. August 2002. Adopted by the City Council on June 23, 2003, Revised: April 2010.
- County of Santa Cruz Regional Transportation Commission, Regional Transportation Improvement Plan, 2017.
- County of Santa Cruz Regional Transportation Commission, Regional Transportation Plan, 2014.
- County of Santa Cruz, 2016
GIS Mapping.
[https://www.co.santacruz.ca.us/Departments/GeographicInformationSystems\(GIS\).asp](https://www.co.santacruz.ca.us/Departments/GeographicInformationSystems(GIS).asp)
x
- County of Santa Cruz, 2015
County of Santa Cruz Local Hazard Mitigation Plan 2015-2020. Prepared by the County of Santa Cruz Office of Emergency Services.

County of Santa Cruz, 2013

County of Santa Cruz Climate Action Strategy. Approved by the Board of Supervisors on February 26, 2013.

County of Santa Cruz, 2011

Freedom County Sanitation District Sanitary Sewer Management Plan, October 25, 2011

County of Santa Cruz, 2007

Freedom County Sanitation District, Sanitary Sewer Capacity Evaluation and Assurance Plan

County of Santa Cruz, 1994

1994 General Plan and Local Coastal Program for the County of Santa Cruz, California. Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

Ecosystems West, 2018

Assessment of Biological Resources for the FCSD Sewer Rehabilitation Project

Federal Emergency Management Agency, 2012

National Flood Insurance Rate Map

Federal Register. October 16, 2002. Department of the Interior. 50 CFR Part 17.

Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for *Holocarpha macradenia* (Santa Cruz Tarplant); Final Rule. Vol. 67, No. 200, Pages 63968 - 64007.

Geri Martin Daliva Engineers, 1996

Soils Engineering Report for 584 Green Valley Road, Watsonville, CA

Haro, Kasunich & Associates, 1996

Geotechnical Investigations for APN 050-15144, Five Lot Minor Land Division, 499 Green Valley Road, Santa Cruz County, CA

Harris & Associates, 2018

Freedom Sewer Rehabilitation Project - Air Quality Conformity Analysis.

Kolassa, Kasey. Santa Cruz County Solid Waste and Recycling Services Manager. Personal communication on Tuesday, February 27th, 2018. Telephone conversation regarding adequate Buena Vista Landfill capacity.

MBUAPCD, 2008

Monterey Bay Unified Air Pollution Control District (MBUAPCD), CEQA Air Quality Guidelines. Prepared by the MBUAPCD, Adopted October 1995, Revised: February 1997, August 1998, December 1999, September 2000, September 2002, June 2004 and February 2008.

MBUAPCD, 2013a

Monterey Bay Unified Air Pollution Control District, NCCAB (NCCAB) Area Designations and Attainment Status – January 2013. Available online at http://www.mbuapcd.org/mbuapcd/pdf/Planning/Attainment_Status_January_2013_2.pdf

MBUAPCD, 2013b

Triennial Plan Revision 2009-2011. Monterey Bay Air Pollution Control District. Adopted April 17, 2013.

Pacific Crest Engineering, Inc, 2017

Geotechnical Investigation for Trembly Lift Station Replacement Relocation Project, Santa Cruz County, CA

Reynolds & Associates, 1996

Geotechnical Investigation for 18 Miller Avenue, Watsonville, CA

Rock Solid Engineering, Inc, 2009

Geotechnical Investigation-Design Phase Proposed Accessory Dwelling Unit Relocation, 48 Fletcher Court, Watsonville, CA

State of California Water Resources Control Board, 2018

Database query of GeoTracker for toxic waste sites in Watsonville, CA. Completed in January, 2018. <https://www.geotracker.waterboards.ca.gov>

Uniform Building Code, 2007

Expansive Soils Codes

United States Department of Transportation, 2006

Federal Transportation Authority, Transit Noise and Vibration Impact Assessment

Williams, Rayvon, 2018.

Manager, Watsonville Municipal Airport. Meeting on April 23, 2018.



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Attachment 1 MMRP



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MITIGATION MONITORING AND REPORTING PROGRAM

FREEDOM SEWER REHABILITATION PROJECT

*Freedom County Sanitation District, Santa Cruz
County, California*

June 2018

Introduction

The Freedom County Sanitation District, as Lead Agency under the California Environmental Quality Act (CEQA) and State CEQA Guidelines, prepared the Initial Study and Mitigated Negative Declaration for the Freedom Sewer Rehabilitation Project. In accordance with CEQA, the lead agency must also adopt a program for reporting or monitoring mitigation measures that were adopted or made conditions of project approval (Public Resources Code [PRC] Section 21081.6[a]; State CEQA Guidelines Sections 15091[d], 15097).

This document represents the mitigation monitoring and reporting program (MMRP) for the Freedom Sewer Rehabilitation Project, and includes all measures required to reduce potentially significant environmental impacts to a less than significant level. The mitigation measures are presented in their entirety by resource area, and **Table 1** includes a summary of the mitigation measures, timing of implementation, the agency responsible for implementing the mitigation, and the agency responsible for monitoring the mitigation.

Contact Information:

Freedom County Sanitation District
701 Ocean Street, Room 410
Santa Cruz, CA 95060
Ashleigh Trujillo, 831.454.2160

Table 1. Mitigation Monitoring and Reporting Plan – Freedom Sewer Rehabilitation Project

Mitigation Measure	Implementation Responsibility	Monitoring Responsibility	Monitoring Notes	Monitoring Notes
Prior to Construction				
Mitigation Measure BIO-1: Implement Protective Measures for Migratory Birds in Improvement Location 5, Airport Area	Santa Cruz County Public Works Department (or Construction Contractor on their behalf) with qualified biologist	Santa Cruz County Public Works Department (or their representative) and qualified biologist		
Mitigation Measure BIO-2: Protective Measures for Western Pond Turtle at the County-Owned Staging Area	Santa Cruz County Public Works Department (or Construction Contractor on their behalf) with qualified biologist	Santa Cruz County Public Works Department (or their representative) and qualified biologist		
During Construction				
Mitigation Measure CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction	Santa Cruz County Public Works Department (or Construction Contractor on their behalf) and a qualified archaeologist	Santa Cruz County Public Works Department (or their representative)		
Mitigation Measure CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction	Santa Cruz County Public Works Department (or Construction Contractor on their behalf) and, if necessary, the County coroner, a qualified archaeologist and Native American Heritage Commission appointed Most Likely Descendent	Santa Cruz County Public Works Department (or their representative)		
Mitigation Measure CR-3: Stop Work in the Event of Unexpected Paleontological Resources or Unique Geological Features during Construction.	Santa Cruz County Public Works Department (or Construction Contractor on their behalf) and, if necessary, a qualified paleontologist	Santa Cruz County Public Works Department (or their representative)		

Table 1. Mitigation Monitoring and Reporting Plan – Freedom Sewer Rehabilitation Project

Mitigation Measure	Implementation Responsibility	Monitoring Responsibility	Monitoring Notes	Monitoring Notes
Mitigation Measure NOI-1: Ensure Standard Sound-Control Devices on Construction Equipment.	Santa Cruz County Public Works Department (or Construction Contractor on their behalf)	Santa Cruz County Public Works Department (or their representative)		
Mitigation Measure NOI-2: Ensure Muffled Exhaust on Construction Equipment.	Santa Cruz County Public Works Department (or Construction Contractor on their behalf)	Santa Cruz County Public Works Department (or their representative)		
Mitigation Measure NOI-3: Installation of Noise-Reducing Enclosures Around Stationary Equipment, Where Necessary.	Santa Cruz County Public Works Department (or Construction Contractor on their behalf)	Santa Cruz County Public Works Department (or their representative)		

Mitigation Measures

Biological Resources

Mitigation Measure BIO-1: Implement Protective Measures for Migratory Birds in Improvement Location 5, Airport Area. For project implementation in Improvement Location 5, Airport Area, construction activities (such as operation of heavy construction equipment to excavate the trenches, lay the pipelines and backfill the trenches) within or adjacent to the airport property will occur outside of the nesting season for migratory birds (which is from February 1st through September 15th), after birds have fledged and before the rainy season. In the event that the timing of project implementation will not allow the project to follow these parameters, a preconstruction survey will be undertaken by a qualified biologist prior to the onset of construction activities in this area. If breeding birds are found to be utilizing the tree canopy of the oaks or wetland, the biologist will delineate appropriate buffers to protect nesting activities from disturbance.

Mitigation Measure BIO-2: Implement Protective Measures for Western Pond Turtle at the County-Owned Staging Area. Prior to and during use of the staging area at the County-owned maintenance yard west of the Green Valley Road/Arroyo Drive intersection and near Pinto Lake, the construction contractor will install protective fencing along the western perimeter of the staging area in locations identified by a qualified biologist. This will keep the western pond turtle and other wildlife species from entering the staging area. The project inspector will check the site every morning to ensure that the protective fencing remains in place, and that no gaps or tears are present, through which an animal may have entered the site, throughout project implementation.

Cultural Resources

Mitigation Measure CR-1: Conduct Construction Awareness Training and Spot-Check Monitoring when Excavation Starts in Each of the Five Improvement Locations, and Stop Work in the Event of Unexpected Occurrence of Cultural Resources during Construction. Pipeline replacement shall occur in one of the five improvement areas at a time. The five improvement areas include: 1) Ponderosa/Hathaway, 2) Arroyo/ Roberta/Mark, 3) Trembley, 4) Green Valley, 5) Airport Area.

Prior to excavation in each of the five improvement locations, a qualified archaeologist (who meets the Secretary of the Interior's Professional Qualifications Standards as promulgated in 36 CFR 61 and who has experience with precontact, historic period, and tribal resources) shall be present at the construction site to: 1) conduct awareness training to inform the construction crew of historic activities that led to the potential presence of cultural resources, and describe the types of resources that may be buried with photographic

examples; 2) monitor initial excavation sites and survey for the presence of resources; and 3) determine additional monitoring requirements in the improvement location, based on the initial spot-check monitoring, and conduct said monitoring.

If cultural resources are encountered, the archaeologist shall have the authority to temporarily halt or redirect ground-disturbing activities until the material is evaluated and appropriate course of action is determined by the archaeologist and County lead engineer. The County engineers will work with the archaeologist to determine the extent of the materials encountered, and develop an appropriate course of action. Such actions may include identifying alternative pipeline replacement methods (e.g., lining) that both provide the ability for the project to move forward and protect resources in place.

Potential resources include subsurface historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Potential Native American archaeological materials include obsidian and chert flaked stone tools (such as projectile and dart points), midden (culturally derived darkened soil containing heat-affected rock, artifacts, animal bones, and/or shellfish remains), and/or groundstone implements (such as mortars and pestles).

Within sixty days after completion of excavation activities in each of the five improvement locations, the archaeologist shall prepare and submit a final report to the County for review and approval. Consistent with the Secretary of Interior's Standards, the report shall describe the monitoring program and results, and provide interpretations about any cultural materials that were encountered during construction noting to the extent feasible each item's class, material, function, and origin.

Mitigation Measure CR-2: Stop Work in the Event of Unexpected Occurrence of Human Remains during Construction. If human remains and associated/or unassociated funerary objects are discovered during soil-disturbing activities, construction crews will stop work and immediately notify the Santa Cruz County Coroner and a qualified archeologist, in accordance with applicable State laws. In the event that the Coroner determines that the human remains are Native American, the County will notify the Native American Heritage Commission (NAHC) according to the requirements in PRC Section 5097.98. NAHC will appoint a Most Likely Descendent (MLD). A qualified archeologist, County and MLD will make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement will take into consideration the appropriate preservation measures, with the preference to preserve all resources intact and in place. The County will work with engineers to develop an alternative pipeline route, or excavate, remove, record, analyze, take custody of, and finally respectfully dispose of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters.

Mitigation Measure CR-3: Stop Work in the Event of Unexpected Paleontological Resources or Unique Geological Features during Construction. If paleontological resources or unique geologic features are discovered during soil-disturbing activities, construction crews will stop work and immediately notify the County and a qualified paleontologist. The paleontologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided, no further mitigation will be required. If the resource cannot be avoided, the qualified paleontologist will evaluate the resource and determine whether it meets the definition of “unique”. If the resource is determined to not be unique, work may continue in the area. If the resource is determined to be unique, work will remain halted, and a preservation or recovery plan will be prepared. Preservation in place is the preferred protective measure. If preservation in place is not possible, resources and/or fossils will be recovered, prepared, identified, catalogued and analyzed according to current professional standards under the direction of the qualified paleontologist. Work may commence at the time of completion of the treatment. A final summary report will be completed and submitted to the County. The report will include a discussion of the methods used, stratigraphy exposed, fossils collected, and the significance of the recovered fossils. The report will also include an itemized inventory of all of the collected and catalogued fossil specimens.

