Appendix A

Regional and Local Laws, Regulations, and Policies

Appendix A
Regional and Local Laws, Regulations, and Policies

This appendix includes policies from general plan policies related to Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs, and incorporated jurisdictions in the project area.

General Plans are long-range comprehensive plans developed for cities and counties that govern growth and development. The project area is located in San Mateo County. Although San Mateo County includes many cities and towns, this analysis focuses on those municipalities directly affected by proposed project activities. The following section reviews key policies in the General Plans of San Mateo County (2013).

San Mateo County

The following policies contained in the San Mateo County General Plan are applicable to the Proposed Project.

Chapter 1 Vegetative, Water, Fish and Wildlife Resources Policies

1.1 Conserve, Enhance, Protect, Maintain and Manage Vegetative, Water, Fish, and Wildlife Resources

Promote the conservation, enhancement, protection, maintenance, and managed use of the County's Vegetative, Water, Fish, and Wildlife Resources.

1.2 Protect Sensitive Habitats

Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.

1.21 Importance of Sensitive Habitats

Consider areas designated as sensitive habitats as a priority resource requiring protection.

1.39 Control Incompatible Vegetation, Fish and Wildlife

Encourage and support the control of vegetation, fish and wildlife resources which are harmful to the surrounding environment or pose a threat to public health, safety and welfare.

Chapter 2 Soil Resources Policies

2.2 Minimize Soil Erosion

Minimize soil erosion through application of appropriate conservation practices.

2.3 Prevention of Soil Contamination

Prevent soil contamination through the appropriate use, storage, and disposal of toxic substances.

2.23 Regulate Excavation, Grading, Filling, and Land Clearing Activities Against Accelerated Soil Erosion

Regulate excavation, grading, filling, and land clearing activities to protect against accelerated soil erosion and sedimentation.

2.29 Promote and Support Soil Erosion Stabilization and Repair Efforts

Promote and support efforts aimed at stabilization of ongoing soil erosion and repair of erosion caused land scars.

2.30 Emergency Creekside Erosion Control

Assure timely implementation of emergency creekside erosion control activities.

Chapter 4 Visual Quality

4.29 Trees and Vegetation

a. Preserve trees and natural vegetation except where removal is required for approved development or safety.

b. Replace vegetation and trees removed during construction wherever possible. Use native plant materials or vegetation compatible with the surrounding vegetation, climate, soil, ecological characteristics of the region and acceptable to the California Department of Forestry.

c. Provide special protection to large and native trees.

4.58 Tree and Vegetation Removal

Prohibit the removal of more than 50% of the tree coverage except as allowed by permit.

Chapter 5 Historic and Archeological Resources

5.1 Historic Resource Protection

Protect historic resources for their historic, cultural, social and educational values and the enjoyment of future generations.

5.3 Protection of Archaeological/Paleontological Sites

Protect archaeological/paleontological sites from destruction in order to preserve and interpret them for future scientific research, and public educational programs.

Chapter 15 Natural Hazards Policies

15.45 Abatement of Flooding Hazards

Support measures for the abatement of flooding hazards, including but not limited to: (1) removal or relocation of development from flood hazard areas; (2) construction of impoundments or channel diversions provided that adequate mitigation of environmental impacts can be demonstrated; and (3) debris clearance and silt removal programs conducted in a manner so as not to disrupt existing riparian communities.

15.38 Encourage Coordination Between the County and Fire Protection Agencies

Encourage coordination and cooperation between the County, volunteer fire departments, fire protection districts, State and city fire departments in order to facilitate the most efficient delivery of fire protection services, reduce response times and assure a uniform data base and communication system.

Other Local Policies

San Mateo County Community Climate Action Plan

Through the San Mateo County Community Climate Action Plan, the unincorporated area of San Mateo County set a GHG emissions reduction target of 45 percent below 1990 levels by 2030 and demonstrate carbon neutrality within unincorporated San Mateo County by 2040.

The Community Climate Action Plan (CCAP) outlines priority actions to achieve a 45% reduction of greenhouse gas emissions over 1990 levels by 2030 and carbon neutrality by 2040.

The City of San Mateo 2020 Climate Action Plan established per capita GHG emission targets of 4.3 metric tonnes carbon dioxide equivalents in 2030 and 1.2 metric tonnes carbon dioxide equivalents in 2050.

San Mateo-Santa Cruz County Community Wildfire Protection Plan (CWPP)

The San Mateo-Santa Cruz County Community Wildfire Protection Plan (CWPP), updated in 2018, identifies the hazards and risks associated with wildfires in both San Mateo and Santa Cruz Counties and proposes strategies to mitigate those risks. Developed by CAL FIRE and the Resource Conservation District for San Mateo County and Santa Cruz County, the CWPP reflects community and agency stakeholder input from the two counties following the Summit Fire in 2008, and recommends projects to reduce the potential for catastrophic wildfire. The CWPP also serves as a mechanism to obtain state grant funding to implement those projects.

San Mateo-Santa Cruz Unit 2023 Strategic Fire Plan

The San Mateo-Santa Cruz Unit 2023 Strategic Fire Plan, developed by CAL FIRE San Mateo-Santa Cruz Unit, identifies fire management strategies and tactics intended to reduce the hazards associated with wildfires and recommends preventative measures to make homes, neighborhoods, and communities within the Unit area's approximate 894 square miles more defensible from wildfire.

2021 Multijurisdictional Local Hazard Mitigation Plan

The 2021 Multijurisdictional Local Hazard Mitigation Plan is developed by San Mateo County in partnership with 35 local governments. The plan aims to identify and reduce risks from natural disasters within the County. It identifies and assesses ten major hazards of concern, including wildfire, flooding, and landslides, and also provides a high-level profile for other potential hazards such as pandemics, aircraft incidents, and cyber threats. Major issues regarding wildfires within the County are identified and include the management of growth in interface areas, that there are CAL FIRE hazard mapping gaps for the cities of Millbrae, Pacifica and San Bruno, and a need for regional consistency with regard to elements such as sprinklers and combustible roof standards.

San Mateo's Significant Tree Ordinance

The San Mateo County's Significant Tree Ordinance protects the county's trees, which are considered a valuable natural resource. The ordinance requires a permit to remove or trim any tree that meets the following criteria:

- **Significant Tree**

  A tree with a trunk circumference of at least 38 inches, measured 4.5 feet above the ground. In the Emerald Lake Hills Design Review district, the trunk circumference must be at least 19 inches.

- **Heritage Tree Ordinance**

  A tree that meets certain size and location requirements, such as Santa Cruz Cypress and Oregon White Oak. A detailed list of heritage trees is available at the Planning counter.

Appendix B

Air Quality, Energy, and GHG Emissions Calculations

23.039 SM Culverts Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23.039 SM Culverts
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	Statewide
Windspeed (m/s)	2.70
Precipitation (days)	41.8
Location	37.273682038172026, -122.2986926893033
County	San Mateo
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1283
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.93	2.46	17.1	16.4	0.05	0.85	0.35	1.17	0.79	0.09	0.86	—	5,408	5,408	0.22	0.12	2.04	5,448
Mit.	2.93	2.46	17.1	16.4	0.05	0.85	0.35	1.17	0.79	0.09	0.86	—	5,408	5,408	0.22	0.12	2.04	5,448
% Reduced	—	—	—	—	—	—	1%	< 0.5%	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.13	2.62	18.3	19.6	0.06	0.81	0.39	1.20	0.75	0.10	0.84	—	6,358	6,358	0.26	0.13	0.06	6,404
Mit.	3.13	2.62	18.3	19.6	0.06	0.81	0.38	1.19	0.75	0.10	0.84	—	6,358	6,358	0.26	0.13	0.06	6,404
% Reduced	—	—	—	—	—	—	1%	< 0.5%	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	0.66	4.54	4.80	0.02	0.18	0.13	0.31	0.16	0.03	0.20	—	1,928	1,928	0.08	0.05	0.34	1,944
Mit.	0.79	0.66	4.54	4.80	0.02	0.18	0.13	0.31	0.16	0.03	0.20	—	1,928	1,928	0.08	0.05	0.34	1,944

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.12	0.83	0.88	< 0.005	0.03	0.02	0.06	0.03	0.01	0.04	—	319	319	0.01	0.01	0.06	322
Mit.	0.14	0.12	0.83	0.88	< 0.005	0.03	0.02	0.06	0.03	0.01	0.04	—	319	319	0.01	0.01	0.06	322
% Reduced	—	—	—	—	—	—	1%	< 0.5%	—	< 0.5%	< 0.5%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.93	2.46	17.1	16.4	0.05	0.85	0.35	1.17	0.79	0.09	0.86	—	5,408	5,408	0.22	0.12	2.04	5,448
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.13	2.62	18.3	19.6	0.06	0.81	0.39	1.20	0.75	0.10	0.84	—	6,358	6,358	0.26	0.13	0.06	6,404
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.79	0.66	4.54	4.80	0.02	0.18	0.13	0.31	0.16	0.03	0.20	—	1,928	1,928	0.08	0.05	0.34	1,944
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.12	0.83	0.88	< 0.005	0.03	0.02	0.06	0.03	0.01	0.04	—	319	319	0.01	0.01	0.06	322

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.93	2.46	17.1	16.4	0.05	0.85	0.35	1.17	0.79	0.09	0.86	—	5,408	5,408	0.22	0.12	2.04	5,448
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.13	2.62	18.3	19.6	0.06	0.81	0.38	1.19	0.75	0.10	0.84	—	6,358	6,358	0.26	0.13	0.06	6,404
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.79	0.66	4.54	4.80	0.02	0.18	0.13	0.31	0.16	0.03	0.20	—	1,928	1,928	0.08	0.05	0.34	1,944
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.14	0.12	0.83	0.88	< 0.005	0.03	0.02	0.06	0.03	0.01	0.04	—	319	319	0.01	0.01	0.06	322

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
94	Grading	1/1/2025	1/1/2025	5.00	1.00	94
102	Grading	1/2/2025	1/13/2025	5.00	8.00	102
119	Grading	1/14/2025	1/17/2025	5.00	4.00	119
128.1	Grading	1/18/2025	1/22/2025	5.00	3.00	128.1
190	Grading	1/23/2025	2/12/2025	5.00	15.0	190
262	Grading	2/13/2025	2/17/2025	5.00	3.00	262
263	Grading	2/18/2025	4/23/2025	5.00	47.0	263
265	Grading	4/24/2025	4/26/2025	5.00	2.00	265
265.1	Grading	4/29/2025	4/29/2025	5.00	1.00	265.1
266	Grading	4/30/2025	5/1/2025	5.00	2.00	266
268	Grading	5/2/2025	7/25/2025	5.00	61.0	268
270	Grading	7/26/2025	7/28/2025	5.00	1.00	270

270.1	Grading	7/29/2025	7/29/2025	5.00	1.00	270.1
Paving	Paving	7/30/2025	8/18/2025	5.00	14.0	paving

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
94	Excavators	Diesel	Average	1.00	8.00	108	0.38
94	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
94	Off-Highway Trucks	Diesel	Average	2.00	4.00	330	0.38
94	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
94	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
102	Excavators	Diesel	Average	1.00	8.00	108	0.38
102	Excavators	Diesel	Average	1.00	2.67	45.0	0.38
102	Tractors/Loaders/Backhoes	Diesel	Average	1.00	5.34	67.1	0.37
102	Rollers	Diesel	Average	1.00	5.34	99.8	0.38
102	Plate Compactors	Diesel	Average	1.00	2.67	8.00	0.43
102	Off-Highway Trucks	Diesel	Average	3.00	5.78	330	0.38
102	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
102	Pumps	Diesel	Average	1.00	8.00	48.2	0.74
102	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
102	Off-Highway Trucks	Diesel	Average	1.00	2.67	430	0.38
119	Excavators	Diesel	Average	1.00	4.00	108	0.38
119	Excavators	Diesel	Average	1.00	1.50	45.0	0.38
119	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
119	Rollers	Diesel	Average	1.00	6.00	99.8	0.38

119	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43
119	Off-Highway Trucks	Diesel	Average	3.00	1.50	330	0.38
119	Off-Highway Trucks	Diesel	Average	1.00	7.50	450	0.38
119	Rollers	Diesel	Average	1.00	1.00	48.2	0.38
119	Off-Highway Trucks	Diesel	Average	1.00	1.00	430	0.38
128.1	Excavators	Diesel	Average	1.00	2.67	108	0.38
128.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
128.1	Rollers	Diesel	Average	1.00	4.67	99.8	0.38
128.1	Plate Compactors	Diesel	Average	1.00	1.33	8.00	0.43
128.1	Off-Highway Trucks	Diesel	Average	3.00	1.78	330	0.38
128.1	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
128.1	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
128.1	Off-Highway Trucks	Diesel	Average	1.00	1.34	430	0.38
190	Excavators	Diesel	Average	1.00	4.00	108	0.38
262	Excavators	Diesel	Average	1.00	2.67	108	0.38
262	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
262	Rollers	Diesel	Average	1.00	4.67	99.8	0.38
262	Plate Compactors	Diesel	Average	1.00	1.34	8.00	0.43
262	Off-Highway Trucks	Diesel	Average	3.00	1.78	330	0.38
262	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
262	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
262	Off-Highway Trucks	Diesel	Average	1.00	1.34	430	0.38
263	Paving Equipment	Diesel	Average	1.00	2.55	159	0.36
263	Rubber Tired Loaders	Diesel	Average	1.00	6.80	249	0.36
263	Excavators	Diesel	Average	1.00	5.53	273	0.38
263	Excavators	Diesel	Average	1.00	1.00	45.0	0.38

263	Tractors/Loaders/Backhoes	Diesel	Average	1.00	1.00	67.1	0.37
263	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43
263	Off-Highway Trucks	Diesel	Average	3.00	3.06	330	0.38
263	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
263	Pumps	Diesel	Average	1.00	6.38	11.0	0.74
265	Excavators	Diesel	Average	1.00	3.00	45.0	0.38
265	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	67.1	0.37
265	Paving Equipment	Diesel	Average	1.00	7.00	99.8	0.36
265	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
265	Off-Highway Trucks	Diesel	Average	3.00	1.56	330	0.38
265	Off-Highway Trucks	Diesel	Average	1.00	7.00	450	0.38
265	Rollers	Diesel	Average	1.00	2.00	48.2	0.38
265	Off-Highway Trucks	Diesel	Average	1.00	2.00	430	0.38
265.1	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
265.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
265.1	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
265.1	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
265.1	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
265.1	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
265.1	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
265.1	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
266	Excavators	Diesel	Average	1.00	3.00	45.0	0.38
266	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	67.1	0.37
266	Paving Equipment	Diesel	Average	1.00	7.00	99.8	0.36
266	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
266	Off-Highway Trucks	Diesel	Average	3.00	2.33	330	0.38

266	Off-Highway Trucks	Diesel	Average	1.00	7.00	450	0.38
266	Rollers	Diesel	Average	1.00	2.00	48.2	0.38
266	Off-Highway Trucks	Diesel	Average	1.00	2.00	430	0.38
268	Paving Equipment	Diesel	Average	1.00	2.56	159	0.36
268	Rubber Tired Loaders	Diesel	Average	1.00	6.80	249	0.36
268	Excavators	Diesel	Average	1.00	5.52	273	0.38
268	Excavators	Diesel	Average	1.00	1.00	45.0	0.38
268	Tractors/Loaders/Backhoes	Diesel	Average	1.00	1.00	67.1	0.37
268	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43
268	Off-Highway Trucks	Diesel	Average	3.00	3.06	330	0.38
268	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
268	Pumps	Diesel	Average	1.00	6.38	11.0	0.74
270	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
270	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
270	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
270	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
270	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
270	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
270	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
270	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
270.1	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
270.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
270.1	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
270.1	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
270.1	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
270.1	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38

270.1	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
270.1	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
94	Excavators	Diesel	Average	1.00	8.00	108	0.38
94	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
94	Off-Highway Trucks	Diesel	Average	2.00	4.00	330	0.38
94	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
94	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
102	Excavators	Diesel	Average	1.00	8.00	108	0.38
102	Excavators	Diesel	Average	1.00	2.67	45.0	0.38
102	Tractors/Loaders/Backhoes	Diesel	Average	1.00	5.34	67.1	0.37
102	Rollers	Diesel	Average	1.00	5.34	99.8	0.38
102	Plate Compactors	Diesel	Average	1.00	2.67	8.00	0.43
102	Off-Highway Trucks	Diesel	Average	3.00	5.78	330	0.38
102	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
102	Pumps	Diesel	Average	1.00	8.00	48.2	0.74
102	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
102	Off-Highway Trucks	Diesel	Average	1.00	2.67	430	0.38
119	Excavators	Diesel	Average	1.00	4.00	108	0.38
119	Excavators	Diesel	Average	1.00	1.50	45.0	0.38
119	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
119	Rollers	Diesel	Average	1.00	6.00	99.8	0.38
119	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43
119	Off-Highway Trucks	Diesel	Average	3.00	1.50	330	0.38

119	Off-Highway Trucks	Diesel	Average	1.00	7.50	450	0.38
119	Rollers	Diesel	Average	1.00	1.00	48.2	0.38
119	Off-Highway Trucks	Diesel	Average	1.00	1.00	430	0.38
128.1	Excavators	Diesel	Average	1.00	2.67	108	0.38
128.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
128.1	Rollers	Diesel	Average	1.00	4.67	99.8	0.38
128.1	Plate Compactors	Diesel	Average	1.00	1.33	8.00	0.43
128.1	Off-Highway Trucks	Diesel	Average	3.00	1.78	330	0.38
128.1	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
128.1	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
128.1	Off-Highway Trucks	Diesel	Average	1.00	1.34	430	0.38
190	Excavators	Diesel	Average	1.00	4.00	108	0.38
262	Excavators	Diesel	Average	1.00	2.67	108	0.38
262	Tractors/Loaders/Backhoes	Diesel	Average	1.00	4.00	67.1	0.37
262	Rollers	Diesel	Average	1.00	4.67	99.8	0.38
262	Plate Compactors	Diesel	Average	1.00	1.34	8.00	0.43
262	Off-Highway Trucks	Diesel	Average	3.00	1.78	330	0.38
262	Off-Highway Trucks	Diesel	Average	1.00	6.67	450	0.38
262	Rollers	Diesel	Average	1.00	1.34	48.2	0.38
262	Off-Highway Trucks	Diesel	Average	1.00	1.34	430	0.38
263	Paving Equipment	Diesel	Average	1.00	2.55	159	0.36
263	Rubber Tired Loaders	Diesel	Average	1.00	6.80	249	0.36
263	Excavators	Diesel	Average	1.00	5.53	273	0.38
263	Excavators	Diesel	Average	1.00	1.00	45.0	0.38
263	Tractors/Loaders/Backhoes	Diesel	Average	1.00	1.00	67.1	0.37
263	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43

263	Off-Highway Trucks	Diesel	Average	3.00	3.06	330	0.38
263	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
263	Pumps	Diesel	Average	1.00	6.38	11.0	0.74
265	Excavators	Diesel	Average	1.00	3.00	45.0	0.38
265	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	67.1	0.37
265	Paving Equipment	Diesel	Average	1.00	7.00	99.8	0.36
265	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
265	Off-Highway Trucks	Diesel	Average	3.00	1.56	330	0.38
265	Off-Highway Trucks	Diesel	Average	1.00	7.00	450	0.38
265	Rollers	Diesel	Average	1.00	2.00	48.2	0.38
265	Off-Highway Trucks	Diesel	Average	1.00	2.00	430	0.38
265.1	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
265.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
265.1	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
265.1	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
265.1	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
265.1	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
265.1	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
265.1	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
266	Excavators	Diesel	Average	1.00	3.00	45.0	0.38
266	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	67.1	0.37
266	Paving Equipment	Diesel	Average	1.00	7.00	99.8	0.36
266	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
266	Off-Highway Trucks	Diesel	Average	3.00	2.33	330	0.38
266	Off-Highway Trucks	Diesel	Average	1.00	7.00	450	0.38
266	Rollers	Diesel	Average	1.00	2.00	48.2	0.38

266	Off-Highway Trucks	Diesel	Average	1.00	2.00	430	0.38
268	Paving Equipment	Diesel	Average	1.00	2.56	159	0.36
268	Rubber Tired Loaders	Diesel	Average	1.00	6.80	249	0.36
268	Excavators	Diesel	Average	1.00	5.52	273	0.38
268	Excavators	Diesel	Average	1.00	1.00	45.0	0.38
268	Tractors/Loaders/Backhoes	Diesel	Average	1.00	1.00	67.1	0.37
268	Plate Compactors	Diesel	Average	1.00	1.00	8.00	0.43
268	Off-Highway Trucks	Diesel	Average	3.00	3.06	330	0.38
268	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
268	Pumps	Diesel	Average	1.00	6.38	11.0	0.74
270	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
270	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
270	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
270	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
270	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
270	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
270	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
270	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38
270.1	Excavators	Diesel	Average	1.00	6.00	45.0	0.38
270.1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	67.1	0.37
270.1	Paving Equipment	Diesel	Average	1.00	8.00	99.8	0.36
270.1	Plate Compactors	Diesel	Average	1.00	2.00	8.00	0.43
270.1	Off-Highway Trucks	Diesel	Average	3.00	3.67	330	0.38
270.1	Off-Highway Trucks	Diesel	Average	1.00	8.00	450	0.38
270.1	Rollers	Diesel	Average	1.00	4.00	48.2	0.38
270.1	Off-Highway Trucks	Diesel	Average	1.00	4.00	430	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
94	—	—	—	—
94	Worker	12.0	11.7	LDA,LDT1,LDT2
94	Vendor	—	8.40	HHDT,MHDT
94	Hauling	2.00	50.0	HHDT
94	Onsite truck	—	—	HHDT
102	—	—	—	—
102	Worker	30.0	11.7	LDA,LDT1,LDT2
102	Vendor	—	8.40	HHDT,MHDT
102	Hauling	7.25	20.0	HHDT
102	Onsite truck	—	—	HHDT
119	—	—	—	—
119	Worker	27.5	11.7	LDA,LDT1,LDT2
119	Vendor	—	8.40	HHDT,MHDT
119	Hauling	4.00	20.0	HHDT
119	Onsite truck	—	—	HHDT
128.1	—	—	—	—
128.1	Worker	25.0	11.7	LDA,LDT1,LDT2
128.1	Vendor	—	8.40	HHDT,MHDT
128.1	Hauling	1.67	20.0	HHDT
128.1	Onsite truck	—	—	HHDT
190	—	—	—	—
190	Worker	2.50	11.7	LDA,LDT1,LDT2
190	Vendor	—	8.40	HHDT,MHDT
190	Hauling	9.60	20.0	HHDT

190	Onsite truck	—	—	HHDT
262	—	—	—	—
262	Worker	25.0	11.7	LDA,LDT1,LDT2
262	Vendor	—	8.40	HHDT,MHDT
262	Hauling	1.67	20.0	HHDT
262	Onsite truck	—	—	HHDT
263	—	—	—	—
263	Worker	27.5	11.7	LDA,LDT1,LDT2
263	Vendor	—	8.40	HHDT,MHDT
263	Hauling	6.57	20.0	HHDT
263	Onsite truck	—	—	HHDT
265	—	—	—	—
265	Worker	25.0	11.7	LDA,LDT1,LDT2
265	Vendor	—	8.40	HHDT,MHDT
265	Hauling	3.50	20.0	HHDT
265	Onsite truck	—	—	HHDT
265.1	—	—	—	—
265.1	Worker	25.0	11.7	LDA,LDT1,LDT2
265.1	Vendor	—	8.40	HHDT,MHDT
265.1	Hauling	4.00	20.0	HHDT
265.1	Onsite truck	—	—	HHDT
266	—	—	—	—
266	Worker	25.0	11.7	LDA,LDT1,LDT2
266	Vendor	—	8.40	HHDT,MHDT
266	Hauling	2.50	20.0	HHDT
266	Onsite truck	—	—	HHDT
268	—	—	—	—
268	Worker	27.5	11.7	LDA,LDT1,LDT2

268	Vendor	—	8.40	HHDT,MHDT
268	Hauling	6.57	20.0	HHDT
268	Onsite truck	—	—	HHDT
270	—	—	—	—
270	Worker	25.0	11.7	LDA,LDT1,LDT2
270	Vendor	—	8.40	HHDT,MHDT
270	Hauling	6.00	20.0	HHDT
270	Onsite truck	—	—	HHDT
270.1	—	—	—	—
270.1	Worker	25.0	11.7	LDA,LDT1,LDT2
270.1	Vendor	—	8.40	HHDT,MHDT
270.1	Hauling	6.00	20.0	HHDT
270.1	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
94	—	—	—	—
94	Worker	12.0	11.7	LDA,LDT1,LDT2
94	Vendor	—	8.40	HHDT,MHDT
94	Hauling	2.00	50.0	HHDT
94	Onsite truck	—	—	HHDT
102	—	—	—	—
102	Worker	30.0	11.7	LDA,LDT1,LDT2

102	Vendor	—	8.40	HHDT,MHDT
102	Hauling	7.25	20.0	HHDT
102	Onsite truck	—	—	HHDT
119	—	—	—	—
119	Worker	27.5	11.7	LDA,LDT1,LDT2
119	Vendor	—	8.40	HHDT,MHDT
119	Hauling	4.00	20.0	HHDT
119	Onsite truck	—	—	HHDT
128.1	—	—	—	—
128.1	Worker	25.0	11.7	LDA,LDT1,LDT2
128.1	Vendor	—	8.40	HHDT,MHDT
128.1	Hauling	1.67	20.0	HHDT
128.1	Onsite truck	—	—	HHDT
190	—	—	—	—
190	Worker	2.50	11.7	LDA,LDT1,LDT2
190	Vendor	—	8.40	HHDT,MHDT
190	Hauling	9.60	20.0	HHDT
190	Onsite truck	—	—	HHDT
262	—	—	—	—
262	Worker	25.0	11.7	LDA,LDT1,LDT2
262	Vendor	—	8.40	HHDT,MHDT
262	Hauling	1.67	20.0	HHDT
262	Onsite truck	—	—	HHDT
263	—	—	—	—
263	Worker	27.5	11.7	LDA,LDT1,LDT2
263	Vendor	—	8.40	HHDT,MHDT
263	Hauling	6.57	20.0	HHDT
263	Onsite truck	—	—	HHDT

265	—	—	—	—
265	Worker	25.0	11.7	LDA,LDT1,LDT2
265	Vendor	—	8.40	HHDT,MHDT
265	Hauling	3.50	20.0	HHDT
265	Onsite truck	—	—	HHDT
265.1	—	—	—	—
265.1	Worker	25.0	11.7	LDA,LDT1,LDT2
265.1	Vendor	—	8.40	HHDT,MHDT
265.1	Hauling	4.00	20.0	HHDT
265.1	Onsite truck	—	—	HHDT
266	—	—	—	—
266	Worker	25.0	11.7	LDA,LDT1,LDT2
266	Vendor	—	8.40	HHDT,MHDT
266	Hauling	2.50	20.0	HHDT
266	Onsite truck	—	—	HHDT
268	—	—	—	—
268	Worker	27.5	11.7	LDA,LDT1,LDT2
268	Vendor	—	8.40	HHDT,MHDT
268	Hauling	6.57	20.0	HHDT
268	Onsite truck	—	—	HHDT
270	—	—	—	—
270	Worker	25.0	11.7	LDA,LDT1,LDT2
270	Vendor	—	8.40	HHDT,MHDT
270	Hauling	6.00	20.0	HHDT
270	Onsite truck	—	—	HHDT
270.1	—	—	—	—
270.1	Worker	25.0	11.7	LDA,LDT1,LDT2
270.1	Vendor	—	8.40	HHDT,MHDT

270.1	Hauling	6.00	20.0	HHDT
270.1	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
94	15.5	0.00	0.00	0.00	—
102	316	148	0.00	0.00	—
119	90.7	35.3	0.00	0.00	—

128.1	34.7	1.10	0.00	0.00	—
190	347	802	0.00	0.00	—
262	34.7	1.10	0.00	0.00	—
263	1,329	1,137	0.00	0.00	—
265	37.0	16.7	0.00	0.00	—
265.1	19.2	6.70	0.00	0.00	—
266	30.3	6.90	0.00	0.00	—
268	1,627	1,580	0.00	0.00	—
270	25.4	17.4	0.00	0.00	—
270.1	25.5	21.4	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.18

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	0.18	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	changed to rural. Construction start generically set to 1/1/2025.

Construction: Construction Phases	Assumed 8 hour work days based on longest hours of equipment use and rounded up to first whole number for work days per phase.
Construction: Off-Road Equipment	Site Specific construction list
Construction: Trips and VMT	Site specific estimate of workers. Adjusted hauling trip distance to 50 miles. Assumed 1 vendor trip per day at 50 miles.
Construction: Paving	site specific square feet of asphalt

Appendix C

Special-status Species Known to Occur in the Project Area

Appendix C. Species Table

The potential for each species to occur in the Project Area was assessed using the criteria outlined below.