Noise

Mitigation Measure NOI-1 Ensure Standard Sound-Control Devices on Construction Equipment. Prior to construction, the construction contractor will ensure that all construction and maintenance equipment powered by gasoline or diesel engines are equipped with sound-control devices that are at least as effective as those originally provided by the manufacturer, and all equipment will be operated and maintained to minimize noise generation.

Mitigation Measure NOI-2: Ensure Muffled Exhaust on Construction Equipment. Prior to construction, the construction contractor will ensure that all gasoline or diesel engines that are used for construction activities do not have unmuffled exhaust.

Mitigation Measure NOI-3: Install Noise-Reducing Enclosures Around Stationary Equipment, Where Necessary. Prior to starting construction activities, the construction contractor will ensure that noise-reducing enclosures are installed around stationary noise-generating equipment capable of 6 dB attenuation.

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Attachment 2

Air Quality Conformity Analysis



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January 5, 2018

Ashleigh Trujillo, P.E., LEED AP
Santa Cruz County Department of Public Works
Freedom County Sanitation District
701 Ocean St. Room 410
Santa Cruz, CA 95060

Subject: Freedom Sewer Rehabilitation Project - Air Quality Conformity Analysis

Dear Ms. Trujillo:

The following presents the results of Harris & Associates' analysis of the potential impacts to air quality from construction of the proposed Freedom County Sanitation District (FCSD) Sewer Rehabilitation Project in Santa Cruz County. The Freedom Sewer Rehabilitation Project (project) includes replacement of sewer lines and associated manhole modifications in five locations, listed in **Table 1**. The project is not increasing the system's capacity for collection and treatment.

Table 1 Freedom Sewer Rehabilitation Project

Location	Improvement Location (Roadway Name or Area)	Description	Planned Construction Method	Planned Construction Timeframe
1	Ponderosa/Hathaway	Replace 6,360 lf of 8-inch sewer line	Open trench in paved roadway	2020/21
2	Arroyo/Roberta/Mark	Replace 3,900 lf of 8-inch sewer line	Open trench in paved roadway	2020/21
3	Trembley	Replace 3,340 lf of 6-inch sewer line with 8-inch line	Open trench in paved roadway, and lining in one section outside the roadway in an existing easement on a residential property	2020/21
4	Green Valley	Replace/upsized 4,110 lf of 8-inch sewer line with 12-inch line	Open trench in paved roadway	2020/21
5	Airport Area	Replace 9,730 lf of 6- and 8- sewer line with 8-inch line	Open trench in paved roadways and, in two locations, through easements to City of Watsonville sewer located on airport property	2019/21



BACKGROUND

The State Revolving Fund (SRF) Loan Program is partially funded by the U.S. Environmental Protection Agency (US EPA) and subject to federal environmental regulations, including the General Conformity Rule for the Clean Air Act. Clean Air Act general conformity analyses applies to projects in areas either not meeting federal national ambient air quality standards or are subject to a maintenance plan. An analysis is required for each criteria pollutant for which an area is considered as being in federal nonattainment or maintenance. If project emissions are below the 'de minimis' level and less than 10 percent of the emissions inventory for the pollutants for which the area is in non-attainment, then further general conformity analysis is not required. If project emissions are above the de minimis level, then a conformity determination for the area must be made.

REGULATORY SETTING

The Clean Air Act of 1970 required the EPA to establish National Ambient Air Quality Standards (NAAQS) with states retaining the option to adopt more stringent standards or to include other specific pollutants. The 1990 CAA Amendments require that each state have an air pollution control plan called the State Implementation Plan (SIP). The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The US EPA reviews the SIPs to determine whether the plans would conform to the 1990 CAA Amendments and achieve the air quality goals.

The US EPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," or "unclassified" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. **Table 2** lists the attainment status of Santa Cruz County, located within the North Central Coast Air Basin (NCCAB), for the criteria pollutants. The US EPA classifies the NCCAB as in attainment or unclassified for all pollutants with respect to federal air quality standards. The NCCAB is not in nonattainment status for any pollutant.

The state of California, under the California Clean Air Act (CCAA), has established standards for criteria pollutants that are generally stricter than federal standards. As shown in **Table 2**, the NCCAB is currently in nonattainment status for respirable particulate matter (PM₁₀), and transitional nonattainment status for ozone. An area is designated transitional nonattainment if, during a single calendar year, the state standard is not exceeded more than three times at any monitoring location within the district.



Table 2 North Central Coast Air Basin Attainment Status

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone (O ₃)	1 Hour	Nonattainment - Transitional	No Federal Standard
	8 Hour		Attainment
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	No Federal Standard
	24 Hour		Unclassified ⁽¹⁾
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Attainment	Attainment
	24 Hour	No State Standard	
Carbon Monoxide (CO)	8 Hour	Unclassified	Unclassified/Attainment
	1 Hour		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	Calendar Quarter	No State Standard	Attainment
	30 Day Average	Attainment	No Federal Standard
	Rolling 3-Month Average	No State Standard	Attainment
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard
Visibility Reducing Particulates	8 Hour (10:00 a.m. to 6:00 p.m., PST)	Unclassified	No Federal Standard

⁽¹⁾ Unclassified; indicates data are not sufficient for determining attainment or nonattainment.

Source: CARB 2017, EPA 2017

SIGNIFICANCE THRESHOLDS

Federal De Minimis Levels

The Code of Federal Regulations (CFR) provides guidance to document Clean Air Act Conformity Determination requirements. 40 CFR Part 93.153(b)(2) defines de minimis levels, that is, the minimum thresholds for which a conformity determination must be performed for criteria pollutants for which an air basin is in nonattainment or maintenance. The NCCAB is in attainment or designated as “unclassified” for all pollutants. As a result, no federal conformity determination is required. However, the Clean Air Act section of the State Water Resources Control Board Evaluation Form for Environmental Review and Federal Coordination requires quantification of a project’s pollutant emissions, regardless of area designation.

Monterey Bay Air Resources District

The project is in the NCCAB, which is comprised of Monterey, Santa Cruz, and San Benito Counties, covering an area of 5,159 square miles along the central coast of California. The Monterey Bay Air Resources District (MBARD) consists of all three counties within the NCCAB; therefore, the County is



within the jurisdiction of the MBARD. The MBARD significance criteria are used in this analysis to determine the project's impact on air quality based on the MBARD CEQA Air Quality Guidelines.

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. The MBARD identifies a quantitative threshold for PM₁₀ emissions of 82 pounds per day (lbs/day). The MBARD identifies general earthmoving screening values to determine consistency with this threshold. Projects that propose grading of up to 8.2 acres total with minimal earthmoving or grading of 2.2 acres per day or less are considered not to exceed the threshold of 82 lbs/day. For a project that would exceed these area screening values, modeling may be used to refute or validate a determination of significance.

The MBARD does not identify quantitative thresholds for other criteria pollutants during construction. Construction projects using typical construction equipment such as dump trucks, scrapers, bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone [i.e., volatile organic compounds (VOC) or oxides of nitrogen (NO_x)], 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 AAQS. However, a project that would use non-typical equipment would have the potential to result in a significant impact related to emissions of VOCs or NO_x.

Regarding operational emissions, an exceedance of any threshold identified in Table 5-3 of the CEQA Air Quality Guidelines would represent a significant impact on local or regional air quality. As addressed in the analysis below, the proposed project is not anticipated to result in operational emissions. As such, no operational emissions have been quantified for comparison to district thresholds and CEQA Air Quality Guidelines Table 5-3 is not duplicated in this report.

IMPACT ANALYSIS

Construction

Project construction emissions were estimated using the CalEEMod Model, version 2016.3.2, based on construction information provided by Santa Cruz County Sanitation District (2017). Detailed assumptions and modeling data sheets are provided in **Attachment A**. Construction of the project is anticipated to begin in 2018. The segments would be constructed consecutively. A trench width of 1.67 feet is assumed for all segments, which is the width of the proposed pipelines plus an additional foot. Sewer lines that would be installed four to eight feet deep would be installed at an average rate of 125 linear feet per day. For lines that would be installed 8 to 23 feet deeps, installation would average 100 linear feet per day. The average daily disturbance would be 208 square feet. **Table 3** provides the estimated disturbance area



and import/export required for each segment. It is assumed that import and export trips would be phased over the entire construction period for that segment.

Table 3 Estimated Earthwork by Segment

Improvement Location	Disturbance Area (Square Feet)	Material to Import/Export from Trenching (Cubic Yards)
Ponderosa/Hathaway	226,000	3,540
Arroyo/Roberta/Mark	105,800	2,330
Trembley	60,500	2,180
Green Valley	153,200	3,040
Airport Area	284,100	4,560

Source: Santa Cruz County Sanitation District 2017

Maximum daily emissions levels associated with construction of the proposed project are shown in **Table 4**. Annual emissions are shown in **Table 5**. Emissions are similar across all segments because it is assumed that a similar construction fleet would be used for all segments, for a similar amount of time. Phasing of truck trips across the construction period reduces the impact of import and export quantity on maximum daily emissions. Segments that would be completed in later years, such as Green Valley, are anticipated to benefit from more stringent emissions standards.

A screening level of 2.2 acres can be used to determine whether the project would have the potential to exceed the MBARD threshold of 82 lbs/day for PM₁₀ emissions. An average disturbance of 208 square feet per day is anticipated for the proposed project, which is less than one percent of the screening level. Additionally, as shown in **Table 4**, the project is estimated to generate a maximum of 6 lbs/day of PM₁₀. Regarding the remaining pollutants, the proposed project would employ typical construction equipment. It would not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories. Therefore, the proposed project would not result in a significant impact related to criteria pollutant emissions during construction.

The NCCAB is in attainment or unclassified for all federal ambient air quality standards. As such, a comparison to federal de minimis thresholds to determine Clean Air Act consistency is not required. As shown **Table 5**, annual emissions from construction of the proposed project would be minimal. Construction emissions are not anticipated to exceed emissions inventories for the basin. Therefore, the project would not have the potential to significantly impact the ability of the NCCAB to maintain attainment status. A significant impact would not occur.



Table 4 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day)

Improvement Location	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Ponderosa/Hathaway	3	32	20	<1	6	3
Arroyo/Roberta/Mark	3	29	19	<1	5	3
Trembley	3	37	21	<1	6	4
Green Valley	2	25	18	<1	5	3
Airport Area	3	34	20	<1	6	3

Emission quantities are rounded to the nearest whole number. Exact values are provided in **Attachment A**.
 PM₁₀ – Particulate Matter less than 10 microns
 PM_{2.5} – Particulate matter less than 2.5 microns
 NO_x – Oxides of Nitrogen
 SO_x – Oxides of Sulfur
 CO – Carbon Monoxide
 Pb – Lead and lead compounds
 VOC – Volatile organic compounds

Table 5 Estimated Construction Annual Pollutant Emissions (tons/year)

Improvement Location	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Ponderosa/Hathaway	<1	1	1	<1	<1	<1
Arroyo/Roberta/Mark	<1	1	1	<1	<1	<1
Trembley	<1	1	1	<1	1	<1
Green Valley	<1	1	1	<1	<1	<1
Airport Area	<1	2	1	<1	<1	<1

Emission quantities are rounded to the nearest whole number. Exact values are provided in **Attachment A**.
 PM₁₀ – Particulate Matter less than 10 microns
 PM_{2.5} – Particulate matter less than 2.5 microns
 NO_x – Oxides of Nitrogen
 SO_x – Oxides of Sulfur
 CO – Carbon Monoxide
 Pb – Lead and lead compounds
 VOC – Volatile organic compounds

Operation

Following construction, operation of the pipelines would be passive and would not result in an increase in criteria pollutant emissions. Future operations would be identical to existing conditions without the need for additional maintenance trips. Therefore, operational emissions would be less than significant.



SUMMARY

Implementation of the FCSDE Sewer Rehabilitation project would not result in a significant air quality impact. No mitigation measures are necessary.

Should you have any questions regarding this memo, please contact me at 619.236.1778, ext. 2528 or Sharon.Toland@WeAreHarris.com.

Sincerely,

Sharon Toland

Project Manager

Harris & Associates

Attachment A: CalEEMod Results

Note: The model results are on file with the County of Santa Cruz Public Works Department, and have not been included due to length.



REFERENCES

California Air Resources Board. 2017. Air Quality Standards and Area Designations. December 4, 2017.

Monterey Bay Air Resources District (formerly Monterey Bay Unified Air Pollution Control District). CEQA Air Quality Guidelines. 2008.

Santa Cruz County Sanitation District. 2017. Freedom Sewer Rehabilitation Project Preliminary Data. December 1.

United States Environmental Protection Agency. 2017. Nonattainment Areas for Criteria Pollutants (Green Book). December 4, 2017. Available online, <https://www.epa.gov/green-book>.

Attachment A
CalEEMod Results

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Attachment 3

Biological Resources Assessment



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MEMORANDUM

To: Kate Giberson
From: Erin McGinty
Date: May 24, 2018
RE: **Assessment of Biological Resources within the Freedom County Sanitation District Sewage Rehabilitation Project, Freedom, Santa Cruz County, California.**

Dear Ms. Giberson,

The Freedom County Sanitation District (FCSD) is proposing the rehabilitation of several wastewater collection lines in the unincorporated community of Freedom, located in Santa Cruz County immediately north of the City of Watsonville (**Figure 1**, Attachment A). EcoSystems West Consulting Group conducted reconnaissance surveys of the proposed project area to determine if sensitive biological resources could be impacted by the proposed project. The project area is located almost entirely within existing roadways, and on paved and heavily disturbed shoulders of the roadways. No impacts to biological resources are anticipated as a result of activities located in these areas. Two open spaces are located adjacent to the proposed project area: the Watsonville Municipal Airport (Airport) and Pinto Lake Park. While these areas are known to support sensitive biological resources, with Best Management Practices (BMPs) in place, this project is not likely to result in impacts to these resources.

PROJECT DESCRIPTION

The project includes the replacement of 27,440 linear feet or 5.2 miles of existing wastewater (sewer) collection lines located within existing residential roadways in the unincorporated community of Freedom (**Figure 1**). The project area is divided into five improvement locations, based on residential neighborhoods, as shown in **Figure 2**.

The project would replace existing sewer lines, including modifications to existing associated manholes and to the two tie-ins on airport property, as described in **Table 1** and shown in **Figures 2 through 9**. The project would not include the rehabilitation of any pump stations.

The project limits (i.e., areas of ground disturbance) would be within existing paved public roadways, except a very small portion that extends onto airport property and two private residential properties in pre-existing easements, as noted in **Table 1**.

Table 1. Freedom Sewer Rehabilitation Project – Improvement Locations				
Improvement Locations ¹		Description	Planned Construction Method	Planned Construction Timeframe
Northern Portion of Project Area				
1	Ponderosa/Hathaway	Replace 6,360 linear feet of 8-inch sewer line	Open trench in paved roadway	2020/21
2	Arroyo/Roberta/Mark	Replace 3,900 linear feet of 8-inch sewer line	Open trench in paved roadway	2020/21
3	Trembley	Replace 3,340 linear feet of 6-inch sewer line with 8-inch line ²	Open trench in paved roadway, and lining in one section outside the roadway in an existing easement on residential property	2020/21
4	Green Valley	Replace/upsized 4,110 linear feet of 8-inch sewer line with a 10-inch or 12-inch line ³	Open trench in paved roadway, and in an existing easement on residential property	2020/21
Southern Portion of Project Area				
5	Airport Area	Replace 9,730 linear feet of 6-inch and 8-inch sewer line with 8-inch line ²	Open trench in paved roadways and, in two locations, in existing easements onto airport property	2019/21
¹ The improvement locations are shown in Figures 2 through 9 . ² The 6" pipelines would be replaced with 8" lines to meet the current industry standard and thus better facilitate future maintenance, allow closed-circuit television (CCTV) camera access and would not substantially increase system capacity. ³ The 8" pipelines would be replaced with 10" or 12" pipelines to prevent sewage spills of existing flows during large storm events per recommendations in the 2007 Sanitary Sewer System Capacity Evaluation and Assurance Plan, and would not substantially increase system capacity.				

Construction activities include open trench excavation and the use of typical construction equipment, including dump trucks, excavators, front-end loaders, scrapers, and compactors. The trenches would be an average of 1.67 feet wide, which is the width of the proposed pipelines plus an additional foot, and would range in depth from eight (8) to 23 feet.

Staging. Construction staging areas would be located on paved or heavily disturbed areas within the road right-of-way where there is an adequate shoulder to support construction vehicles and/or materials. Additionally, there could be equipment and materials staging on the County-owned property located west of the Green Valley Road/Arroyo Drive intersection near Pinto Lake County Park (**Figure 3**). Staging areas would not extend into residential yards, private property or airport property; and would be at least 50 feet away from any drainage courses. Following project implementation, the staging areas and all roadways and affected areas within the project area would be returned to pre-project conditions and normal use.

Schedule. Project construction activities would occur over the course of a two-year period, and would generally occur from April 15 to October 15 of 2019-2021, outside of the rainy season and when it is dry, to fully implement the project (i.e., complete all five improvement locations). Any work outside this window would be completed with the proper best management practices described below. The construction duration in each improvement location would be 12 to 22 weeks, as shown in **Table 2**. The hours of construction activities would be limited to between 8:00 a.m. to 5:00 p.m.¹, Monday through Saturday, excluding holidays.

¹ In accordance with Santa Cruz County Code 8.30
<https://www.codepublishing.com/CA/SantaCruzCounty/html/SantaCruzCounty08/SantaCruzCounty0830.html>

Improvement Locations	Estimated Construction Duration	
	Construction Days	Construction Weeks
1. Ponderosa/Hathaway	80	16
2. Arroyo/Roberta/Mark	60	12
3. Trembley	60	12
4. Green Valley	60	12
5. Airport Area ¹	110	22

¹ Construction within airport property where the two tie-in locations are would be less than one week.

Traffic Control. Daily construction activities could require up to 23 worker vehicle trips per day, in addition to 7-10 additional truck deliveries for the import and export of materials. This would result in an approximate increase in 33 daily vehicle trips throughout the project area over the course of project implementation.

During construction, individual traffic lanes within the public roadways where the sewer line is being replaced would be intermittently closed. To minimize project effects on local traffic, the construction contractor would prepare a traffic control plan prior to issuance of the encroachment permit. The control plan would ensure that roadways within the project area remain open (i.e., one lane of traffic would be open) throughout project implementation to the greatest extent possible, and that lane closures would be safely and effectively managed with appropriate safety flags and signage. Prior to the start of construction activities, signage would be installed that includes the dates for construction, contact information for the FCSD liaison to answer project specific questions, and detour information to minimize the effects of temporary closures. The control plan would also include coordination with local safety personnel to maintain effective emergency service access throughout the duration of the project.

Continuous Service and Spill Protection. During construction, the existing sewage conveyance system would be kept in continuous operation. The contractor would determine whether parallel trenches would be utilized to allow the existing sewer system to remain in place throughout construction of the new system, or if the new sewage conveyance pipelines would be constructed in the existing trenches with concurrent sewer bypass systems in place that would connect an existing upstream manhole with a downstream manhole, past each incremental length of construction activities. If the bypass system was installed, an alarm system would be included in the design that would ensure that adequate capacity and reliability were retained throughout project implementation. The alarm system would be connected to the FCSD's operation's center, and would provide advanced notice if there was pump failure or malfunction, so that the risk of sewage spills from the project would be minimized.

To further minimize potential impacts that may occur to the environment from the accidental spill of sewage and other hazardous materials, the contractor would develop a hazardous materials spill prevention and containment plan for the project. The plan would not allow any wastewater discharge from the sewage collection system to enter adjacent lands or waters. In the event of accidental discharge, the contractor would be responsible for containment and the immediate cleanup and disposal of all contaminated materials, in accordance with the requirements of the Santa Cruz County Health Department. The contractor would also notify the appropriate regulatory agencies (e.g. U.S. Army Corps of Engineers, California Department of Emergency Services, California Department of Fish and Wildlife, Central Coast Regional Water Quality Control Board) to determine the appropriate permits that would be required to ensure that the project area was returned to pre-spill conditions following cleanup activities, and that all impacts were adequately mitigated.

Best Management Practices. The construction contractor would be required to implement Best Management Practices (BMPs) in accordance with the *County of Santa Cruz Construction Site Stormwater Pollution Control BMP Manual (October 2011 edition)*. The construction specifications would include BMPs to control erosion, sediment and stormwater pollution (e.g. storm drain inlet protection, sand bags around the perimeter of the staging area and/or straw bales, watering down the site to minimize excess dust, and covering stock piles of excavated dirt). Additionally, the construction specifications would include testing any groundwater

encountered during excavation to ensure all water leaving the site and entering the storm drain system is not contaminated with hazardous materials and meets RWQCB requirements. All surplus asphalt and rubble from the project area would be removed and transported to the local landfill.

This project does not require a Stormwater Pollution Prevention Plan (SWPPP) because it is a linear project that involve operations and maintenance activities, including pipeline replacement, on existing lines and facilities within an existing right of way (2009-0009-DWQ Construction General Permit²).

To reduce the generation of fugitive dust, the construction contractor would be required to implement the following dust control measures at the construction and staging sites: water all active construction areas as needed based on the type of construction activity, soil, and wind exposure; maintain at least 2-feet of free board or cover dirt and loose materials in haul trucks; cover inactive storage piles and stock piles of dirt; and sweep streets if visible soil material remains at the end of the work day. Following sewer and pipeline installation, the project area would be returned to pre-project conditions. The trenching, sewer installation, and paving would be inspected by a County inspector to ensure it meets County standard detail, as required by the encroachment permit. Disturbed areas that are not re-paved would be seeded or planted with native groundcover to maintain minimal surface erosion.

To reduce greenhouse gas emissions and comply with the County's adopted Climate Action Strategy, all construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment.

To protect biological resources in the airport area, the construction contractor would implement the following recommendations from the *Assessment of Biological Resources within the Freedom County Sanitation District Sewage Rehabilitation Project* (Ecosystems West 2018), prior to and during construction at the two tie-in locations in Improvement Location 5, Airport Area: 1) Install silt fencing along the drainage ditch located 40 feet south of the tie-in location to avoid disturbance to the drainage. 2) Remove the top 12 inches of soil (maintaining the existing soil horizon and avoiding disturbance to the seedbank), which may contain seeds for Santa Cruz tarplant; stockpile with protective covering; and then, after tie-in construction, return the topsoil and area to existing conditions.

The County would perform routine inspections of the construction area to verify the BMPs are properly implemented and maintained. The County would notify the contractor immediately if there was a violation that would require immediate compliance.

METHODS

EcoSystems West biologists reviewed all relevant background information pertaining to this project including available site photographs, US Fish and Wildlife Service (USFWS 2018), CDFW, the California Natural Diversity Database (CNDDDB 2018), and California Native Plant Society (CNPS 2018) occurrence records for special-status plants and wildlife on or near the site, and other relevant documents or communications from resource specialists. Following CNDDDB and other standard survey protocols, we reviewed distribution information for sensitive species to determine which species have the potential to occur in or near the project site and which species could be eliminated from consideration, based on vegetation and habitat types within the project area and surroundings, locations of known occurrences, (for wildlife) dispersal distances, and professional knowledge of the region and local sensitive species. Our target list of species with potential to occur is included in Attachment B. Our initial lists of potential sensitive species from the CNDDDB, CNPS, and USFWS are included in Attachment C.

² State Water Resources Control Board, Storm Water Program, Section II.C.2 of 2009-0009-DWQ Construction General Permit as amended by 2010-0014-DWQ & 2012-0006-DWQ.
https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

EcoSystems West conducted surveys of the project area on 15 May and 9 June 2017 and 12 January 2018. We evaluated the entire project area for potential sensitive biological resources. Our efforts were focused on those sites located adjacent to open spaces: the Airport property and the staging area located on County-owned property on both sides of the northern access road (Rancho Todos Santos Road) to Pinto Lake Park.

RESULTS

The construction footprint is comprised almost entirely of roadways. Exceptions include two pre-existing easements on residential private property, and two pre-existing easements on the Airport property. Staging areas are located on paved and heavily disturbed shoulders and on County-owned property on both sides of the northern access road to Pinto Lake Park. No impacts to biological resources are anticipated as a result of this project. Those portions of the project that will occur adjacent to open spaces that are known to support sensitive biological resources are described in greater detail below.