None: the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.

Not Expected: suitable habitat or key habitat elements might be present but might be of poor quality or isolated from the nearest extant occurrences, and/or the species is not known to occur in the area.

Possible: presence of suitable habitat or key habitat elements that potentially support the species.

Present: the species was either observed directly or its presence was confirmed by field investigations or in previous studies in the area

Appendix C. Species Table

Table 1. Special-status Plant Species

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Acanthomintha duttonii San Mateo thorn-mint	FE / SE / 1B.1	Chaparral, valley and foothill grassland. Uncommon serpentinite vertisol clays; in relatively open areas. 50-185 m. Blooms April through June.	**None**. Not known to occur within coastal portions of San Mateo County.
Agrostis blasdalei Blasdale's bent grass	- / - / 1B.2	Coastal bluff scrub, coastal dunes, and coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 m. Blooms in May through July.	**None.** Suitable habitat is not present in the Study areas.
Allium peninsulare var. franciscanum Franciscan onion	- / - / 1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5-320 m. Blooms in May through June.	**None.** Suitable habitat is not present in the Study areas
Amsinckia lunaris bent-flowered fiddleneck	- / - / 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m. Blooms in March through June.	**None**. Suitable cismontane woodland habitat is present in the Study areas of Wurr Road, Pescadero Creek Road and Cloverdale. However, this species is not known to occur within coastal or bayside portions of San Mateo County and no known CNDDB occurrences are mapped within Project area (CNDDB 2025).
Aphyllon robbinsii Robbins' broomrape	- / - / 1B.1	Coastal bluff scrub. Rocky or sandy soil on bluffs, cliffs, landslides, or shell mounds; possibly on sand dunes. Its only confirmed host is *Eriophyllum staechadifolium.* 0-100 m. Blooms in April through July.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos andersonii Anderson's manzanita	- / - / 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 95-765 m. Blooms in November through May.	**Not expected.** Suitable habitat is present in the vicinity of the Study area, but the nearest known occurrence is near Butano Ridge Road in Pescadero Creek County Park approximately 2.15 miles east of the Project area (CNDDB 2025). This species was not observed in the Project area during reconnaissance surveys.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Arctostaphylos glutinosa Schreiber's manzanita	- / - / 1B.2	Chaparral, closed-cone coniferous forest. Mudstone or diatomaceous shale outcrops; often with *Pinus attenuata*. 170-680 m. Blooms March through April.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos ohloneana Ohlone manzanita	- / - / 1B.1	Coastal scrub, lower montane coniferous forests. Monterey shale. 455-520 m. Blooms February through March.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos regismontana Kings Mountain manzanita	- / - / 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Granitic or sandstone outcrops. 240-705 m. Blooms December through April.	**None.** Suitable habitat containing granitic or sandstone outcrops is not present in the Project areas.
Arctostaphylos silvicola Bonny Doon manzanita	- / - / 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Only known from Zayante (inland marine) sands in Santa Cruz County. 150-520 m. Blooms January through March.	**None.** Suitable habitat is not present in the Study areas and Zayante sands is restricted to occur within Santa Cruz County.
Arenaria paludicola Marsh sandwort	FE/SE	Marshes and swamps. Grow up through dense mats of *Typha, Juncus, Scirpus,* etc. in freshwater marsh. 10-170m. Blooms May to August.	**None.** Suitable habitat is not present in the Study areas.
Astragalus agnicidus Humboldt County milk-vetch	- / SE / 1B.1	Broadleafed upland forest, north Coast coniferous forest. Disturbed areas, openings, and roadsides (sometimes). 120-800 m. Blooms April through September.	**None.** Suitable broadleafed upland habitat is present in the Study areas. However, no known occurrences are present within 5 miles of the Project area (CNDDB 2025).
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	- / - / 1B.2	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m. Blooms June through October.	**None.** Suitable habitat is not present in the Study areas.
Calyptridium parryi var. hesseae Santa Cruz Mountains pussypaws	- / - / 1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 300-1535 m. Blooms May through August.	**None.** Suitable habitat is present in the Study areas. However, this species is restricted to Santa Cruz County.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	- / - / 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 meters. Blooms May through November.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Chorizanthe pungens var. hartwegiana Ben Lomond spineflower	FE / - / 1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 105-475 m. Blooms April through July.	**None.** Suitable habitat is not present in the Study areas and is species is restricted to Santa Cruz County.
Cirsium andrewsii Franciscan thistle	- / - / 1B.2	Coastal bluff scrub, broadleafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0-295 m. Blooms March through July.	**None.** Suitable habitat is not present in the Study areas.
Cirsium fontinale var. fontinale fountain thistle	FE / SE / 1B.1	Valley and foothill grassland, chaparral, cismontane woodland, meadows and seeps. Serpentine seeps and grassland. 45-185 m. Blooms May through October.	**None.** Suitable habitat of chappal is present in the Study areas. However, the nearest known location is within Ano Nuevo and this species is possibly extirpated (CNDDB 2025).
Cirsium praeteriens lost thistle	- / - / 1A	Little information exists on this plant; it was collected from the Palo Alto area at the turn of the 20th Century. Although not seen since 1901, this Cirsium is thought to be quite distinct from other Cirsiums acc. to D. Keil. 0-100 m. Blooms June through July.	**None.** Suitable habitat is not present in the Study areas and species is restricted to Palo Alto, Ca.
Collinsia corymbose round-headed collinsia	- / - / 1B.2	Coastal dunes. 0-30 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Collinsia multicolor San Francisco collinsia	- / - / 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 10-275 m. Blooms March through May.	**None.** Suitable habitat is not present in the Study areas.
Dirca occidentalis western leatherwood	- / - / 1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 25-425 meters. Blooms January through April.	**Possible.** Suitable habitat is present in the along several Wurr Road and Pescadero Creek Road sites. Several CNDDB occurrences are present north of La Honda Road approximately 1.94 miles northwest from Site 128.1 (CNDDB 2025).

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Eriophyllum latilobum San Mateo woolly sunflower	FE / SE / 1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest, ultramafic. Often on roadcuts; found on and off of serpentine. 30-610 m. Blooms May through June.	**None.** Suitable habitat of cismontane woodland is present in the Study areas of Wurr Road, and Pescadero Creek Road. However, one CNDDB occurrence in La Honda from 1988 is considered possibly extirpated and species is presumed extirpated within La Honda Quadrat (CNDDB 2025 and CNPS 2025).
Eryngium aristulatum var. hooveri Hoover's button-celery	- / - / 1B.1	Vernal pools, wetland. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 1-50 m. Blooms July.	**None.** Suitable habitat is not present in the Study areas.
Eryngium jepsonii Jepson's coyote-thistle	- / - / 1B.2	Vernal pools, valley and foothill grassland. Clay. 3-300 meters. Blooms April through August.	**None.** Suitable habitat is not present in the Study areas.
Erysimum ammophilum sand-loving wallflower	- / - / 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 3-320 m. Blooms February through June.	**None.** Suitable habitat is not present in the Study areas.
Fissidens pauperculus minute pocket moss	- / - / 1B.2	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10-1,024 m.	**Possible.** Suitable habitat is present in the study area. One CNNDB occurrence is present near Old Haul Road near Memorial County Park and another along the Little Butano Creek Trail within Butano State Park (CNDDB 2025).
Fritillaria liliacea fragrant fritillary	- / - / 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-385 m. Blooms February through April.	**Not expected.** Cismontane woodland occurs within the area. However, only one historical occurrence from 1931 was observed in Pilarcitos Lake in Montara Mountain. No other CNDDB occurrences are not known to occur within the Santa Cruz Mountain area of San Mateo County and in the vicinity of the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Grimmia torenii Toren's grimmia	- / - / 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Boulder and rock walls. 325 - 1160 m.	**Not expected.** Suitable habitat of cismontane woodland is present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Grimmia vaginulata vaginulate grimmia	- / - / 1B.1	Chaparral (openings), boulder and rock walls. 685 - 685 m	**None.** Suitable habitat is not present in the Study areas.
Hesperevax sparsiflora var. brevifolia short-leaved evax	- / - / 1B.2	Coastal bluff scrub, coastal dunes. Sandy bluffs and flats. 0-200m.	**None.** Suitable habitat is not present in the Study areas.
Hesperocyparis abramsiana var. abramsiana Santa Cruz cypress	FT / SE / 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. Sometimes on granitic and sandstone. 280-800 m.	**None.** Suitable habitat is not present in the Study areas.
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	FT / SE / 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. On sandstone. 400-490 m. Blooms in October.	**None.** Suitable habitat is not present in the Study areas.
Hesperolinon congestum Marin western flax	FT / ST / 1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. 60-400 m. Blooms April through June.	**None.** Suitable habitat with serpentine is not present in the Study areas.
Horkelia cuneata var. *sericea* Kellogg's horkelia	- / - / 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 5-215 m. Blooms April through September.	**None.** Suitable habitat is not present in the Study areas.
Lasthenia californica ssp. macrantha perennial goldfields	- / - / 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m. Blooms January through November.	**None.** Suitable habitat is not present in the Study areas.
Legenere limosa legenere	- / - / 1B.1	Vernal pools. In beds of vernal pools. 1-1005 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Leptosiphon rosaceus rose leptosiphon	- / - / 1B.1	Coastal bluff scrub. 10-140 m. Blooms April through July.	**None.** Suitable habitat is not present in the Study areas.
Lessingia arachnoidea Crystal Springs lessingia	- / - / 1B.2	Coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine; sometimes on roadsides. 90-200 m. Blooms July through October.	**None.** Suitable habitat with serpentine is no present in the Study areas.
Limnanthes douglasii ssp. sulphurea Point Reyes meadowfoam	- / SE / 1B.2	Marshes and swamps (freshwater), vernal pools, coastal prairie, meadows and seeps. Vernally wet depressions in open rolling, coastal prairies and meadows; typically in dark clay soil. 10-125 m. Blooms March through May.	**None.** Suitable habitat is not present in the Study areas.
Lupinus constancei Lassics lupine	FE / - / 1B.1	Lower montane coniferous forest (serpentinite). 1500-2000 m. Blooms July.	**None.** Suitable habitat is not present in the Study areas.
Malacothamnus arcuatus arcuate bushmallow	- / - / 1B.2	Chaparral. Gravelly alluvium. 1-735 m. Blooms April through June.	**Possible.** Suitable chaparral habitat is present along Pescadero Creek Road (Site 128.1). One CNDDB occurrence is present near La Honda approximately 0.45 miles northwest from Site 128.1 (CNDDB 2025).
Microseris paludosa marsh microseris	- / - / 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Monolopia gracilens woodland woollythreads	- / - / 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 100-1,200 meters. Blooms February through July.	**Possible.** Suitable habitat of chaparral and cismontane woodland is present along Wurr Road and Pescadero Creek Road. One CNDDB occurrence is near La Honda 0.45 miles northwest from Project area of Pescadero Creek Road (Site 102 and 128.1) (CNDDB 2025).
Orthotrichum kellmanii Kellman's bristle moss	- / - / 1B.2	Chaparral, cismontane woodland. Carbonate and sandstone. 343-685 m. Blooms January through February.	**None.** Suitable habitat of chaparral and cismontane woodland is present in the Study area of Pescadero Road, but carbonate and sandstone are not present.

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Pedicularis dudleyi Dudley's lousewort	- / - / 1B.2	Chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 60-330 m. Blooms April through June.	**None.** Suitable habitat is present in the Study areas of Wurr Road, Pescadero Road and Pescadero Creek Road. However, known occurrences are confined to Portola State Park approximately 3.8 miles southeast from the Project areas and study areas do not contain deep shady woods of older coast redwood forests (CNDDB 2025).
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	- / - / 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 455-915 m. Blooms May through June.	**Not expected**. Suitable habitat is present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Pentachaeta bellidiflora white-rayed pentachaeta	FE / SE / 1B.1	Valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35-610 m. Blooms March through May.	**Possible.** Suitable habitat is present in along the Wurr Road and Pescadero Creek Road sites. Nearest CNDDB occurrence is present Portola State Park approximately 0.9 miles southeast from Wurr Road.
Pinus radiata Monterey pine	- / - / 1B.1	Closed-cone coniferous forest, cismontane woodland. 25-185 m.	**None.** Only native stands of Monterey pine are considered special-status. In San Mateo County, native stands are limited to areas around Año Nuevo State Park
Piperia candida white-flowered rein orchid	- / - / 1B.2	North Coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 20-1615 m. Blooms May through September.	**Possible.** Suitable habitat is present in the Study areas of Wurr Road and Pescadero Road. Nearest CNDDB occurrence is present Portola State Parks approximately 3.9 miles southeast from Project areas of Wurr Road.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	- / - / 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 5-160 m. Blooms March through June.	**None.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, the Study areas are outside of known elevation range for this species.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Plagiobothrys diffusus San Francisco popcornflower	- / SE / 1B.1	Valley and foothill grassland, coastal prairie. Historically from grassy slopes with marine influence. 45-360 meters. Blooms March through June.	**None.** Suitable habitat is not present in the Study areas.
Sagittaria sanfordii Sanford's arrowhead	- / - / 1B.2	Marshes and swamps (shallow freshwater). In standing or slow-moving freshwater ponds, marshes, and ditches. 0-650 m. Blooms May through October.	**Not expected.** Suitable aquatic habitat present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Senecio aphanactis chaparral ragwort	- / - / 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m. Blooms January through May.	**Not expected.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Silene scouleri ssp. scouleri Scouler's catchfly	- / - / 2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 5-315 m. Blooms June through September.	**None.** Suitable habitat is not present in the Study areas.
Silene verecunda ssp. verecunda San Francisco campion	- / - / 1B.2	Coastal bluff scrub, chaparral, coastal prairie coastal scrub, valley and foothill grassland. Often on mudstone or shale; one site on serpentine. 30-645 m. Blooms March through August.	**Not expected.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Stebbinsoseris decipiens Santa Cruz microseris	- / - / 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coasta l scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m. Blooms April though May.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Stuckenia filiformis ssp. *alpina* northern slender pondweed	- / - / 2B.1	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 5-2325 m. Blooms May through July.	**Not expected.** Suitable habitat of drainage channels is present in the Study areas of Wurr Road, Pescadero Creek Road, and Pescadero Road. However, no known occurrences are present within 5 miles of the Project areas (CNDDB 2025). There is one historic CNDDB occurrence approximately four miles south of Little Butano Creek (Site 190) (CNDDB 2025). However, suitable marsh and swamp habitat is not present in Little Butano Creek (Site 190).
Trifolium amoenum two-fork clover	- / - / 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-300 meters. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Trifolium buckwestiorum Santa Cruz Clover	- / - / 1B.1	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-805 m. Blooms April through October.	**None.** Suitable habitat of cismontane woodland is present in the Study areas of Wurr Road, and Pescadero Creek Road. However, moist grassland with gravely margins is not present and no known occurrences are present within 5 miles of the Project areas (CNDDB 2025).
Trifolium polyodon Pacific Grove clover	- / SR / 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.