Airport Area (Location 5)

Project activities proposed for the Airport property easements include two tie-ins between the replacement sewer lines and the existing sewer line which runs near the north-eastern airport property boundary. Replacement sewer pipes run along residential streets perpendicular to the Airport property boundary and the tie-ins are located just inside the property boundary within the pre-existing easement.

Tie-ins are located in grassland comprised almost entirely of non-native grasses and other ruderal non-native plants. We observed a few individuals of California oatgrass (*Danthonia californica*), a handful of other native plants [poison oak (*Toxicodendron diversilobum*) and Pacific blackberry (*Rubus ursinus*)] with scattered coast live oak trees (*Quercus agrifolia*) south of the tie-in locations. EcoSystems West did not identify any special-status plants within or immediately adjacent to the project area during our surveys. All of the grassland habitat on the Airport property is considered "Critical Habitat"³ for Santa Cruz tarplant (*Holocarpa macradenia*), listed by the State of California as Endangered and by the Federal Government as 'Threatened'. The northeastern boundary of the airport provides only marginal habitat for the plant because of the presence of dense non-native grasses and associated thatch. We did observe the plant approximately 250 feet to the southwest and uphill of the project area, as described below.

One tie-in location is located approximately 50 feet from a storm water drainage ditch that supports hydrophytic vegetation such as watercress (*Nasturtium officinale*), cattail (*Typha latifolia*), bristly ox-tongue (*Helminthotheca echioides*), and curly dock (*Rumex crispus*). The ditch is connected to a large wetland located approximately 150 feet to the south of the tie-in locations. The wetland supports a suite of associated native and non-native wetland plants including Pacific willow (*Salix lasiandra* ssp. *Lasiandra*), white alder (*Alnus rhombifolia*), dock (*Rumex* sp.), and pennyroyal (*Mentha pulegium*). A wetland assessment was not conducted as part of this effort because no impacts to this feature are anticipated.

We observed numerous common bird species utilizing the boundaries between the grassland and wetland during our survey, including black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), chestnut-backed chickadee (*Poecile rufescens*), and bushtit (*Psaltriparus minimus*). It is likely that birds use the willows, alders, and oak trees for nesting during the breeding bird season⁴. It is likely that other common wildlife species utilize the wetland and adjacent grassland.

³ Designated Critical Habitat for plants or animals, determined and published in the Federal Register as a formal rule, receives protection under section 7 of the ESA, through the prohibition of destruction or adverse modification of critical habitat by actions carried out, funded, or authorized by a Federal Agency.

⁴ Nesting birds, their nests, and eggs are protected under the Migratory Bird Treaty Act of 1918 (MBTA) (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13).

Approximately 250 feet to the southwest and uphill from the alignment, coastal terrace prairie is present with California oatgrass (*Danthonia californica*), Santa Cruz tarplant, and Muehlenberg's centaury (*Zeltnera muehlenbergii*). Choris' popcorn flower (*Plagiobothrys chorisianus* var. *chorisianus*) and San Francisco popcorn flower (*Plagiobothrys diffusus*) are also known to occur on the Airport property further to the west. We did not observe these species during our site visit, which was limited to the Airport property immediately adjacent to the tie-in locations.

A list of plant species observed is included in Attachment D.

The project will not result in any direct, indirect, or cumulative impacts to critical habitat for Santa Cruz tarplant, coastal terrace prairie, or the rare plant species located on the Airport property. No "destruction or adverse modification of critical habitat" and no alteration of the primary constituent elements for the species, such as the alteration of watershed characteristics or destruction of coastal terrace prairie, would occur as a result of this project (Federal Register 2002).

Construction will be short in duration (approximately 3 days) and the work will be contained entirely to the northeastern boundary of the Airport property dominated by non-native plant species. The project footprint within the Airport will be limited to the area immediately around the tie in locations. No staging or stockpiling will take place within the Airport property. The work will consist of trenching in the roadways (outside of the Airport property) to replace existing pipes and exposing the existing sewer line at the junctions to connect the replacement pipes. In addition, BMPs will be in place to prevent any temporary potential impacts to tarplant seedbank, if present, or other sensitive resources. Work will take place outside of the breeding bird season to avoid potential impacts to breeding birds.

County-Owned Staging Area (Pinto Lake Park Access Road)

The Pinto Lake Park northern access road (Rancho Todos Santos Road) staging area for the project would be utilized for equipment and materials storage during the project. No other construction activities are proposed for this area. The staging area is comprised of an existing County maintenance yard, the access road and kiosk, grassland that is kept mowed short, and scattered trees.

The staging area does not provide habitat for sensitive biological resources. Breeding birds likely utilize the trees in the staging area and surroundings during nesting bird season. Nesting birds, their nests, and eggs are protected under the MBTA³.

The staging area is located adjacent to Pinto Lake Park. Pinto Lake is known to support western pond turtle (WPT) (*Actinemys = Emys marmorata pallida*), a California Department of Fish and Wildlife (CDFW) 'Species of Special Concern', as well as bird rookeries³. The project is not likely to impact WPT. Western pond turtles are known to move overland, most often less than 200 meters, with greater movements along aquatic corridors in riverine environments. This occurrence location is not within a riverine system. The portion of the pond occupied by WPT is greater than 500 meters from the staging area and the intermediate habitat is not likely to be utilized by WPT for movement or egg-laying.

It is unlikely that project activities proposed for the staging area will impact breeding birds, either in or near the staging area or in adjacent Pinto Lake Park. Materials and equipment storage planned for the staging area are not likely to generate significantly more noise than Green Valley Road or the County maintenance yard.

The Best Management Practices listed below will further protect biological resources in the vicinity of the staging area.

BEST MANAGEMENT PRACTICES

To further avoid any impacts to biological resources, we recommend the following Best Management Practices:

- To avoid potential impacts to breeding birds, conduct jackhammering of the roadways and tie-in activities near/on the Airport property in the late summer and early fall, after birds have fledged and before the rainy season. If this timing is not feasible, conduct a breeding bird survey. If breeding birds are utilizing the tree canopy of the oaks and wetland, establish buffers appropriate to the observed nesting species based on standard protocols such as the Nesting Bird Management Plan (PG&E 2015) to protect nesting activities from disturbance.
- To avoid disturbing the seedbank which may contain seeds for the Santa Cruz tarplant and to further avoid potential impacts to Critical Habitat, before trenching within the Airport property, remove vegetation, then remove and stockpile the top 12 inches of soil, maintaining the soil horizon. When work is completed, replace the topsoil.
- To avoid impacts to the drainage ditch and wetland on the Airport property:
 - ❖ stage all equipment and materials outside of the Airport property; and
 - ❖ install silt fencing along the drainage ditch and employ other applicable erosion control measures.
- To ensure there are no impacts to western pond turtle known to occur in Pinto Lake, install protective exclusion fencing around the staging area located on the northern access road to the Park (Rancho Todos Santos Road) to keep WPT and other wildlife species from entering the staging area.

Please contact us with any questions or comments.

Sincerely,

Erin McGinty, Biologist, EcoSystems West

REFERENCES

Biotic Resources Group. 2016. Watsonville Airport Precision Approach Path Indicator Project. Biotic Report. Prepared for the City of Watsonville Community Development and Public Works Department, Santa Cruz County, California. October 31, 2016.

California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB). 2018. Viewed on line at: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 12 March 2018].

Kittleson, Gary. 2014. Biological Assessment for the Freedom Sanitation District Trunk Sewer Line Project. Prepared for the City of Watsonville, Santa Cruz County, California.

Federal Register. October 16, 2002. Department of the Interior. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for *Holocarpha Macradenia* (Santa Cruz Tarplant); Final Rule. Vol. 67, No. 200, Pages 63968 - 64007.

Pacific Gas & Electric Company. 2015. *Nesting Bird Management Plan*. Final Draft. August.

US Fish and Wildlife Service (USFWS). 2018. IPaC Information and Planning and Consultation. Viewed on line at: <https://ecos.fws.gov/ipac/>

Attachment A. Figures 1-9

GENERAL PLAN BOUNDARIES

SANTA CRUZ COUNTY, CALIFORNIA

Legend	
APTOS HILLS	
APTOS	
BONNY DOON	
CARBONERA	
EUREKA CANYON	
LIVE OAK	
LA SELVA	
NORTH COAST	
PAJARO VALLEY	
SAN ANDREAS	
SKYLINE	
SAN LORENZO VALLEY	
SUMMIT	
SOQUEL	
SALSIPUEDES	
CITY LIMITS	



180-07
 PREPARED BY SANTA CRUZ COUNTY
 GEOGRAPHIC INFORMATION SYSTEM STAFF
 November 2007

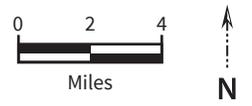


Figure 1
 Regional Location
 Freedom Sewer Rehabilitation Project

Path: M (MorCom)\Project & Proposal Deliverables\2017 FCSD Sewer Rehab 170-0106

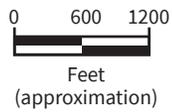
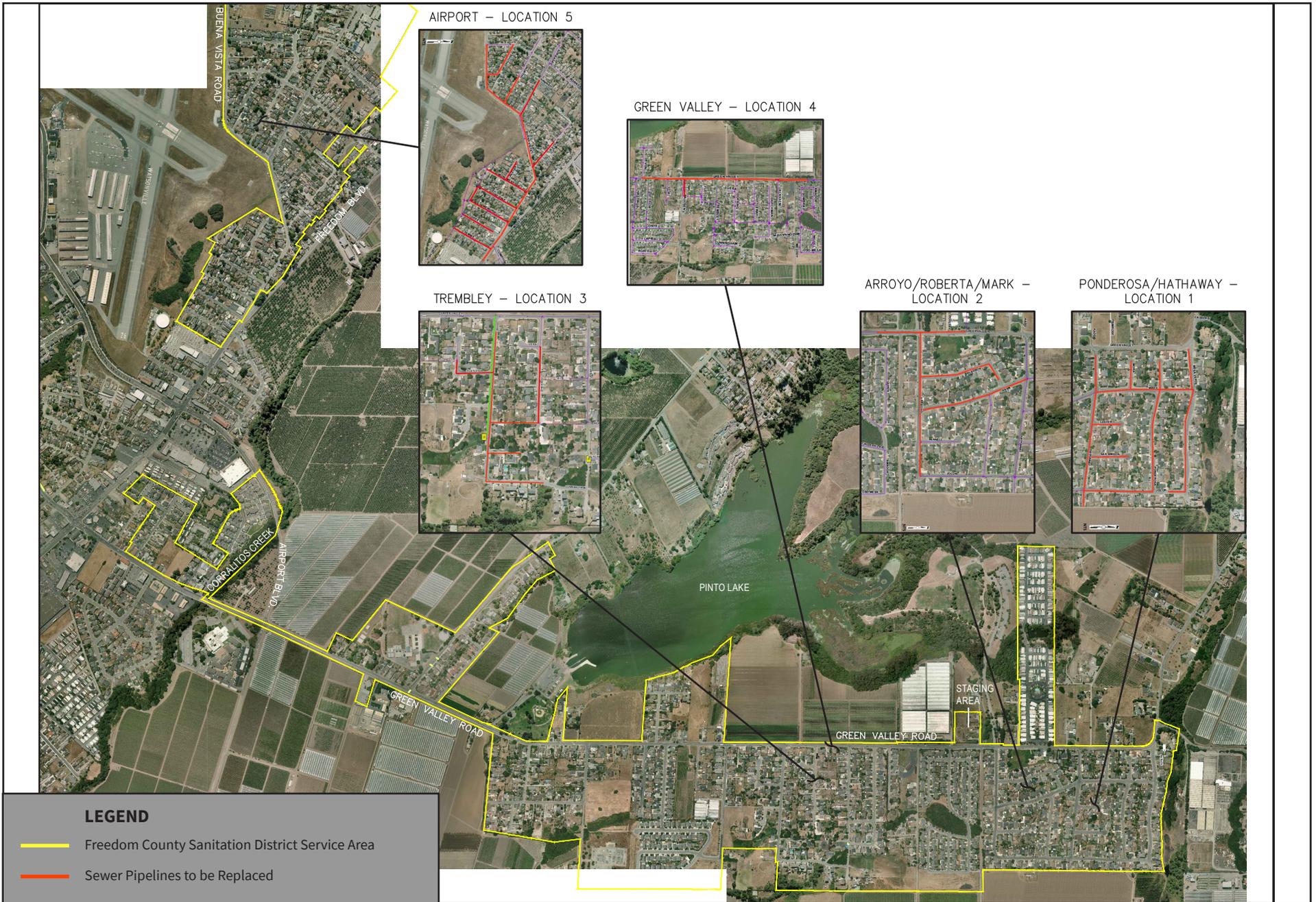


Figure 2
Five Improvement Locations
Freedom Sewer Rehabilitation Project

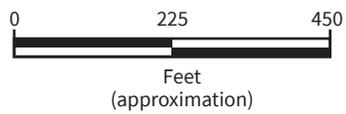
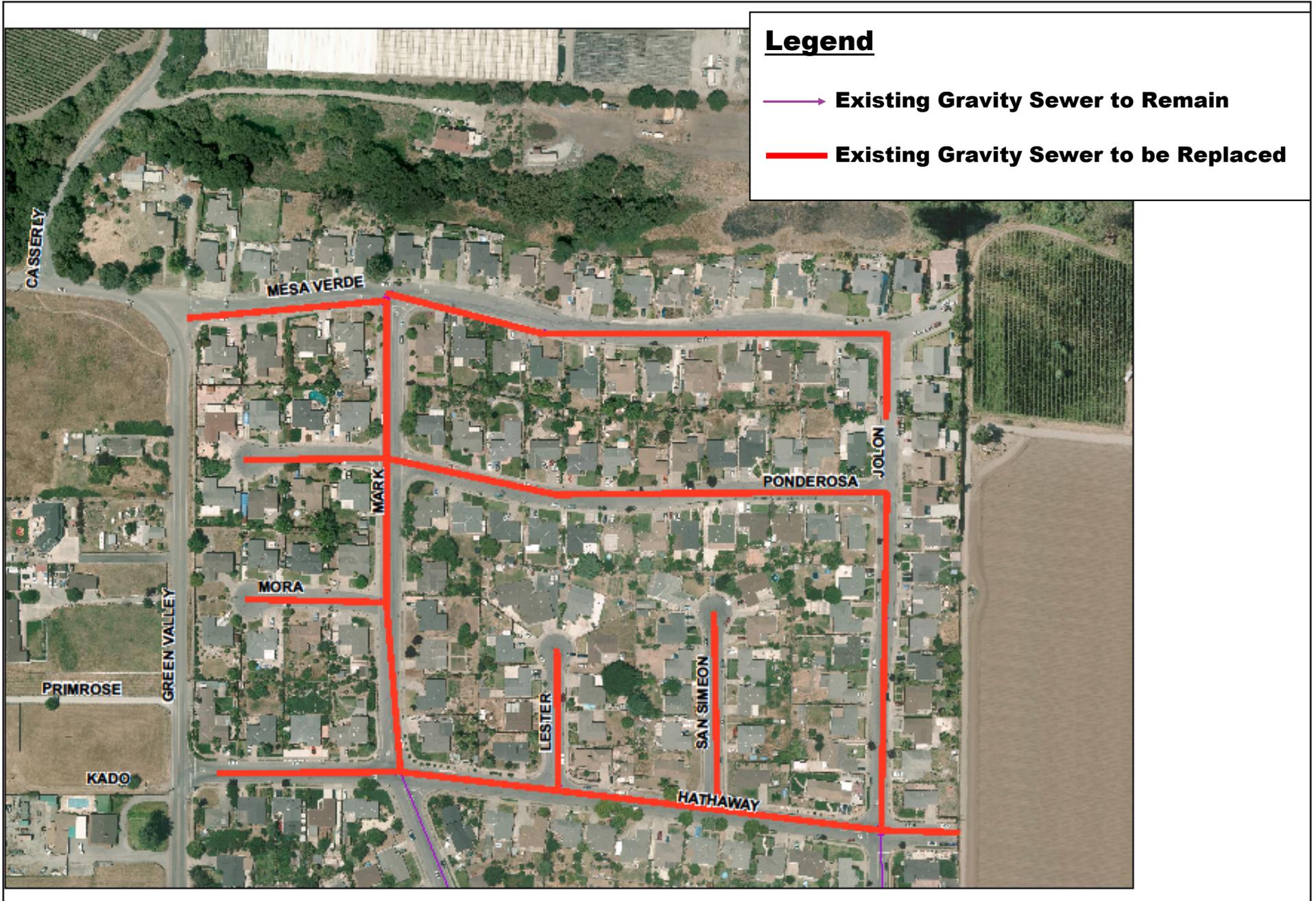


Figure 5
Ponderosa/Hathaway Sewer Rehabilitation – Location 1
Freedom Sewer Rehabilitation Project

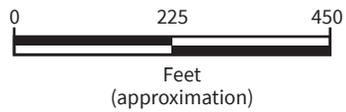
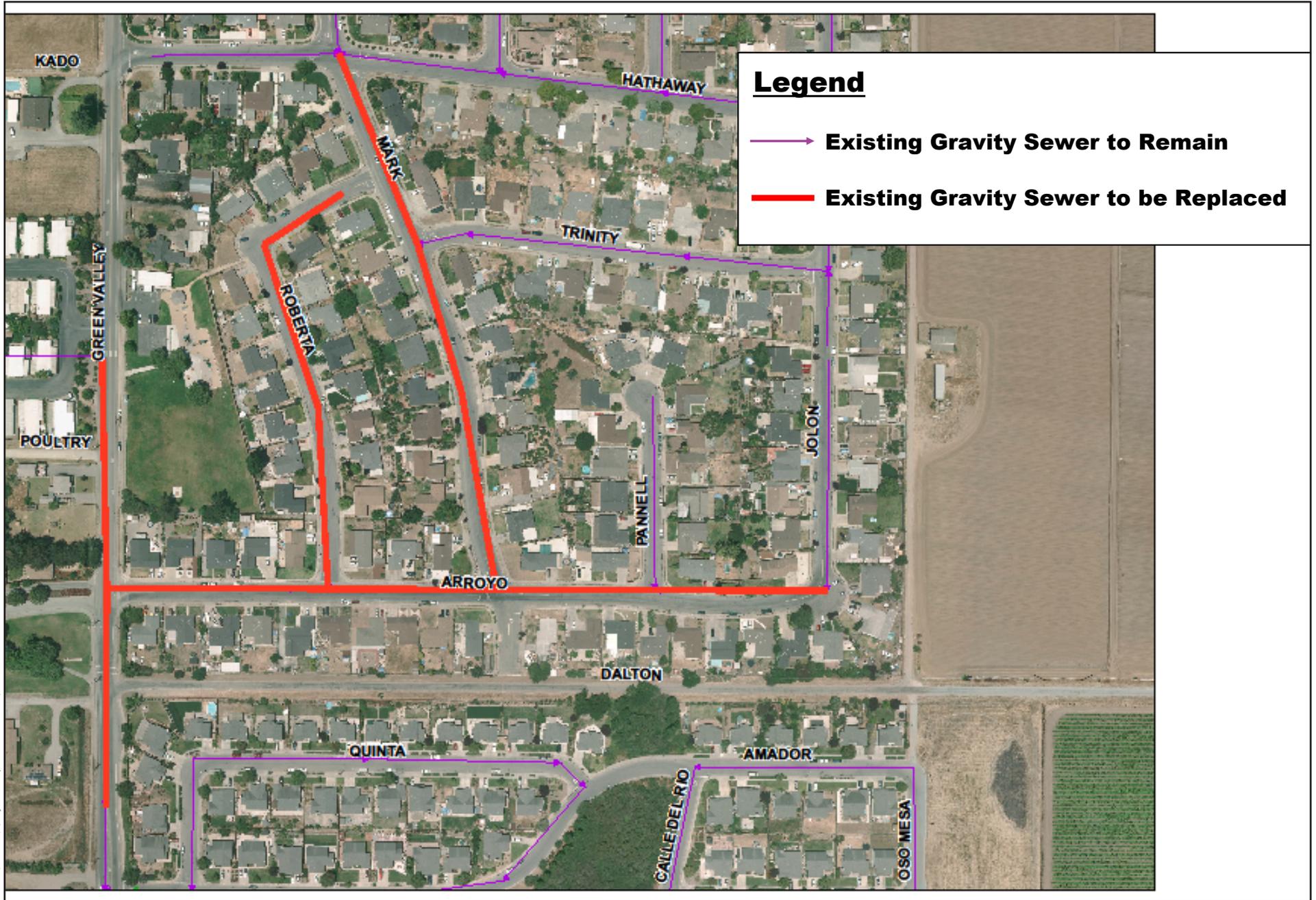
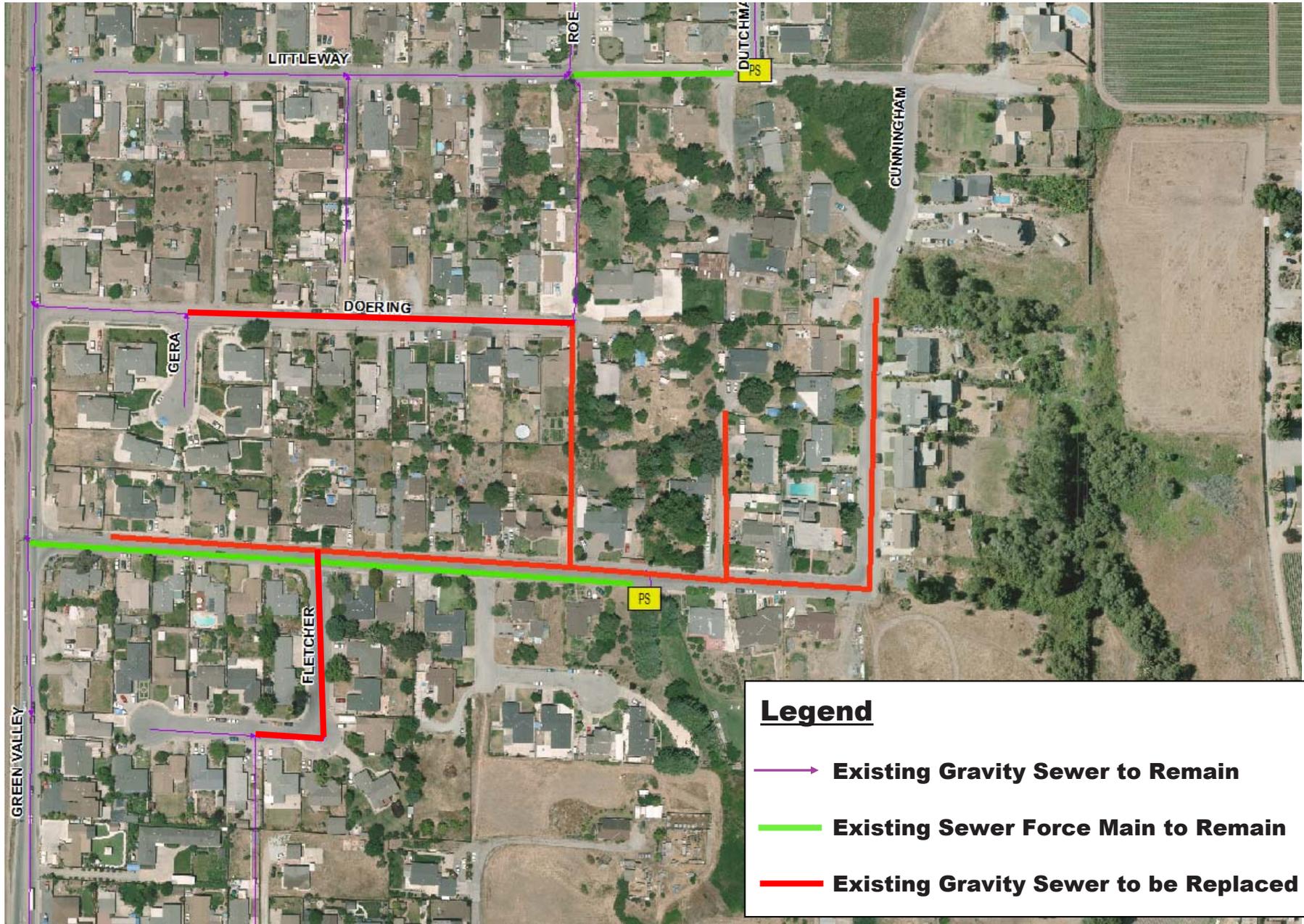


Figure 6
Arroyo/Roberta/Mark Sewer Rehabilitation – Location 2
Freedom Sewer Rehabilitation Project



Legend

- Existing Gravity Sewer to Remain
- Existing Sewer Force Main to Remain
- Existing Gravity Sewer to be Replaced

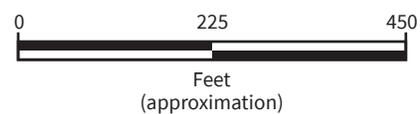


Figure 7
Trembley Sewer Rehabilitation – Location 3
Freedom Sewer Rehabilitation Project



Figure 8
Green Valley Sewer Rehabilitation – Location 4
Freedom Sewer Rehabilitation Project



Figure 9
Airport Sewer Rehabilitation – Location 5
Freedom Sewer Rehabilitation Project

Attachment B. Conservation status, habitat requirements, and potential to occur for sensitive resources in the vicinity of the proposed Freedom County Sanitation District (FCSD) Sewage Rehabilitation Project, Freedom, Santa Cruz County, California.