* List of Abbreviations for Species Status follow below: FE = Federal endangered FT = Federal threatened FC = Federal Candidate SC = State Candidate SE = State Endangered (California) ST = State Threatened (California) SR = State Rare (California) SCC = Species of Special Concern FP= Fully Protected Source: California Department of Fish and Wildlife (CDFW). 2025 California Natural Diversity Database.	CA Rare Plant Rank 1A = Plants presumed extinct in California and rare/extinct elsewhere 1B.1 = Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California 1B.2 = Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California 1B.3 = Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California 2B.2 = Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

Table 2. Special-status Animal Species

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Invertebrates			
Bombus crotchii Crotch bumble bee	- / SCE	Coastal areas east to the Sierra-Cascade crest and south into Mexico. Food plant include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum*.	**None.** The Project areas are within the historic range of this species; however not within its current range (CDFW 2023). No CNDDB records occur within 5 miles of the Project areas (CNDDB 2025).
Bombus occidentalis Western bumble bee	- / SCE	Open grasslands, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings. Food plant include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum*. Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease. Western bumble bee populations in California are currently largely restricted to high elevation sites in the Sierra Nevada and a few records on the northern California coast (Xerces Society et al. 2018).	**None.** The Project areas are within the historic range of this species; however, it is not within the mapped current range (CDFW 2023). No CNDDB records occur within 5 miles of the Project areas of Wurr Road, Pescadero Creek Road or Pescadero Road (CNDDB 2025). Nearest CNDDB occurrences are present within mouth of Gazos Creek from 1972 approximately 1.56 miles southwest and within Redwood State Park from 1961 approximately 2 miles east of the Project area of Cloverdale (CNDDB 2025).
Danaus plexippus monarch - California overwintering population (pop. 1)	FC / -	Dense Eucalyptus, Monterey pine, and live oak groves along Coastal California that provide shelter from prevailing winds. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Closed-cone coniferous forest.	**Not expected.** No overwintering sites are present in the Project areas. Six CNDDB occurrences occur along the coast within 5 miles of the Project area of Cloverdale. Additionally, all 6 occurrences are documented overwintering sites by Xerces Society (2023).
Euphydryas editha bayensis Bay checkerspot butterfly	FT / -	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**None.** The current range of this species is restricted to Santa Clara County (USFWS 2009), and species has been reintroduced to Edgewood County Park and San Bruno Mountain. Current range of species is outside of Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Speyeria zerene myrtleae Myrtle's silverspot butterfly	FE / -	Coastal dunes. Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County.	**None.** The current range of this species is restricted to Point Reyes (USFWS 2009).
Amphibians			
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	FT / ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**None.** Suitable habitat is not present in the Study areas.
Aneides niger Santa Cruz black salamander	- / SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	**Possible.** Suitable habitat is present along Cloverdale Road and Wurr Road and Pescadero Creek Road woodlands. The nearest CNDDB occurrence from 2002 is within Gazos Creek in Butano State Park 1.5 miles east of the Cloverdale Road site, with a historical occurrence from 1950 on Old Woman's Creek less than 1 mile south from Cloverdale Road.
Dicamptodon ensatus California giant salamander	- / SSC	Aquatic, meadow & seep, north coast coniferous forest, riparian forest. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**Present.** Larvae was observed in the scour pool downstream of Site 268 in Peterson Creek during reconnaissance surveys. The nearest CNDDB occurrence overlaps with Project area location 102 on Pescadero Creek Road (CNDDB 2025).

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	FT / SE	Aquatic, riparian forest, riparian scrub, riparian woodland, south coast flowing waters. San Francisco Peninsula and Diablo Range south of San Francisco Bay Estuary, and south through the Santa Cruz and Gabilan Mountains east of the Salinas River in the southern inner Coast Ranges. Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Possible.** Suitable aquatic habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. The nearest CNDDB occurrence from 1960 overlaps Site 94 (CNDDB 2025). Other known occurrences are within Pescadero Creek Park from 1960 and 1999 (CNDDB 2025).
Rana draytonii California red-legged frog	FT / SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Possible.** The Project area is within designated Critical Habitat for this species. Suitable riparian habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. Forty-two CNDDB occurrence records are known from within five miles of the Cloverdale Road location (CNDDB 2025). Fourteen occurrence records are known within five miles of the Wurr Road and Pescadero Creek Road sites, with one record as close as 0.5 miles northeast of Site 102 (CNDDB 2025).
Taricha rivularis red-bellied newt	- / SSC	Broadleaved upland forest, north coast coniferous forest, redwood, riparian forest, and riparian woodland. Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	**None.** The current range of this species is restricted to Humboldt County south to Sonoma County, and Isolated population in Santa Clara County.
Reptiles			
Chelonia mydas	FT / -	Marine. Completely herbivorous; needs adequate supply of seagrasses and algae.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
green sea turtle			
Actinemys marmorata Northwestern pond turtle	PT / SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Not expected.** This species is known to inhabit Pescadero-Butano Marsh approximately 3.8 miles northwest of the Cloverdale Road site (Site 190) (CNDDB 2025). Marginal aquatic habitat is present upstream and downstream of the Cloverdale Road culvert, but the concrete bed, banks, and box culvert prevent this species from persisting within the Project area. Suitable habitat is absent at the Wurr Road and Pescadero Creek Road sites.
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE / SE/ FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Possible.** This species is documented in the Pescadero-Butano watershed within five miles of the study area (CNDDB 2025). Suitable riverine habitat is present in Little Butano Creek. Marginal aquatic habitat is present at Bloomquist Creek and Peterson Creek, but these sites generally lacked dense vegetative cover and/or suitable pools.
Fish			
Acipenser medirostris pop. 1 green sturgeon - southern DPS	- / SSC	The green sturgeon ranges from Mexico to at least Alaska in marine waters and is observed in bays and estuaries up and down the west coast of North America. Green sturgeon are believed to spawn in the Rogue River, Klamath River Basin, and the Sacramento River, and rarely occur in the Umpqua River. Green sturgeon appear to occasionally occupy the Eel River, and may also be using the Trinity River.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Eucyclogobius newberryi tidewater goby	FE / SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, requires fairly still but not stagnant water and high oxygen levels.	**None.** Suitable habitat is not present in the Study area.
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	FE / SE	Open ocean, estuaries, and rivers. Federal listing includes populations between Punta Gorda and San Lorenzo River. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Present.** Coho salmon are known to occur in Pescadero Creek and the creek is designated Critical Habitat for this species. However, no work occurs on Pescadero Creek, and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish. Coho also occur in Butano Creek. Currently a bedrock chute on Little Butano Creek is a total fish barrier downstream of the Cloverdale Road site (Site 190) which impedes anadromous fish from upstream movement. However, the San Mateo RCD is currently (Summer 2025) implementing a project to remove the bedrock chute, which will allow upstream movement of Coho salmon in Little Butano Creek to Cloverdale Road prior to the planned start of the Project.

Scientific Name Common Name	Listing status* (Federal/ State)	Habitat Association	Potential to Occur in the Study Area
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	FT / SCC	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	**Present.** Steelhead are known to occur in Pescadero Creek and lower reaches of Little Butano Creek and the creek is designated Critical Habitat for this species (Spence et al. 2008, CEMAR 2008). However, no work occurs on Pescadero Creek and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Steelhead also occur in Butano Creek but total fish barriers on Little Butano Creek downstream of the Cloverdale Road site currently impede anadromous fish from upstream movement. The RCD is currently (Summer 2025) implementing a project to remove the bedrock chute, which will allow upstream movement of steelhead in Little Butano Creek to Cloverdale Road prior to the planned start of the Project. Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish.
Spirinchus thaleichthys longfin smelt	- / ST	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater. Inhabits coast estuaries north of the Russian River (primarily) and south of Pillar Point, Half Moon Bay.	**None.** Suitable habitat is not present in the Study area.
Spirinchus thaleichthys pop. 2 Longfin smelt – San Francisco Bay-Delta DPS	FE/ST	Found in the Gulf of Farallones from Russian River to Pillar Point, Half Moon Bay, and salt and freshwater habitats upstream of the Golden Gate including the San Francisco Bay, Sacramento - San Joaquin River Delta, and their tributaries where found.	**None.** The Study area is not within the known range of this species (CDFW 2024).

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Birds			
Aquila chrysaetos golden eagle	- / FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**None.** Suitable habitat is not present in the Study area.
Asio otus long-eared owl	- / SSC	Cismontane woodland, great basin scrub, riparian forest, riparian woodland, upper montane coniferous forest. Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Not expected.** A breeding pair was documented near the Stevens Creek headwaters approximately 5 miles east of Pescadero Creek Road, Site 128.1 in 1986/1987 (CNDDB 2025). The open space area adjacent to Site 128.1 provides suitable foraging habitat but lacks suitable nesting habitat.
Athene cunicularia burrowing owl	- / SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**None.** Suitable habitat is not present in the Study area.
Brachyramphus marmoratus marbled murrelet	FT / SE	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	**Present.** In Memorial County Park, known Marbled murrelet (MAMU) occupied sites have been at documented at the Huckelberry Flat and occupied behavior has been confirmed at Homestead Flat, Sequoia Flat at Memorial County Park. Designated Critical Habitat for this species overlaps within San Mateo County in Memorial Park, is present within Site 94 and Site 102 and is adjacent to the Project sites along Wurr Road (Sites 263, 265, 265.1, 266, 268, and 270). Based on proximity to 2010 CNDDB occurrence at Memorial County Park (CNDDB#38) it is assumed MAMU has the potential to occur at Project sites at 265, 265.1, 266, 268, and 270 (occurrence overlaps Wurr Road and Pescadero creek Road) and Site 263 is approximately 144 meters from 2010 occurrence

Scientific Name Common Name	Listing status* (Federal/ State)	Habitat Association	Potential to Occur in the Study Area
			(CNDDB 2025). The presence of potential nesting trees within 300 feet (ft) of Project sites with large diameter tree with large (≥4") horizontal branches (platform location with moss and access and good canopy cover, complex understory, good access points for landing) are present in sites 94, 263, 265, 270, 270.1. No suitable nesting trees were observed within 300 ft at Sites 102, 265.1, and 266. With known occupied sites, confirmed occupied behavior, CNDDB occurrences and presence of potential nesting trees (within 300ft of Project site) within the vicinity of the Project area is it possible (assumed) that Sites 94, 263, 265, 268, 270, 270.1 contain suitable habitat for marbled murrelet and the species has the potential to occur within these Study areas.
Charadrius alexandrinus nivosus western snowy plover	FT / SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**None.** Suitable habitat is not present in the Study area.
Coturnicops noveboracensis yellow rail	- / SSC	Shallow brackish and freshwater marshes, wet meadows, and occasionally rice fields. Summer resident in eastern Sierra Nevada in Mono County.	**None.** Suitable habitat is not present in the Study area.
Cypseloides niger black swift	- / SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	**None.** Suitable habitat is not present in the Study area.
Elanus leucurus white-tailed kite	- / FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Falco peregrinus anatum American peregrine falcon	FD / SD	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**None.** Suitable nesting habitat is absent from the study area.
Geothlypis trichas sinuosa saltmarsh common yellowthroat	- / SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**None.** Suitable habitat is not present in the Study area.
Gymnogyps californianus California condor	FE/SE	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. forages up to 100 miles from roost/nest.	**None.** Suitable habitat is not present in the Study area.
Haliaeetus leucocephalus bald eagle	FD / SE, FP	Lower montane coniferous forest, old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**Absent as Breeder.** Suitable habitat is present in the Study area. However, no CNDDB records occur within 5 miles of the Project areas (CNDDB 2025).
Laterallus jamaicensis coturniculus California black rail	- / ST	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None.** Suitable habitat is not present in the Study area.
Melospiza melodia pusillula Alameda song sparrow	- / SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits *Salicornia* marshes; nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*.	**None.** Suitable habitat is not present in the Study area.
Rallus obsoletus California Ridgway's rail	FE / SE, FP	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Riparia riparia bank swallow	- / ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None.** Suitable habitat is not present in the Study area.
Sternula antillarum browni California least tern	FE / SE, FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**None.** Suitable habitat is not present in the Study area.
Mammals			
Antrozous pallidus pallid bat	- / SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Possible.** Suitable foraging habitat is present within the study area, such as in larger trees in riparian areas. One CNDDB occurrence is 2.3 miles west of Wurr Road (CNDDB 2025).
Corynorhinus townsendii Townsend's big-eared bat	- / SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Not expected.** One CNDDB occurrence within 1.3 miles west of Wurr Road (CNDDB 2025). Suitable foraging habitat is present within the study area. Roosting habitat is limited to very large cavities in redwood trees as typical roost sites, such as old mines, caves, barns, and abandoned buildings, are not within the Project area.
Eumetopias jubatus Steller sea lion	FD / SSC	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	- / SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**Present.** No CNDDB occurrences were within 5 miles of the Study area (CNDDB 2025). However, suitable habitat is present where forest, woodland, and chaparral habitats occur. In addition, one woodrat nest was observed along Little Butano Creek downstream of Cloverdale Road (Site 190) during the July 2025 survey.
Reithrodontomys raviventris Salt marsh harvest mouse	FE / SE, FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**None.** Suitable habitat is not present in the Study area.
Sorex vagrans halicoetes salt marsh wandering shrew	- / SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6-8 ft above sea level where abundant driftwood is scattered among *Salicornia*.	**None.** Suitable habitat is not present in the Study area.
Taxidea taxus American badger	- / SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Possible.** This species is known to occur in the Santa Cruz Mountains east of La Honda to Skyline Boulevard, with multiple CNDDB occurrence records within a 3.0 mile radius of Pescadero Creek Road (Site 128.1) and one historical record from 1978 was reported in Butano State Park near the Cloverdale Road site (Site 190) (CNDDB 2025). Suitable habitat is present in the open grassland and chaparral areas adjacent to these sites.

* List of Abbreviations for Federal and State Species Status follow below: FE = Federal endangered PE = Proposed endangered FT = Federal threatened PT = Federal proposed threatened FC = Federal proposed candidate	SE = State endangered ST = State threatened SCE = State candidate endangered SSC = Species of special concern (CDFW) FP = Fully protected (CDFW)

Source: California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database.