Common Name <i>Scientific Name</i>	Status			Habitat Requirements	Potential Occurrence
	Federal	State	Other		
BOTANY					
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT	SE	CNPS 1B.1	Coastal prairie, valley and foothill grassland, coastal scrub; often in clay or sandy soils.	Present Known to occur and observed during surveys on Watsonville Airport prairie habitat adjacent to the project area.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcorn flower			CNPS 1B.2	Chaparral, coastal scrub, coastal prairie.	Present Known to occur on Watsonville Airport prairie habitat adjacent to the project area.
<i>Plagiobothrys diffusus</i> San Francisco popcorn flower		SE	CNPS 1B.1	Valley and foothill grassland, coastal prairie.	Present Known to occur on Watsonville Airport prairie habitat adjacent to the project area.
WILDLIFE					
Santa Cruz long-toed salamander <i>Ambystoma macrodactylum croceum</i>	FE	SE/FP		Shallow ponds with emergent and submerged vegetation for cover during the aquatic phase of their life. In terrestrial phase, require woodlands with a dense understory and abundant burrows.	Not Expected No potential habitat is located in or near the project area. Nearest records are from Merk Road (≈3.0 miles), Larkin Valley (≈1.0 miles), and Ellicott Pond (≈2.0 miles).
California tiger salamander <i>Ambystoma californiense</i>	FT	SE		Seasonal pools, stock ponds and detention basins, and ditches with nearby upland grasslands and/or open woodlands within Central California. May migrate over 1 mile to reach breeding ponds.	Not Expected No potential habitat is located in or near the project area. Nearest records are from Buena Vista and Ellicott Ponds (≈2.0 miles).
California red-legged frog <i>Rana draytonii</i>	FT	SC		Requires surface water until mid to late summer for reproduction; ephemeral and/or perennial systems with standing or slow moving flows; upland habitat includes leaf litter, burrows and crevices; adults may travel up to 2 miles overland between aquatic sites.	Not Expected Pinto Lake provides degraded potential aquatic habitat. The presence of predators, distance (≈2.5 miles), and significant urban barriers between known occurrence locations and Pinto Lake likely preclude CRLF from occurring in Pinto Lake. Nearest occurrences are from Watsonville Slough and Struve Slough.
Western pond turtle <i>Actinemys = Emys marmorata pallida</i>		SC		Ponds, marshes, rivers, streams, and ditches containing aquatic vegetation. Basks on logs, debris, banks and/or rocks. Moves up to 4 miles within a creek/drainage system. Nests in upland areas adjacent to aquatic habitat.	Present The WPT is known to occur in Pinto Lake, adjacent to the project's proposed staging area on the Pinto Lake Park northern access road (Rancho Todos Santos Road).
Nesting Birds	MBTA			Variety of woodland, riparian, and savanna habitats.	Possible Tree stands in the Watsonville Airport and Pinto Lake Park provide potential nesting habitat for birds, including raptors and owls.

Table Notes:

MBTA = The Migratory Bird Treaty Act of 1918 (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13) and CDFW codes that support the act protect all nesting raptors (i.e., hawks and owls), native birds, and their occupied nests.

FE = Federally Endangered: Any species, which is in danger of extinction throughout all, or a significant portion of its range.

FT = Federally Threatened: Any species, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range.

SE = State Endangered: A native species or subspecies of animal which is in serious danger of becoming extinct throughout all, or a significant portion of its range, due to loss of habitat, change in habitat, over exploitation, predation, competition and/or disease.

SC = California Department of Fish and Wildlife 'Species of Special Concern': Taxa given special consideration because they are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California or taxa that are closely associated with a habitat that is declining in California (e.g., wetlands).

FP = Fully Protected: State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

CNPS = California Native Plant Society *Inventory*: Plants Rare, Threatened, or Endangered in California and Elsewhere; 1B.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); and 1B.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Watsonville East (3612186) OR Watsonville West (3612187))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01082	<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	Endangered	Endangered	G5T1T2	S1S2	FP
AAAAA01180	<i>Ambystoma californiense</i> California tiger salamander	Threatened	Threatened	G2G3	S2S3	WL
AAAAD01070	<i>Aneides niger</i> Santa Cruz black salamander	None	None	G3	S3	SSC
AAAAH01020	<i>Dicamptodon ensatus</i> California giant salamander	None	None	G3	S2S3	SSC
AAABH01022	<i>Rana draytonii</i> California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01050	<i>Rana boylei</i> foothill yellow-legged frog	None	Candidate Threatened	G3	S3	SSC
ABNKC12040	<i>Accipiter cooperii</i> Cooper's hawk	None	None	G5	S4	WL
ABNNB03031	<i>Charadrius alexandrinus nivosus</i> western snowy plover	Threatened	None	G3T3	S2S3	SSC
ABPAU08010	<i>Riparia riparia</i> bank swallow	None	Threatened	G5	S2	
ABPBXB0020	<i>Agelaius tricolor</i> tricolored blackbird	None	Candidate Endangered	G2G3	S1S2	SSC
AFCHA0209G	<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	Threatened	None	G5T2T3Q	S2S3	
AFCHA0209H	<i>Oncorhynchus mykiss irideus pop. 9</i> steelhead - south-central California coast DPS	Threatened	None	G5T2Q	S2	
AFCQN04010	<i>Eucyclogobius newberryi</i> tidewater goby	Endangered	None	G3	S3	SSC
AMAFD03042	<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	None	None	G4T1	S1	
AMAJF04010	<i>Taxidea taxus</i> American badger	None	None	G5	S3	SSC
ARAAD02030	<i>Emys marmorata</i> western pond turtle	None	None	G3G4	S3	SSC
ARACC01020	<i>Anniella pulchra</i> northern California legless lizard	None	None	G3	S3	SSC
CTT21320CA	<i>Central Dune Scrub</i> Central Dune Scrub	None	None	G2	S2.2	
CTT52410CA	<i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh	None	None	G3	S2.1	
IIHYM24250	<i>Bombus occidentalis</i> western bumble bee	None	None	G2G3	S1	



Selected Elements by Element Code
California Department of Fish and Wildlife
California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IIHYM24380	<i>Bombus caliginosus</i> obscure bumble bee	None	None	G4?	S1S2	
IILEPP2012	<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	None	None	G4T2T3	S2S3	
PDAST4R0P1	<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	None	None	G3T2	S2	1B.1
PDAST4X020	<i>Holocarpha macradenia</i> Santa Cruz tarplant	Threatened	Endangered	G1	S1	1B.1
PDAST6G010	<i>Monolopia gracilens</i> woodland woollythreads	None	None	G3	S3	1B.2
PDBOR0V061	<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	None	None	G3T2Q	S2	1B.2
PDBOR0V080	<i>Plagiobothrys diffusus</i> San Francisco popcornflower	None	Endangered	G1Q	S1	1B.1
PDBRA16010	<i>Erysimum ammophilum</i> sand-loving wallflower	None	None	G2	S2	1B.2
PDERI04030	<i>Arctostaphylos andersonii</i> Anderson's manzanita	None	None	G2	S2	1B.2
PDERI040J1	<i>Arctostaphylos hookeri ssp. hookeri</i> Hooker's manzanita	None	None	G3T2	S2	1B.2
PDERI04100	<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	None	None	G1	S1	1B.1
PDPGN040M2	<i>Chorizanthe pungens var. pungens</i> Monterey spineflower	Threatened	None	G2T2	S2	1B.2
PDPGN040Q2	<i>Chorizanthe robusta var. robusta</i> robust spineflower	Endangered	None	G2T1	S1	1B.1
PDPLM041P2	<i>Gilia tenuiflora ssp. arenaria</i> Monterey gilia	Endangered	Threatened	G3G4T2	S2	1B.2
PDROS0W043	<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	None	None	G4T1?	S1?	1B.1
PDSCR1K0D0	<i>Pedicularis dudleyi</i> Dudley's lousewort	None	Rare	G2	S2	1B.2
PDSCR1L5B1	<i>Penstemon rattanii var. kleei</i> Santa Cruz Mountains beardtongue	None	None	G4T2	S2	1B.2
PMLILOV0C0	<i>Fritillaria liliacea</i> fragrant fritillary	None	None	G2	S2	1B.2

Record Count: 38

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Santa Cruz County, California



Local office

Ventura Fish And Wildlife Office

☎ (805) 644-1766

📅 (805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Southern Sea Otter *Enhydra lutris nereis*
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/8560>

Threatened
Marine mammal

Birds

NAME

STATUS

California Least Tern *Sterna antillarum browni*
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/8104>

Endangered

Least Bell's Vireo *Vireo bellii pusillus*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/5945>

Endangered

Marbled Murrelet *Brachyramphus marmoratus*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/4467>

Threatened

Southwestern Willow Flycatcher *Empidonax traillii extimus*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/6749>

Endangered

Western Snowy Plover *Charadrius alexandrinus nivosus*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/8035>

Threatened

Reptiles

NAME

STATUS

San Francisco Garter Snake *Thamnophis sirtalis tetrataenia*
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/5956>

Endangered

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2891>

Threatened

California Tiger Salamander *Ambystoma californiense* Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2076>

Santa Cruz Long-toed Salamander *Ambystoma macrodactylum croceum* Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/7405>

Fishes

NAME	STATUS
Tidewater Goby <i>Eucyclogobius newberryi</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Flowering Plants

NAME	STATUS
Marsh Sandwort <i>Arenaria paludicola</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant <i>Holocarpha macradenia</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Santa Cruz Tarplant <i>Holocarpha macradenia</i> https://ecos.fws.gov/ecp/species/6832#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the [E-bird data mapping tool](#) (search for the name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain timeframe) and the [E-bird Explore Data Tool](#) (perform a query to see a list of all birds sighted in your county or region and within a certain timeframe). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS INDICATED)

FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird *Selasphorus sasin*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

Ashy Storm-petrel *Oceanodroma homochroa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/7237>

Breeds May 1 to Jan 15

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Black Oystercatcher *Haematopus bachmani*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9591>

Breeds Apr 15 to Oct 31

Black Skimmer *Rynchops niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5234>

Breeds May 20 to Sep 15

Black Swift *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

Black Turnstone *Arenaria melanocephala*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

<p>Black-chinned Sparrow <i>Spizella atrogularis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447</p>	Breeds Apr 15 to Jul 31
<p>Burrowing Owl <i>Athene cunicularia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737</p>	Breeds Mar 15 to Aug 31
<p>California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Jul 31
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Dec 31
<p>Costa's Hummingbird <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470</p>	Breeds Jan 15 to Jun 10
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Gull-billed Tern <i>Gelochelidon nilotica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501</p>	Breeds May 1 to Jul 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408</p>	Breeds Apr 20 to Sep 30

<p>Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511</p>	Breeds elsewhere
<p>Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481</p>	Breeds elsewhere
<p>Mountain Plover <i>Charadrius montanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3638</p>	Breeds elsewhere
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20
<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002</p>	Breeds elsewhere
<p>Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480</p>	Breeds elsewhere
<p>Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910</p>	Breeds Mar 15 to Aug 10
<p>Whimbrel <i>Numenius phaeopus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483</p>	Breeds elsewhere

Willet *Tringa semipalmata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Yellow-billed Magpie *Pica nuttalli*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in your project's counties during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (l)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