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Appendix D

Cultural Resources Assessment Report

Technical Report

CULTURAL RESOURCES INVENTORY REPORT

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project San Mateo County, CA

August 2025

Prepared for:

County of San Mateo Department of Public Works
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List of Acronyms

APE	area of potential affects
BERD	Built Environment Resource Directory
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DIA	Diameter
DPR	California Department of Parks and Recreation
LF	linear feet
Montrose	Montrose Environmental
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
PRC	Public Resources Code
Project	Wurr Road, Pescadero Creek Road, Cloverdale Road Culvert Repairs Project
RPA	registered professional archaeologist
RSP	Rock Slope Protection
SHPO	State Historic Preservation Officer
TBD	To Be Determined
TCR	tribal cultural resource
USC	United States Code
USGS	U.S. Geological Survey

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Executive Summary

The County of San Mateo (County) Department of Public Works (DPW) is proposing to implement the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Project) to improve and repair twelve (12) culverts along Wurr Road, Pescadero Creek Road and Cloverdale Road. The Proposed Project is located near the communities of Pescadero and Loma Mar in unincorporated San Mateo County. The Project installs three (3) new culverts, replaces two (2) culverts, upsizes five (5) culverts, and installs a new trash/debris rack and stabilizes the eroding channel at one (1) location. Additional improvements at these sites include replacing/installing new headwalls, adding rock inlet protection, and adding rock outfall energy dissipation. In addition, the Project will remove sediment and enhance habitat at one (1) location along Cloverdale Road. The anticipated work at Cloverdale Road will remove accumulated sediment and obstructive vegetation as well as demolish existing concrete channel structures upstream and downstream of the double box crossing and restore the channel to provide unimpeded fish passage. The sites were identified as priority locations in the Pescadero-Butano Watershed County Road Inventory and Sediment Assessment (Waterways 2022) and will help to reduce erosion and sediment delivery throughout the Pescadero-Butano Creek watershed in accordance with objectives of the Total Maximum Daily Load for Sediment and Habitat Enhancement Plan for Pescadero-Butano Watershed (California Regional Water Quality Control Board 2018).

A cultural resources inventory was conducted to comply with the requirements of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the State CEQA guidelines (14 California Code of Regulations 15000 et seq.). The inventory also supports obligations under Section 106 of the National Historic Preservation Act (NHPA) due to the proposed actions requiring federal permits, such as Section 404 of the Clean Water Act.

This inventory consisted of a literature review to identify any previously recorded cultural resources within the search radius of the current area of interest and a field survey to locate any cultural resources that may exist but have not yet been recorded. No previously recorded resources have boundaries that intersect with the Project locations; no newly identified cultural resources were identified during the archaeological pedestrian survey. No adverse effect to historic resources or properties is expected to result from the Project actions.

This inventory was performed based on information obtained at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), as well as on direct observation of site conditions and other information generally applicable as of September 2024. The conclusions and recommendations herein are therefore based on information available up to that point in time. Further information may come to light in the future that could substantially change the conclusions found herein.

Information obtained from these sources in this timeframe is assumed to be correct and complete. Montrose Environmental (Montrose) does not assume any liability for findings or lack of findings based upon misrepresentation of information presented to Montrose or for items that are not visible, made visible, accessible, or present at the time of the Project area inventory.

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1 Introduction

1.1 Location and Setting

The County of San Mateo (County) is proposing culvert repairs and improvements at 12 locations near the communities of Pescadero and Loma Mar in unincorporated San Mateo County, California (see **Figure 1**). An assessment of the existing drainage infrastructure and a hydrologic conditions study determined improvements at each proposed site was needed to address drainage infrastructure deficiencies and provide adequate conveyance capacity commensurate with the site hydrology.

The Project areas are located on the La Honda and Franklin Point U.S. Geological Survey (USGS) 7.5" Quadrangles (Townships 7S, 8S, Ranges 4W, 5W, Sections 26, 27, 34, 4, 3, 36) (**Figure 2**).

1.2 Project Description

The County proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve and repair twelve (12) culverts along Wurr Road, Pescadero Creek Road, and Cloverdale Road. The Proposed Project is located near the communities of Pescadero and Loma Mar in unincorporated San Mateo County. The Project includes installs three (3) new culverts, replaces two (2) culverts, upsizes five (5) culverts, and installs a new trash/debris rack and stabilizes the eroding channel at one (1) location. Culverts will be replaced and upsized where they have been deemed damaged or undersized. Culvert sizing determinations are based on hydraulic model results and hydrological conditions. Culverts will be replaced in-kind where the existing pipe diameter adequately conveys flows. New culverts will be installed at three (3) sites to provide added roadway ditch drainage relief and minimize roadway flooding. Additional improvements at these sites include replacing/installing new headwalls, adding rock inlet protection, and adding rock outfall energy dissipation.

In addition, the Project will remove sediment and enhance habitat at one (1) location along Cloverdale Road. The anticipated work at Cloverdale Road will remove accumulated sediment and obstructive vegetation as well as demolish existing concrete channel structures upstream of the double box crossing and restore the channel to provide unimpeded fish passage.

The sites were identified as priority locations in the Pescadero-Butano Watershed County Road Inventory and Sediment Assessment (Waterways 2022) and will help to reduce erosion and sediment delivery throughout the Pescadero-Butano Creek watershed in accordance with objectives of the Total Maximum Daily Load (TMDL) for Sediment and Habitat Enhancement Plan for Pescadero-Butano Watershed (California Regional Water Quality Control Board 2018). The site locations and IDs (as identified in TMDL road inventory) are as follows:

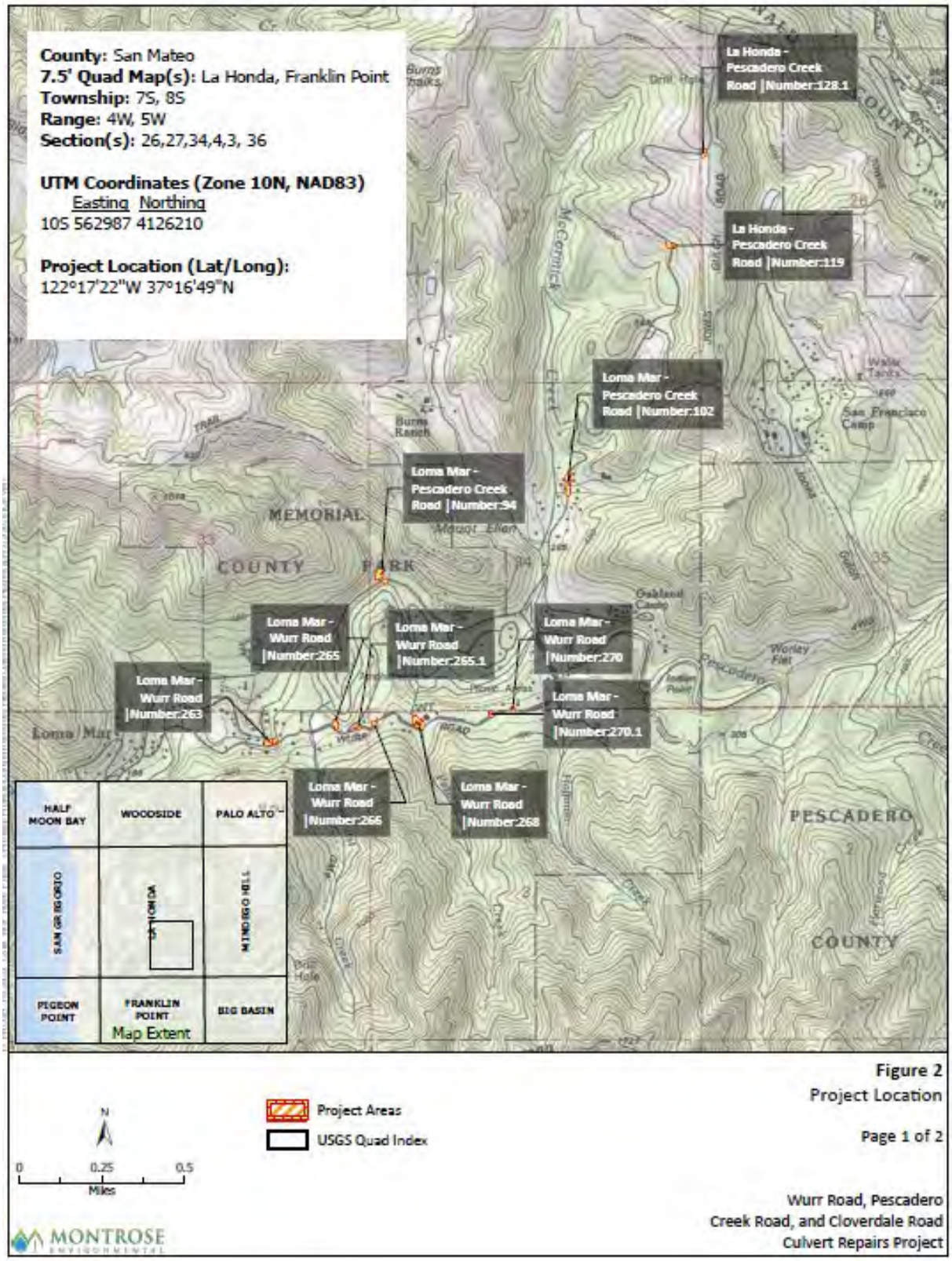
- **Pescadero Creek Road**, four (4) sites: Sites 128.1, 119, 102, and 94.
- **Wurr Road**, seven (7) sites: Sites 263, 265, 265.1, 266, 268, 270, and 270.1
- **Cloverdale Road**, one (1) site: Site 190.

Table 1 summarizes Project activities proposed for each site. Heavy equipment will be used to excavate trenches, remove the existing culvert pipes, and install the new culvert pipes and associated inlet and outlet structures. The roadways will be restored to previous conditions.

Figure 1. Vicinity



Figure 2. Project Location



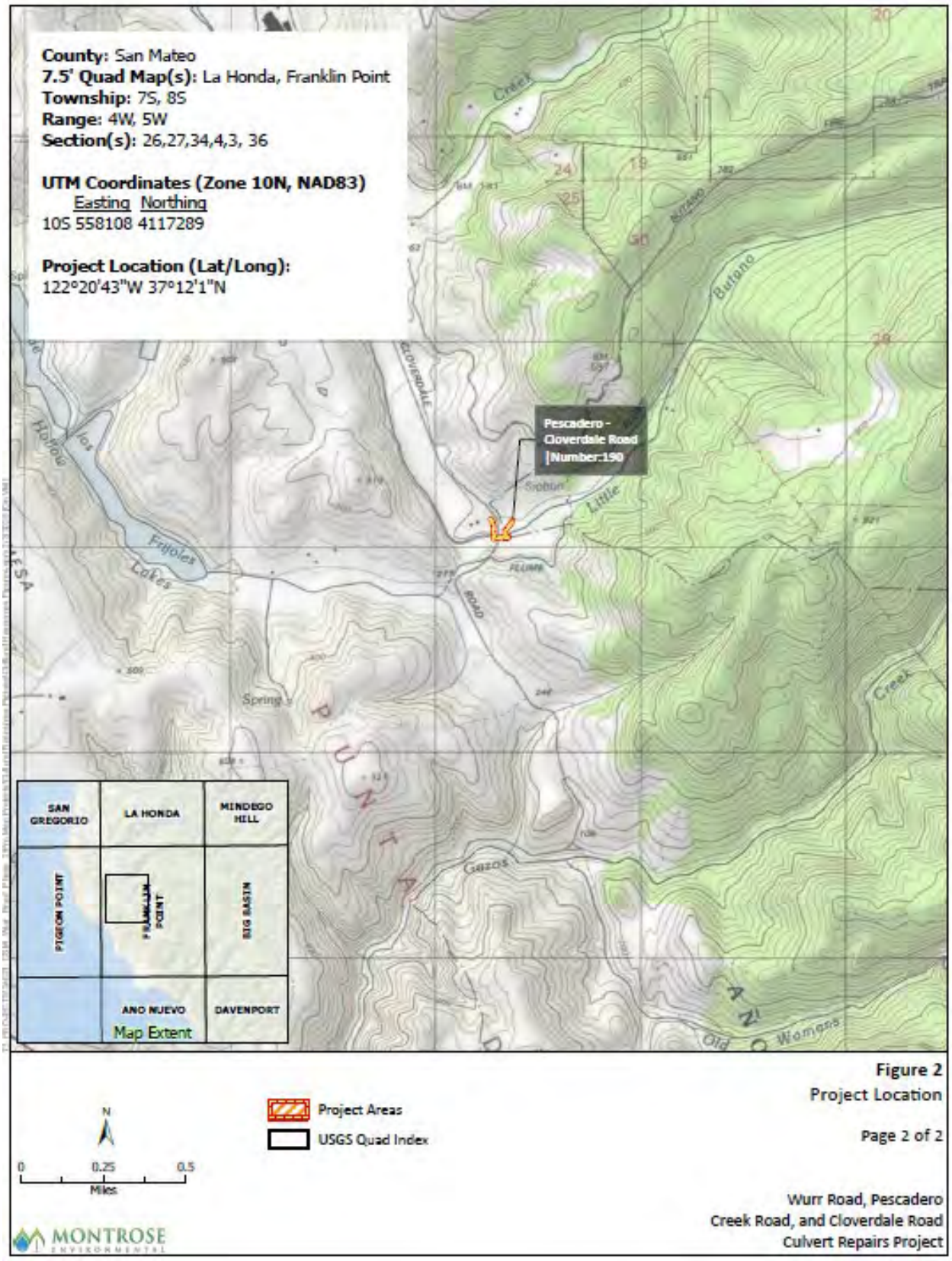

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36
UTM Coordinates (Zone 10N, NAD83)
Easting Northing
10S 558108 4117289
Project Location (Lat/Long):
122°20'43"W 37°12'1"N
Pescadero - Cloverdale Road |Number:190
SAN GREGORIO
LA HONDA
MINDEGO HILL
PIGEON POINT
FRANKLIN POINT
BIG BASIN
ANO NUEVO
DAVENPORT
Map Extent
Project Areas
USGS Quad Index
N
0
0.25
0.5
Miles
MONTROSE ENVIRONMENTAL
Figure 2
Project Location
Page 2 of 2
Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