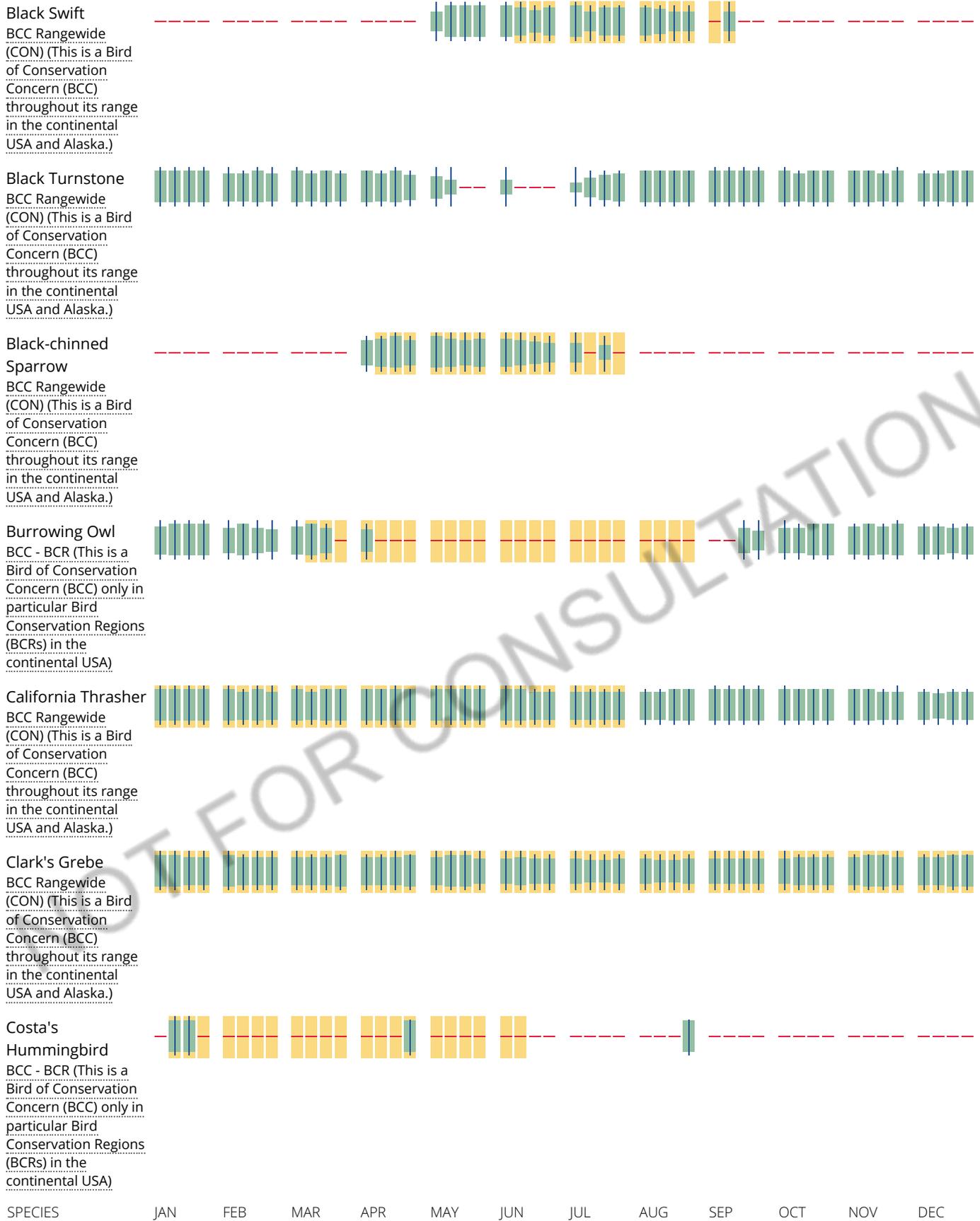
No Data (-)

A week is marked as having no data if there were no survey events for that week.

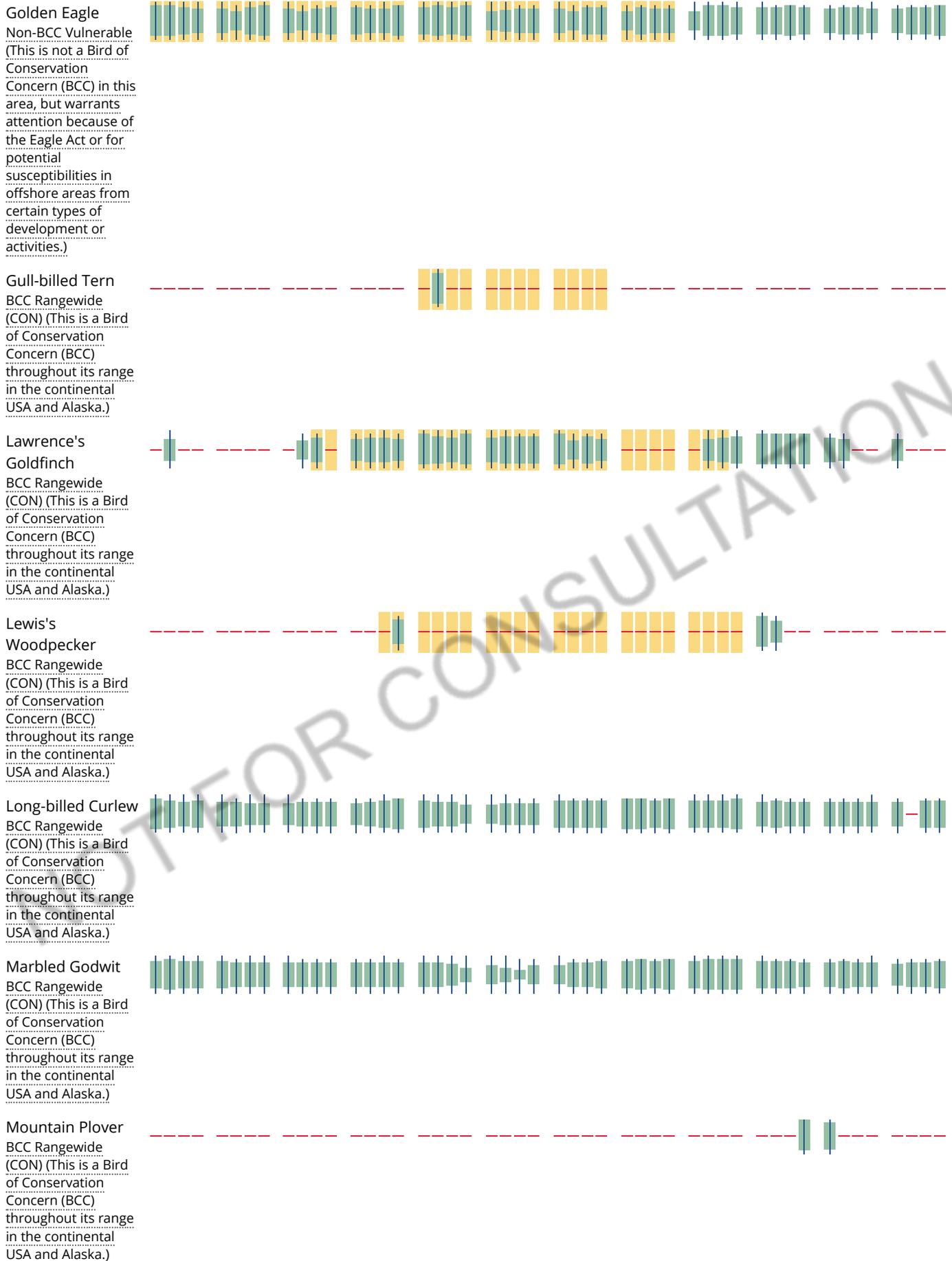
Survey Timeframe

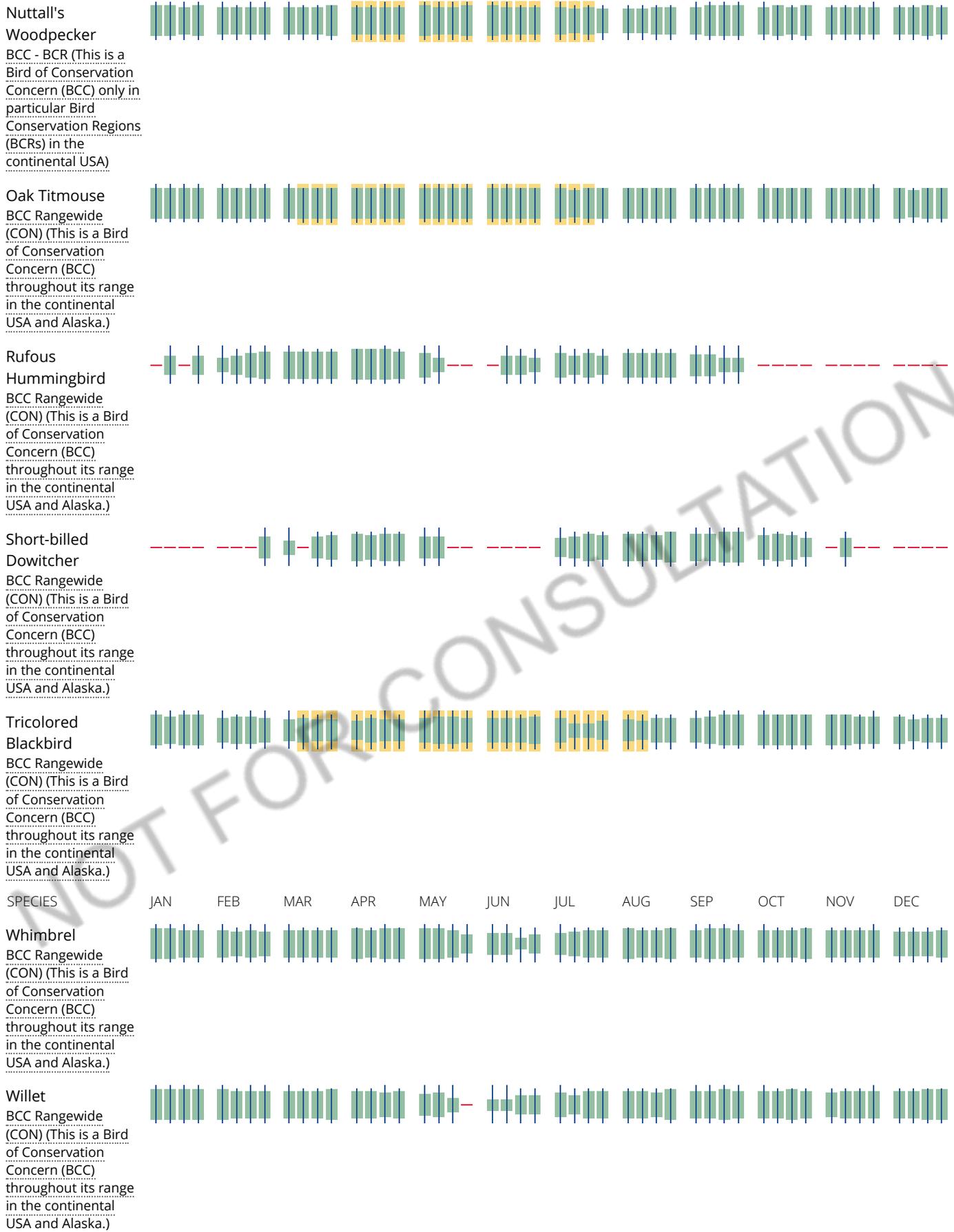
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information.

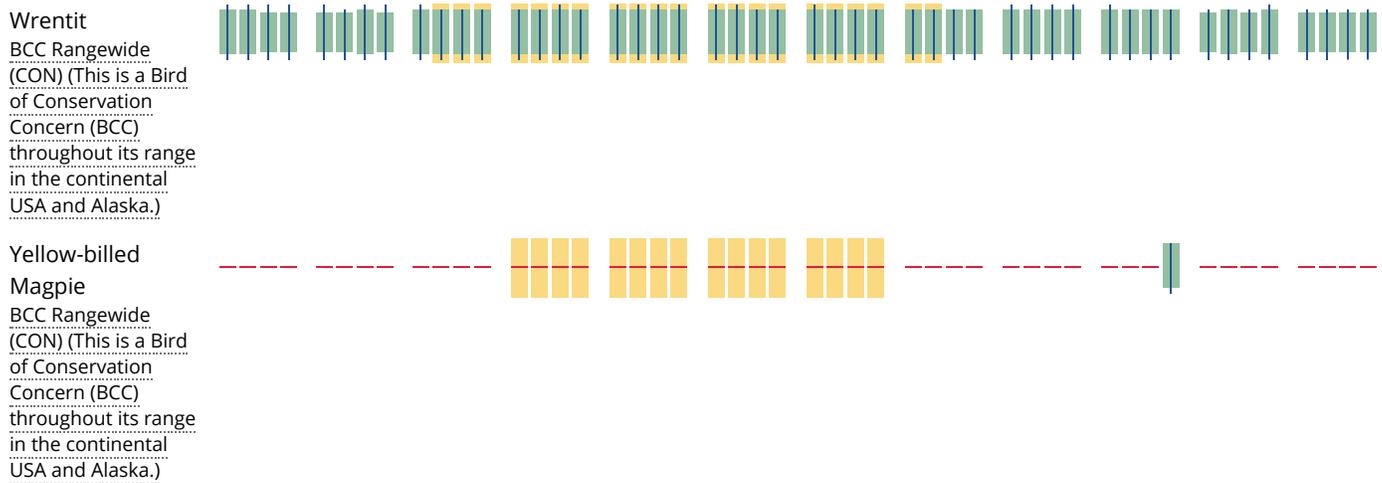




NOT FOR CONSULTATION







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the counties which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird entry on your migratory bird species list indicates a breeding season, it is probable that the bird breeds in your project's counties at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the BGEPA should such impacts occur.

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and the National Marine Fisheries Service (NMFS) [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NMFS are **not** shown on this list; for additional information on those species please visit the [NMFS marine mammal website](#).

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter *Enhydra lutris nereis*
<https://ecos.fws.gov/ecp/species/8560>

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment C-3. Rare and Endangered Plants from California Native Plant Society (CNPS) Inventory, Santa Cruz County, California.

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<u>Agrostis blasdalei</u>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	1B.2	S2	G2
<u>Amsinckia lunaris</u>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S2S3	G2G3
<u>Anomobryum julaceum</u>	slender silver moss	Bryaceae	moss		4.2	S2	G5?
<u>Arabis blepharophylla</u>	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
<u>Arctostaphylos andersonii</u>	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	1B.2	S2	G2
<u>Arctostaphylos glutinosa</u>	Schreiber's manzanita	Ericaceae	perennial evergreen shrub	(Nov)Mar-Apr	1B.2	S1	G1
<u>Arctostaphylos hookeri ssp. hookeri</u>	Hooker's manzanita	Ericaceae	perennial evergreen shrub	Jan-Jun	1B.2	S2	G3T2
<u>Arctostaphylos ohloneana</u>	Ohlone manzanita	Ericaceae	evergreen shrub	Feb-Mar	1B.1	S1	G1
<u>Arctostaphylos pajaroensis</u>	Pajaro manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	1B.1	S1	G1
<u>Arctostaphylos regismontana</u>	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	1B.2	S2	G2
<u>Arctostaphylos silvicola</u>	Bonny Doon manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.2	S1	G1
<u>Arenaria paludicola</u>	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	1B.1	S1	G1
<u>Calandrinia breweri</u>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
<u>Calochortus</u>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	4.2	S3?	G3?

<u>umbellatus</u>							
<u>Calochortus uniflorus</u>	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	4.2	S4	G4
<u>Calyptridium parryi var. hesseae</u>	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	1B.1	S2	G3G4T2
<u>Campanula californica</u>	swamp harebell	Campanulaceae	perennial rhizomatous herb	Jun-Oct	1B.2	S3	G3
<u>Carex comosa</u>	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
<u>Carex saliniformis</u>	deceiving sedge	Cyperaceae	perennial rhizomatous herb	Jun(Jul)	1B.2	S2	G2
<u>Castilleja ambigua var. ambigua</u>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S4	G4T5
<u>Castilleja latifolia</u>	Monterey Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Feb-Sep	4.3	S4	G4
<u>Ceanothus rigidus</u>	Monterey ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr(Jun)	4.2	S4	G4
<u>Centromadia parryi ssp. congdonii</u>	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	1B.1	S2	G3T2
<u>Chorizanthe pungens var. hartwegiana</u>	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
<u>Chorizanthe pungens var. pungens</u>	Monterey spineflower	Polygonaceae	annual herb	Apr-Jun(Jul-Aug)	1B.2	S2	G2T2
<u>Chorizanthe robusta var. hartwegii</u>	Scotts Valley spineflower	Polygonaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
<u>Chorizanthe robusta var. robusta</u>	robust spineflower	Polygonaceae	annual herb	Apr-Sep	1B.1	S1	G2T1

<u>Clarkia concinna</u> <u>ssp. automixa</u>	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	4.3	S3	G5?T3
<u>Collinsia multicolor</u>	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	1B.2	S2	G2
<u>Corethrogyne leucophylla</u>	branching beach aster	Asteraceae	perennial herb	May,Jul,Aug,Sep,Oct,Dec	3.2	S3	G3Q
<u>Cypripedium fasciculatum</u>	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
<u>Cypripedium montanum</u>	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
<u>Dacryophyllum falcifolium</u>	tear drop moss	Hypnaceae	moss		1B.3	S2	G2
<u>Elymus californicus</u>	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	4.3	S4	G4
<u>Eriogonum nudum var. decurrens</u>	Ben Lomond buckwheat	Polygonaceae	perennial herb	Jun-Oct	1B.1	S1	G5T1
<u>Erysimum ammophilum</u>	sand-loving wallflower	Brassicaceae	perennial herb	Feb-Jun	1B.2	S2	G2
<u>Erysimum franciscanum</u>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	4.2	S3	G3
<u>Erysimum teretifolium</u>	Santa Cruz wallflower	Brassicaceae	perennial herb	Mar-Jul	1B.1	S1	G1
<u>Fissidens pauperculus</u>	minute pocket moss	Fissidentaceae	moss		1B.2	S2	G3?
<u>Fritillaria agrestis</u>	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.2	S3	G3
<u>Gilia tenuiflora</u> <u>ssp. arenaria</u>	Monterey gilia	Polemoniaceae	annual herb	Apr-Jun	1B.2	S2	G3G4T2
<u>Grimmia torenii</u>	Toren's grimmia	Grimmiaceae	moss		1B.3	S2	G2
	vaginulate	Grimmiaceae	moss		1B.1	S1	G2G3

Grimmia vaginulata	grimmia						
Grindelia hirsutula var. maritima	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	3.2	S1	G5T1Q
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3
Hesperocyparis abramsiana var. abramsiana	Santa Cruz cypress	Cupressaceae	perennial evergreen tree		1B.2	S1	G1T1
Hoita strobilina	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	1B.1	S2	G2
Holocarpha macradenia	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1
Horkelia cuneata var. sericea	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.1	S1?	G4T1?
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	1B.2	S2	G2
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	4.2	S3	G3G4
Lasthenia californica ssp. macrantha	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	4.2	S4	G4
Leptosiphon grandiflorus	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	4.2	S3	G3
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	4.2	S3	G3
Lomatium parvifolium	small-leaved lomatium	Apiaceae	perennial herb	Jan-Jun	4.2	S4	G4
Malacothamnus arcuatus	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q

<u>Micropus amphibolus</u>	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	1B.2	S2	G2
<u>Mielichhoferia elongata</u>	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
<u>Mimulus rattanii ssp. decurtatus</u>	Santa Cruz County monkeyflower	Phrymaceae	annual herb	May-Jul	4.2	S1S3	G4T1T3Q
<u>Monardella sinuata ssp. nigrescens</u>	northern curly-leaved monardella	Lamiaceae	annual herb	(Apr)May-Jul(Aug-Sep)	1B.2	S2	G3T2
<u>Monolopia gracilens</u>	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
<u>Orthotrichum kellmanii</u>	Kellman's bristle moss	Orthotrichaceae	moss	Jan-Feb	1B.2	S2	G2
<u>Pedicularis dudleyi</u>	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	1B.2	S2	G2
<u>Penstemon rattanii var. kleei</u>	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	May-Jun	1B.2	S2	G4T2
<u>Pentachaeta bellidiflora</u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
<u>Perideridia gairdneri ssp. gairdneri</u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	4.2	S4	G5T4
<u>Pinus radiata</u>	Monterey pine	Pinaceae	perennial evergreen tree		1B.1	S1	G1
<u>Piperia candida</u>	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	1B.2	S3	G3
<u>Piperia michaelii</u>	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	4.2	S3	G3
<u>Plagiobothrys chorisianus var. chorisianus</u>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.2	S2	G3T2Q

<u>Plagiobothrys chorisianus var. hickmanii</u>	Hickman's popcornflower	Boraginaceae	annual herb	Apr-Jun	4.2	S3	G3T3Q
<u>Plagiobothrys diffusus</u>	San Francisco popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.1	S1	G1Q
<u>Polygonum hickmanii</u>	Scotts Valley polygonum	Polygonaceae	annual herb	May-Aug	1B.1	S1	G1
<u>Puccinellia simplex</u>	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
<u>Ranunculus lobbii</u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	4.2	S3	G4
<u>Rosa pinetorum</u>	pine rose	Rosaceae	perennial shrub	May,Jul	1B.2	S2	G2
<u>Sanicula hoffmannii</u>	Hoffmann's sanicle	Apiaceae	perennial herb	Mar-May	4.3	S3	G3
<u>Senecio aphanactis</u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
<u>Sidalcea malachroides</u>	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	4.2	S3	G3
<u>Silene verecunda ssp. verecunda</u>	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jun(Aug)	1B.2	S1	G5T1
<u>Stebbinsoseris decipiens</u>	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
<u>Toxicoscordion fontanum</u>	marsh zigadenus	Melanthiaceae	perennial bulbiferous herb	Apr-Jul	4.2	S3	G3
<u>Trifolium buckwestiorum</u>	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	1B.1	S2	G2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
<u>Usnea longissima</u>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		4.2	S4	G4

Attachment D. List of vascular plant species sorted by family observed during the Airport property site visits for the Freedom County Sanitation District Sewage Rehabilitation Project, Freedom, Santa Cruz County, California.

<u>SPECIES NAME</u>	<u>COMMON NAME</u>
ANACARDIACEAE	
<i>Toxicodendron diversilobum</i>	poison oak
ASTERACEAE	
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Cirsium vulgare</i>	bull thistle
<i>Hypochaeris radicata</i>	rough cat's ear
<i>Lactuca serriola</i>	prickly wild lettuce
BETULACEAE	
<i>Alnus rhombifolia</i>	white alder
BRASSICACEAE	
<i>Raphanus sativus</i>	wild radish
<i>Nasturtium officinale</i>	watercress
CONVOLVULACEAE	
<i>Convolvulus arvensis</i>	bindweed
CYPERACEAE	
<i>Cyperus eragrostis</i>	tall flatsedge
FABACEAE	
<i>Trifolium hirtum</i>	rose clover
<i>Vicia villosa</i> ssp. <i>varia</i>	smooth vetch
FAGACEAE	
<i>Quercus agrifolia</i>	coast live oak
GENTIANACEAE	
<i>Zeltnera muehlenbergii</i>	Muehlenberg's centaury
GERINACEAE	
<i>Erodium botrys</i>	broad leaf filaree
<i>Geranium dissectum</i>	cutleaf geranium
LAMIACEAE	
<i>Mentha pulegium</i>	pennyroyal
PLANTAGINACEAE	
<i>Plantago lanceolata</i>	English plantain
POACEAE	

<u>SPECIES NAME</u>	<u>COMMON NAME</u>
<i>Avena barbata</i>	slender wild oat
<i>Bromus hordeaceus</i>	soft chess
<i>Danthonia californica</i>	California oat grass
<i>Festuca myuros</i>	Rattail sixweeks grass
<i>Festuca perennis</i>	Italian ryegrass
<i>Holcus lanatus</i>	velvet grass
<i>Phalaris aquatica</i>	Harding grass
POLYGONACEAE	
<i>Rumex acetosella</i>	sheep sorrel
<i>Rumex pulcher</i>	fiddle dock
<i>Rumex crispus</i>	curly dock
ROSACEAE	
<i>Cotoneaster sp.</i>	cotoneaster
<i>Rosa californica</i>	wild rose
<i>Rubus ursinus</i>	California blackberry
<i>Rubus armeniacus</i>	Himalayan blackberry
SALICACEAE	
<i>Salix lasiandra ssp. lasiandra</i>	Pacific willow

Species native to California and the Santa Cruz Area in bold

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