Table 1. Culvert Repair Locations and Expected Levels of Disturbance

Site ID / TMDL No.	Road	Resource Agency Jurisdictions	Existing Culvert Diameter (inches)	Proposed Site Improvements
Pescadero Creek Road Locations				
94	Pescadero Creek Road	CDFW, RWQCB, USACE	28	Install new debris reflector (trash rack) at inlet; add new rock energy dissipator at outfall
102	Pescadero Creek Road	CDFW, RWQCB, USACE	24	Demo existing culverts and junction box and slurry fill trench; install/upsize replacement culvert in new alignment (24” to 38” H x 57" W arch culvert); new headwall and rock inlet protection; new rock energy dissipator at outfall; install/upsize replacement roadside ditch culvert with new inlet catch basin near inlet of new culvert alignment (12” to 18” DIA); install new 15" DIA roadside culvert with asphalt inlet apron.
119	Pescadero Creek Road	CDFW, RWQCB, USACE	36	Demo existing culvert; install/upsize replacement culvert with new outfall alignment (36” to 42” DIA); replace existing concrete headwall and add new rock inlet protection; new flume down drain with inlet apron from roadside ditch to culvert outlet; new rock energy dissipator at outfall; regrade inlet to conform to existing flow line; and regrade downstream roadside embankment.
128.1	Pescadero Creek Road	N/A	New	New 18” diameter (DIA) culvert, headwall at inlet, rock inlet and outlet protection
Wurr Road Locations				
263	Wurr Road MP 0.6A	CDFW, RWQCB, USACE	78	Replace 78” DIA culvert; extend pipe length at inlet 12’ and outlet 25’; reconstruct unstable embankment slopes; new rock inlet and outlet protection; install new 18" pipe with headwall from roadside ditch to culvert inlet; relocation of one (1) existing log at inlet and approximately four (4) at outlet; revegetate embankment with native tree species and plants.
265	Wurr Road MP 0.7	CDFW, RWQCB, USACE	12	Demo existing culvert; install/upsize replacement culvert with new outfall alignment (12” to 30” DIA); new headwall and rock inlet protection; extend outfall location 25’; new rock outfall energy dissipator; grade outfall swale to conform to existing flow line; demo existing roadside ditch culvert
265.1	Wurr Road MP 0.7	N/A	New	New 18” DIA culvert; new headwall and inlet rock protection; and new rock energy dissipator at outfall

Site ID / TMDL No.	Road	Resource Agency Jurisdictions	Existing Culvert Diameter (inches)	Proposed Site Improvements
266	Wurr Road MP 0.8	CDFW, RWQCB, USACE	16	Demo existing culvert; install/upsize replacement culvert in new alignment (16” to 30” DIA); new headwall and rock inlet protection; and new rock energy dissipator at outfall
268	Wurr Road MP 1.0	CDFW, RWQCB, USACE	84	Replace 84” DIA culvert; extend pipe length at inlet 18’ and outlet 21’; reconstruct unstable embankment slopes; remove existing concrete headwall; new rock inlet and outlet protection; install new 18" slope down drain with rock lined ditch and concrete headwall from roadside to culvert inlet, install new 18" slope down drain with concrete headwall from roadside to culvert outlet; relocate existing logs at inlet; revegetate embankment with native tree species and plants.
270	Wurr Road MP 1.2	N/A	12	Demo existing culvert; install/upsize replacement culvert with new outfall alignment (12” to 24” DIA); extend the culvert length by 10’; new headwall and rock inlet protection; and new rock energy dissipator at outfall
270.1	Wurr Road MP 1.2	N/A	New	New 24” DIA culvert; new headwall and rock inlet protection; new rock energy dissipator at outfall
Cloverdale Road				
190	Cloverdale Road	CDFW, RWQCB, USACE	8’ x 7’ double box	Remove upstream concrete apron, weirs, and sacked concrete banks; replace upstream apron with naturalized channel constructed from engineered streambed material (ESM) and vegetated rock slope protection; construction of an engineered streambed pool and channel downstream of culvert outlet and associated channel bank grading and stabilization with vegetation or vegetated rock slope protection; remove accumulated sediment from existing culvert barrels and outlet; install slope protection fabric; revegetate riparian corridor with native tree species and plants.

1.3 Regulatory Setting

1.3.1 State of California Regulations

CEQA and State CEQA Guidelines

The Proposed Project seeks to comply with the CEQA (Public Resources Code [PRC] 21000 et seq.) and the CEQA guidelines (California Code of Regulations [CCR], Title 14, Chapter 3), which determine, in part, whether a project has a significant effect on a unique archaeological resource (per PRC 21083.2) or a historical resource (per PRC 21084.1).

CEQA guidelines in CCR 15064.5 notes that "a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment." Lead agencies are required to identify potentially feasible measures or alternatives to avoid or mitigate significant adverse changes in the significance of a historical resource before such projects are approved. According to the CEQA guidelines, historical resources are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (per PRC 5024.1(k));
- Included in a local register of historical resources (per PRC 5020.1) or identified as significant in a historical resource survey meeting the requirements of PRC 5024.1(g); or
- Determined by a lead state agency to be historically significant.

California Register of Historical Resources

PRC Section 5024.1 establishes the CRHR. This register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed, or determined to be eligible for listing, in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the NHPA. The following CRHR criteria for listing are similar to those of the NRHP.

(1) Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) Are associated with the lives of persons important in our past;

(3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

(4) Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

Unique Archaeological Resources

CEQA guidelines in CCR 15064.5 also applies to unique archaeological resources as defined in PRC 21084.1. As defined in PRC Section 21083.2, a unique archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important pre-contact or historic event or person.

The CEQA guidelines note that if an archaeological resource is not a unique archaeological resource, historical resource, or tribal cultural resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (CCR Section 15064.5[c][4])

Tribal Cultural Resources

PRC 21080.3.1 (also known as Assembly Bill 52) requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if requested by the tribe, and if the agency intends to release a negative declaration, mitigated negative declaration, or environmental impact report for a project. The bill also specifies, under PRC 21084.2, that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is considered a project that may have a significant effect on the environment.

As defined in Section 21074(a) of the PRC, TCRs are:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

   a. Included or determined to be eligible for inclusion in the CRHR; or

   b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074(b) and (c) as follows:

(b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to Section 21080.3.2 or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs, treating TCRs with culturally appropriate dignity, and considering the tribal cultural values and meaning of the resource.

The lead state agency for the Project will communicate and consult as needed with Native American tribes pursuant to PRC 21080.3.1. The results of that communication to date are provided in **Appendix A**.

1.3.2 Federal Regulations

The Proposed Project is subject to federal permit review. As a result, the Project, constitutes a federal undertaking as defined by Title 54 United States Code (USC) Section 300101 of the NHPA and mandates compliance with 54 USC Section 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found under Title 36 of the Code of Federal Regulations (CFR) Section 800, as amended in 2001. To comply with Section 106 of the NHPA, the project proponent must "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register."

The implementing regulations of the NHPA require that cultural resources be evaluated for eligibility to the NRHP if they cannot be avoided by an undertaking (proposed project). To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in Title 36 CFR Section 60.4, "the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association" and must be considered within the historic context. Resources must also be at least 50 years old, except in rare cases, and, to meet eligibility criteria of the NRHP, must:

(A) Be associated with events that have made a significant contribution to the broad patterns of our history; or

(B) Be associated with the lives of persons significant in our past; or

(C) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) Have yielded, or may be likely to yield, information important in prehistory or history.

For archaeological sites evaluated under Criterion (D), integrity requires that the site remain sufficiently intact to convey information necessary to address specific important research questions.

Section 106 of the National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to consider the effects of their actions on historic properties (54 USC 306108). The Section 106 review process typically consists of the following major steps by federal agencies, all of which occur in consultation with the State Historic Preservation Officer (SHPO), Native American Tribes, and other consulting parties.

1. Initiate Section 106 process by defining the federal undertaking and establishing a plan for consultation.

2. Identify the area of potential effect (APE).

3. Identify historic properties within the limits of the APE.

4. Assess the effects of the undertaking by applying the criteria for adverse effects.

5. Resolve adverse effects.

The Section 106 regulations define an adverse effect as an effect that alters, directly or indirectly, the qualities that make a resource eligible for listing on the NRHP (36 CFR Section 800.5[a][1]).

Consideration must be given to the property's location, design, setting, materials, workmanship, feeling, and association, to the extent that these qualities contribute to the integrity and significance of the resource. Adverse effects may be direct and reasonably foreseeable or may be more remote in time or distance (36 CFR Section 800.5[a][1]).

2 Project Context

2.1 Environmental Setting

The Project areas are situated within the Coast Range geologic province. The northern Coast Ranges are a geologic province comprised of numerous rugged north-south trending ridges and valleys that run parallel to a series of faults and folds. Formation of these ranges is generally attributed to events associated with subduction of the Pacific Plate beneath the western border of North America. The bedrock that underlies the region is a complex assemblage of highly deformed, fractured, and weathered sedimentary, igneous, and metamorphic rocks (Schoenherr 1992). The bedrock geology of the Project area consists of Miocene and Pliocene age, non-marine sedimentary rock (California Geological Survey 2010).

The Project is located in the Pescadero-Butano Creek watershed. Riverine habitat in this study area includes Pescadero Creek (general vicinity), unnamed tributary drainages, Peterson Creek (Site 268), Bloomquist Creek (Site 263), and Little Butano Creek (Site 190). These features area generally characterized as having intermittent or perennial flow and a coarse matrix of gravel/cobble beds and fine sediments with earthen banks. Other riverine features within the Project area include minor intermittent or ephemeral drainages along Pescadero Creek Road and Wurr Road.

Terrestrial habitats include upland areas, including forest/woodland, shrubland, grassland, and barren areas. Developed areas are also classified as terrestrial habitat. Terrestrial habitats in the study area are described below. The riparian canopy at the project sites generally consists of a narrow band of big leaf maple (*Acer macrophyllum*), California bay (*Umbellularia californica*), and California buckeye (*Aesculus californica*) trees with a sparse shrub, vine, and fern understory contiguous with the redwood forest community of the project study area.

Riparian woodland habitat is a tree-dominated community, with typical species including white alder (*Alnus rhombifolia*), Pacific willow (*Salix lasiandra*), Douglas fir (*Pseudotsuga menziesii*), and American dogwood (*Cornus florida*). A shrub or vine layer often occurs that frequently includes California blackberry (*Rubus ursinus)*, poison oak (*Toxicodendron diversilobum*), California coffeeberry (*Frangula californica*), and young willows (*Salix* spp.). Understory herbs include grasses, California mugwort (*Artemisia douglasiana*), stinging nettle (*Urtica dioica*), rushes (*Juncus* spp.), and California bee plant (*Scrophularia californica*). The mid-and upper-bank areas and adjacent historic benches in the project reach support riparian woodlands associated with Little Butano Creek, Bloomquist Creek, and Peterson Creek.

Redwood forest habitats are largely restricted to areas of coastal influence with relatively stable temperatures and summer coastal fog. The tree composition includes redwood (*Sequoia sempervirens*) as the dominant species with associated species including California bay (*Umbellularia californica*), Douglas fir (*Pseudotsuga menziesii*), and red alder (*Alnus rubra*). Redwood forest is present along Wurr Road and Pescadero Creek Road.

California annual grassland is present along some slopes in the study area. Dominant species include slender oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and soft brome (*B. hordeaceus*). Ruderal species are present along roadway shoulder areas.

Prior to 1850, the region surrounding San Francisco Bay was a rich biome of coastal salt marsh and coastal prairie-scrub, with mixed hardwood settings more upland and inland that supported numerous animal and plant species exploited by pre-contact populations (Küchler 1976).

2.2 Pre-Contact Context

The pre-contact period reflects information known about the indigenous population from the time the region was first populated with humans until the arrival of the first Europeans, who recorded their journeys. The pre-contact record is derived from over a century of archaeological research, and while much has been gleaned from these studies, large gaps in the data record remain. The following pre-contact culture sequence, derived from Milliken et al. (2010:114-118), briefly outlines the prehistory of the San Francisco Bay region.

The Early Holocene (Lower Archaic; 8000 to 3500 B.C.) is considered a time when populations continued to be very mobile as they practiced a foraging subsistence pattern around the region. Artifacts that characterize this period include the millingslab and handstone to process seeds, as well as large wide-stemmed and leaf-shaped projectile points.

The Early Period (Middle Archaic; 3500 to 500 B.C.) is marked by the appearance of cut shell beads in the archaeological record, as well as the presence of the mortar and pestle for processing acorns. House floors with postholes indicate substantial living structures, which suggests a move toward establishing a more sedentary lifestyle and an increasing population.

The Middle Period, which includes the Lower Middle Period (Initial Upper Archaic; 500 B.C. to A.D. 430) and Upper Middle Period (Late Upper Archaic; A.D. 430 to 1050), appears to be a time when geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the development of numerous small villages. Around A.D. 430 a “dramatic cultural disruption” occurred, as evidenced by the sudden collapse of the Olivella saucer bead trade network.

The Initial Late Period (Lower Emergent; A.D. 1050 to 1550) reflects a social complexity that had developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

The Terminal Late Period (Upper Emergent; A.D. 1550 to circa 1750) generally represents the indigenous cultures that were encountered by the Spanish when they first arrived in San Francisco Bay.

2.3 Ethnohistoric Context

The population indigenous to the Project area spoke a language referred to as Costanoan, a derivative from a Spanish term for “coast people.” Costanoan, which consisted of six known languages and various dialects within those languages, was spoken over a broad territory that included all of the San Francisco Peninsula, along the east and south of San Francisco Bay, and south to Monterey Bay, Salinas Valley, and the area around Hollister. Those residing in San Francisco Peninsula and the

Project area spoke the Ramaytush dialect of San Francisco Bay Costanoan (Milliken et al. 2009:33 35).

The Costanoan peoples, also referred to as the Ohlone, Mutsun, or Rumsen, depending on geography, were not a united cultural or political entity (Milliken et al. 2009:2-4). Rather, there were strong differences not only in language, but also in culture, between the San Francisco and Monterey Bay occupants. Political affinity was based on the tribelet, which was comprised of one or more villages within a specific geographic territory (Levy 1978:487).

The tribelet territory was 10 to 12 miles in diameter and contained a population of 200 to 400 people living among four or five villages (Milliken et al. 2009:99). Those living in the Project area resided in large villages along permanent streams in locations that allowed access to the diverse resources found in the tidal marshlands, the valley floor, and the hills (Milliken et al. 2010:106; Moratto 2004:225).

Several Costanoan tribes lived entirely within modern-day San Mateo County. Along the bay were the *Urebure* of San Bruno, the *Ssalson* in San Mateo and the *Lamchin* at Redwood City. Other tribes were partially in San Mateo County but also spilled over into more southern counties. These included, but not limited to, the *Puichun* who were on the bay front at San Francisquito Creek, and the *Olpen* who lived in the mountains above the *Puichun* at the headwaters of San Francisquito Creek. Another group, the *Quiroste*, lived on the coast in the area of Point Ano Nuevo (Milliken et al. 2009:87-89). Numerous village locations throughout San Mateo County have been identified for some of these groups, including villages in proximity to the Project areas (Milliken et al. 2009:4-5).

2.4 Historic-Era Context

The historic era began in the San Francisco Bay area when Spanish explorers arrived in the late 1760s and the 1770s. Members of the Portola expedition were the first to arrive in present-day San Mateo County. On October 23, 1769, the party entered the Quiroste village of Mitenne, where they were graciously welcomed. Portola's group continued northward, encountering and staying at villages of all the peninsula tribes as they crossed to the bay-side of the peninsula via Sweeny Ridge and camped near Palo Alto by the middle of November. The party retraced their route back to Monterey. Following Portola's exploration, the Rivera-Palou expedition followed Portola's exploration 5 years later, in 1774. Instead of coming up the coast, the Rivera-Palou party arrived through Santa Clara Valley, and followed along the bay shore to San Francisquito Creek. The team made their way to the north end of the peninsula before returning to Monterey via the coastal route. Early exploration was conducted near Woodside Valley in 1769, when the first Portola expedition camped in the valley. By 1793, the area encompassing the northern and central peninsula was no longer inhabited by tribal villages and the local San Francisco Bay Costanoan-speaking local tribes of the area had been absorbed into Mission Dolores (Milliken et al. 2009). In August 1840, the Governor of Spanish California granted the 12,545-acre Rancho Canada de Raymundo to John Coppinger, an Irishman who had become a naturalized Mexican citizen. This rancho consisted of most of the eastern slopes and valleys in the Woodside area, including today's Wunderlich Park.

Mexico, which included California, became independent from Spain in 1822, and after that time, the government began issuing grants of land to favored citizens. First granted only to Mexican nationals, these tracts of land were soon bestowed upon those outsiders (largely Americans) who agreed to become citizens (Kyle et al. 2002:xiii-xiv). During Mexican rule, at least 20 tracts of land, or ranchos, were granted within what was to become San Mateo County (California State Lands Commission

1982). Nine of the ranchos (one of which overlaps into San Francisco County, and one into Santa Cruz County) stretched out along the Pacific coast, three were entirely within the interior mountains, and the remainder bordered San Francisco Bay. These properties were largely used for cattle grazing, agriculture, or timber harvesting, though the operations also attracted settlers who would purchase small tracts of land in order to establish their own livelihoods. Central settlements eventually became established on many of the ranchos, particularly on the bay side, that are the sites of modern-day communities (Kyle et al. 2002).

2.5 Geoarchaeological Context

To assess the potential for buried archaeological sites within a project area's components, an investigation will often take into account factors that either encouraged or discouraged human use or occupation of certain landforms (e.g., geomorphic setting and distance to water), combined with those that affected the subsequent preservation (i.e., erosion or burial) of those landforms. It is well known, for instance, that pre-contact archaeological sites in California are most often found on relatively level landforms near natural water sources (e.g., spring, stream, river, or estuary), which is often where two or more environmental zones (ecotones) are present. Landforms with this combination of variables are frequently found at or near the contact between a floodplain and a higher and older geomorphic surface, such as an alluvial fan or stream terrace (Hansen 2004:5).

In general, most Pleistocene-age landforms have little potential for harboring buried archaeological resources, as they developed before the first evidence of human migration into North America (ca. 13,000 years ago). However, Pleistocene or older surfaces buried below younger Holocene deposits do have a potential for containing archaeological deposits because of the long-term viability of the platform (or Pleistocene age surface) from which occupation can occur. Holocene alluvial deposits may contain buried soils (paleosols) that represent periods of landform stability before renewed deposition. The identification of paleosols within Holocene-age landforms is of particular interest because they represent formerly stable surfaces that have a potential for preserving archaeological deposits.

The potential for the Project Area to contain buried archaeological resources was investigated using a model formulated by Byrd et al. (2017) for predicting a location's sensitivity for buried Native American archaeological sites based on the age of the landform, slope, and proximity to water. A location is considered to have the highest sensitivity if the landform dates to the Holocene[1] , has a slope of 5 percent or less, is within 150 meters (500 feet) of fresh water, and 150 meters (500 feet) of a confluence. A basic premise of the model is that Native American archaeological deposits will not be buried within landforms that predate human colonization of the area. Calculating these factors using the buried site model (Byrd et al. 2017: Tables 11 and 12), a location's sensitivity was scored on a scale of 1–10 and classed as follows: lowest (<1); low (1-3); moderate (3-5.5); high (5.5-7.5); highest (>7.5).

Based on landform age and the other factors described above, the model determined that the sensitivity for buried sites in the Project Area is considered low. Moreover, a review of Witter et al. (2006), a quaternary geology review of the Bay Area—from which the Byrd et al. (2017) analysis is partially derived— indicates that the Project areas are mostly underlain by pre-Quaternary deposits and bedrock. A small portion of the sites in the Project Areas are underlain by more recent geologic

[1] The Holocene Epoch is the current period of geologic time, which began about 11,700 years ago, and coincides with the emergence of human occupation of the area.

formations. The Pescadero-Cloverdale Road section is underlain by Holocene alluvium, which increases the sensitivity of this location for buried deposits—particularly at Cloverdale Road near Butano Park Road (site No. 190). Whereas some sites within the Loma Mar – Wurr Road section are underlain by Late Pleistocene to Holocene alluvial fan or stream terrace deposits but only in areas directly adjacent to stream watercourses; all other locations are underlain by bedrock deposits. Overall, the geology suggests that the majority of the Project Areas are underlain by bedrock layers or Pre-Pleistocene formations that would not have likely supported substantial human activity due to the antiquity of the landform as pre-dating known human occupation for the area and, as such, would not suggest that buried deposits are likely in this area.

3 Native American Communication and Archival Research

3.1 Native American Communication

An email request was made to the Native American Heritage Commission (NAHC) on August 1, 2023, to review its files for the presence of recorded sacred sites on the Project area. The NAHC responded on August 12, 2023. The results of the Sacred Lands database review were negative for any sacred sites within the Project area.

On October 28, 2024, letters were sent to the 15 tribal contacts provided by the NAHC with follow up emails on November 1, 2024 (**Table 2**). The letters requested any additional information regarding tribal resources and to notify the County if they wished to initiate consultation regarding the Project actions. To date, responses have only been received from Amah Mutsun Tribal Band of Mission San Juan Bautista and The Ohlone Indian Tribe. As planning proceeds, the County will continue to consult with interested tribal representatives regarding the Project and incorporate their concerns into Project planning and mitigation as warranted.

Table 2. Tribal Communication Conducted to Date

Organization/Tribe	Name of Contact	Letter Date	Comments
Amah Mutsun Tribal Band	Valentin Lopez, Chairperson	10/28/2024	No response
Amah Mutsun Tribal Band	Ed Ketchum, Vice-Chairperson	10/28/2024	No response
Amah Mutsun Tribal Band of Mission San Juan Bautista	Irenne Zwierlein, Chairperson	10/28/2024	Responded on 11/01/2024 via email and provided a letter of response and Most Likely Descendant recommendation letter; The County responded on 12/11/2024 and provided a summary of the project's cultural review process and results to date and inquired if the Tribe would like to set up a meeting to discuss the project further; No further response has been received at this time.
Costanoan Rumsen Carmel Tribe	Carla Munoz, Tribal Council	10/28/2024	No response
Costanoan Rumsen Carmel Tribe	Desiree Munoz, Tribal Liaison	10/28/2024	No response
Costanoan Rumsen Carmel Tribe	Henry Muñoz	10/28/2024	No response

Organization/Tribe	Name of Contact	Letter Date	Comments
Costanoan Rumsen Carmel Tribe	Samuel Rodriguez	10/28/2024	No response
Indian Canyon Mutsun Band of Costanoan	Ms. Ann Marie Sayers, Chairperson	10/28/2024	No response
Indian Canyon Mutsun Band of Costanoan	Kanyon Sayers-Roods, MLD Contact	10/28/2024	No response
Muwekma Ohlone Indian Tribe of the SF Bay Area	Richard Massiatt, Councilmember/MLD Tribal Rep.	10/28/2024	No response
Muwekma Ohlone Indian Tribe of the SF Bay Area	Charlene Nijmeh, Chairperson	10/28/2024	No response
The Ohlone Indian Tribe	Vincent Medina, Tribe Consultant	10/28/2024	See response for Andrew Galvan.
The Ohlone Indian Tribe	Desiree Vigil, THPO	10/28/2024	See response for Andrew Galvan.
The Ohlone Indian Tribe	Andrew Galvan, Chairperson	10/28/2024	Responded on 11/02/2024 via email and requested copy of the contact list and Sacred Lands File search results provided by the NAHC; The County responded on 12/11/2024 and provided requested items; No further response has been received at this time.
Wuksachi Indian Tribe/Eshom Valley Band	Kenneth Woodrow, Chairperson	10/28/2024	No response

All correspondence, to date, between the NAHC and contacted tribes is provided in **Appendix A**.

3.2 Archival Research and Results

A record search was requested at the Northwest Information Center (NWIC) to determine whether any portions of the Project area had been previously surveyed for cultural resources and to identify the presence of any previously recorded cultural resources within the Project area, as well as a 0.25-mile buffer (the search radius). The records search was received on May 24, 2024 (NWIC File No. 23-1700). See **Appendix B** for detailed summaries of results for this records search.

Other sources of information reviewed included, but were not limited to, the current listings of properties on the *National Register of Historic Places, California Historical Landmarks, California Register of Historical Resources, California Points of Historical Interest*, as listed in the Office of Historic

Preservation's (OHP's) Historic Property Directory, and the Built Environment Resource Directory (BERD) for San Mateo County (OHP 2020).

No resources have been previously recorded within the Project areas. Four resources have been previously recorded within the search radius (see **Appendix B**); none have been identified as CRHR or NRHP listed historical resources or properties.

Table 3. Previously Recorded Resources within the Records Search Radius

Primary No.	Name/Description	Type	Age
41-001991	420 Wurr Road	Building	Historic
41-002190	Log Cabin Site	Building, Site	Historic
41-002221	CRF-PESCADERO-01	Structure	Historic
41-002696	Memorial Park Wastewater Treatment Facility	Building, Structure	Historic

According to the record search results, the boundaries of three previous studies intersect the Project areas, specifically the locations along the Loma Mar – Wurr Road section. All of these investigations were negative for cultural resources or archaeological deposits. Once investigation, S-027920, was conducted in the forested areas within and south of Wurr Road that covered approximately a ½-square miles (Tunheim 2002). This survey did not identify any cultural resources or archaeological deposits. Eleven previous studies intersect the search radius (see **Appendix B**).

4 Inventory Methods and Results

Figure 3 depicts each location and the areas surrounding the locations that were surveyed that constitute the APE.

A pedestrian survey of each culvert repair location was conducted by Montrose archaeologist Brian Sandford on June 8, 2024. Each location was surveyed, to the extent feasible, as well as a 100-foot buffer surrounding each side of culvert footprint and the surrounding area. **Table 4** lists the locations and the conditions encountered, as well as the results.

Table 4. Survey Methods and Results for Each Project Area

Project Culverts by Road Name Section	Methods	Comments	Results
Pescadero Creek Road	Intensive (10-meter transects)	Soil is a dark brown clay silt; high levels of organic vegetation; some root disturbance observed	Negative for cultural deposits
Wurr Road	Intensive (10-meter transects)	Soil includes brown and black clay, brown clay-loam, and brown-dark brown loam; high levels of organic vegetation; some root disturbance observed	Negative for cultural deposits
Cloverdale Road	Intensive (10-meter transects)	Limited native surface visibility due to dense vegetation and presence of sacked concrete	Negative for cultural deposits

Due to the heavy vegetation and grass cover, as well as substantial roadway hardscaping, the overall visibility of the native surface was limited from 0 to 30 percent. In addition, the majority of the culvert locations are located within very steeply sloped locations that also presented difficulties in inspecting the ground surface. However, all areas of existing native surface exposure, as well as areas exposed using a shovel or trowel to view the native surface, were inspected. A total of 5 shovel test pits or trowel scrapes were conducted. A total of about 26-acres were surveyed[2] (see Figure 3).

At the time of the pedestrian survey, the western downstream portion of Site 190 was not included in the project footprint and was therefore not included in the survey area. The revised and expanded footprint, which adds approximately 0.25-acres, was not revisited for pedestrian survey. The addition of the expanded area along the creek bed, which is the only area of the expanded project APE that was not surveyed, has environmental conditions that preclude effective archaeological survey, such as near-zero surface visibility due to vegetation cover and the surface of the creek bed itself that would not be a platform for any sustained human activity. However, as discussed in the section below, an archaeological monitor is recommended to be on-site during the construction of Location 190 due to the higher potential for subsurface deposits in the areas above the streambed in flat, alluvial areas at this location. As a result, any deposits or resources that may occur within the project footprint will be more likely identified during the monitoring on-site.

[2] In some cases areas were surveyed that represented culverts that were listed for repair at the time of the survey that are no longer slotted for repair for the purposes of the current project.

No evidence of archaeological deposits was identified throughout the surveys. **Appendix C** contains example photos of the Project areas and surroundings.


La Honda - Pescadero Creek Road | Number: 128.1 (staging)
La Honda - Pescadero Creek Road | Number: 128.1
Pescadero Rd
Pescadero Rd
Project Location APE
Shovel Test Probe
Survey Area
N
0 62.5 125 250 Feet
MONTROSE ENVIRONMENTAL
Haskins Hill
Figure 3
Area of Potential Effects
Page 1 of 12
Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



Figure 3
Area of Potential Effects

Page 2 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

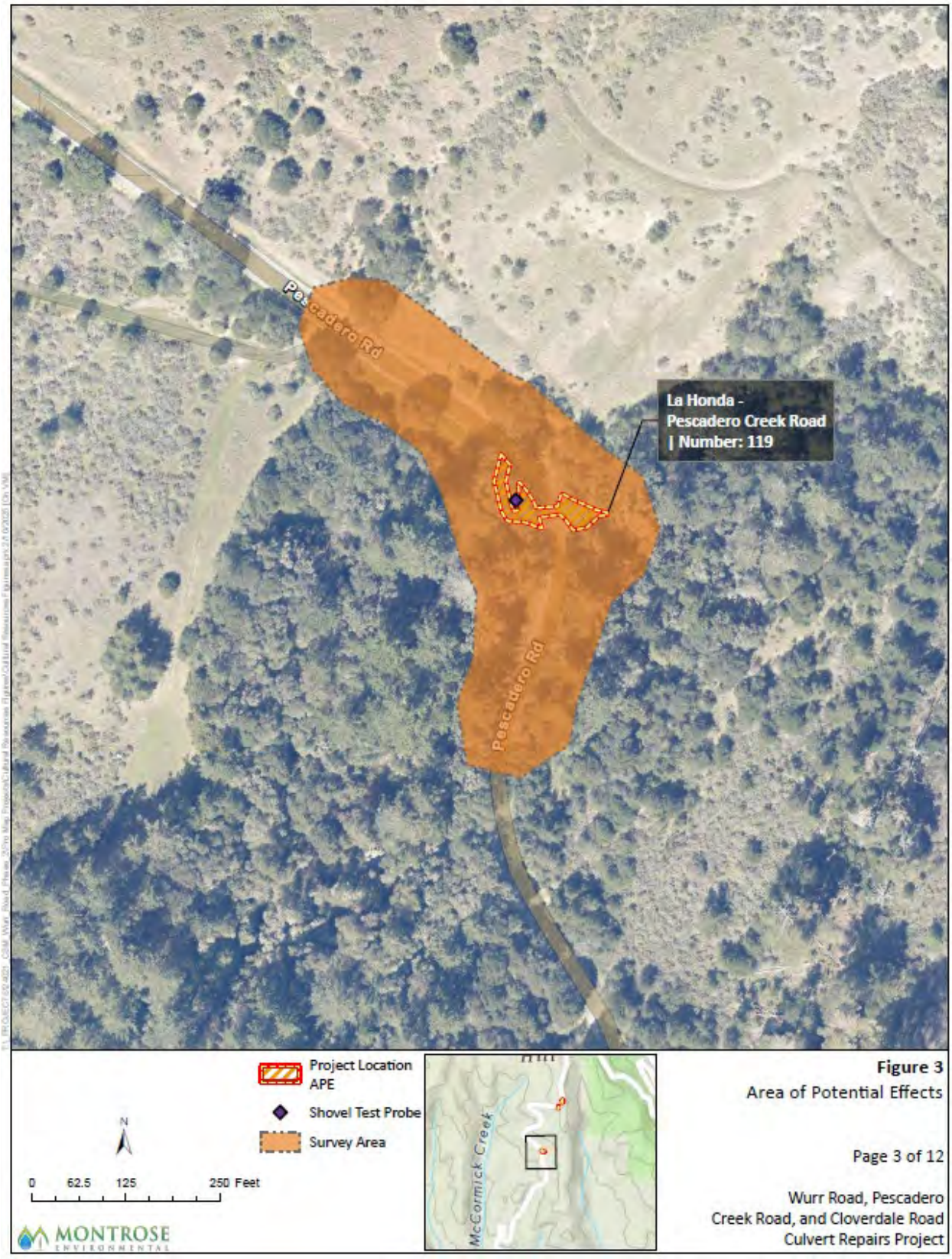


Figure 3
Area of Potential Effects

Page 3 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

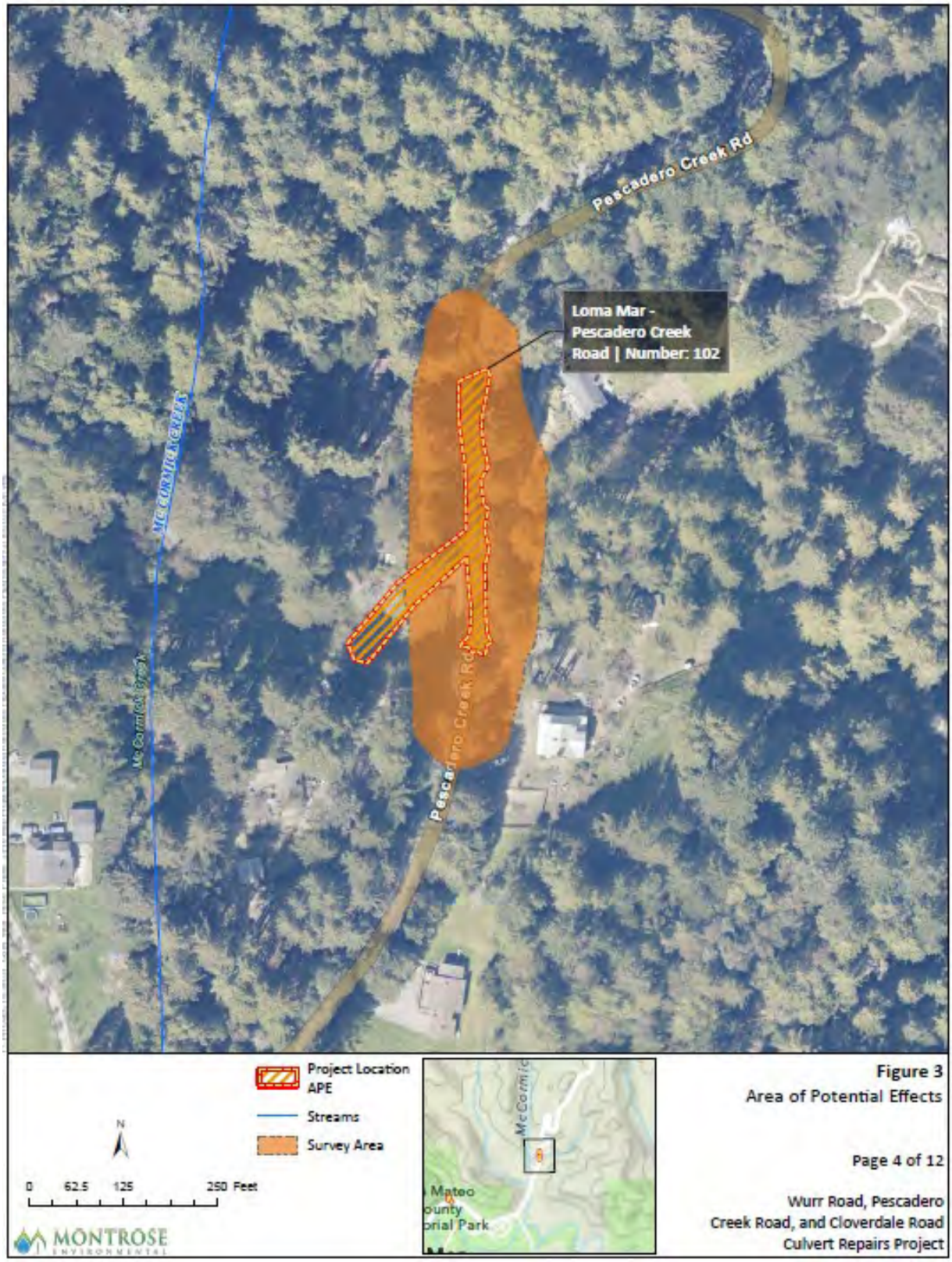


Figure 3
Area of Potential Effects

Page 4 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

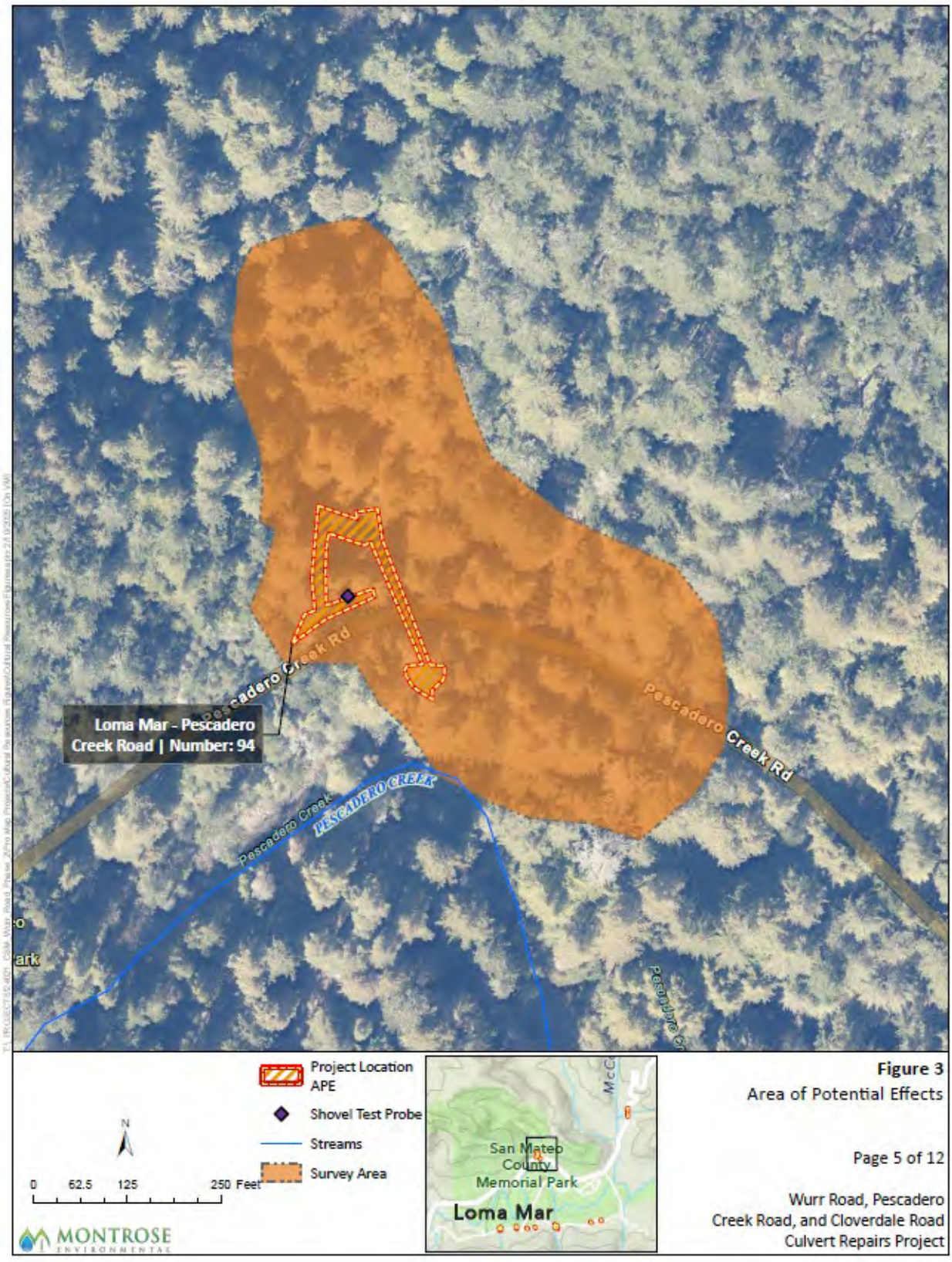


Figure 3
Area of Potential Effects

Page 5 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

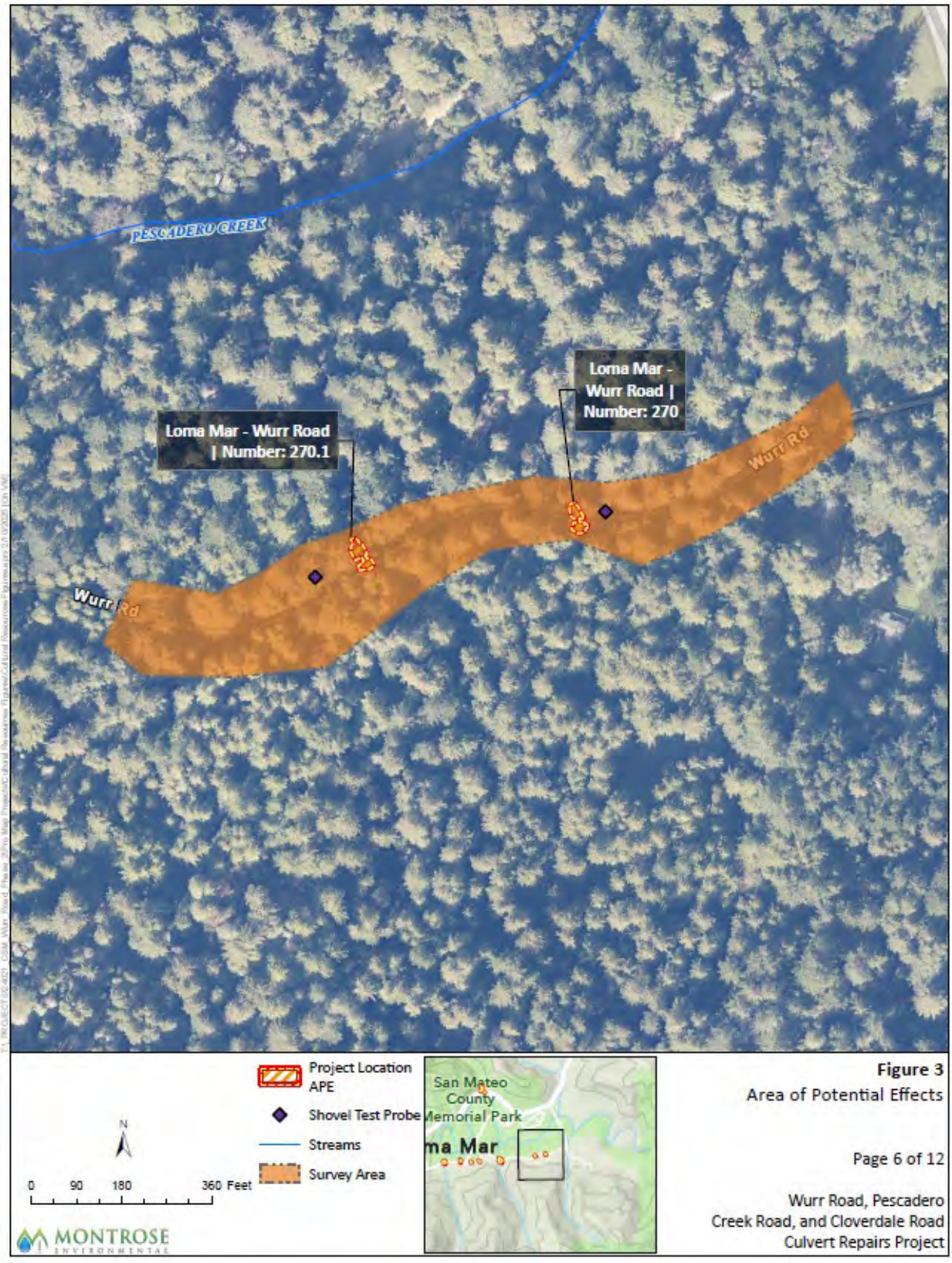


Figure 3
Area of Potential Effects

Page 6 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



Figure 3
Area of Potential Effects

Page 7 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

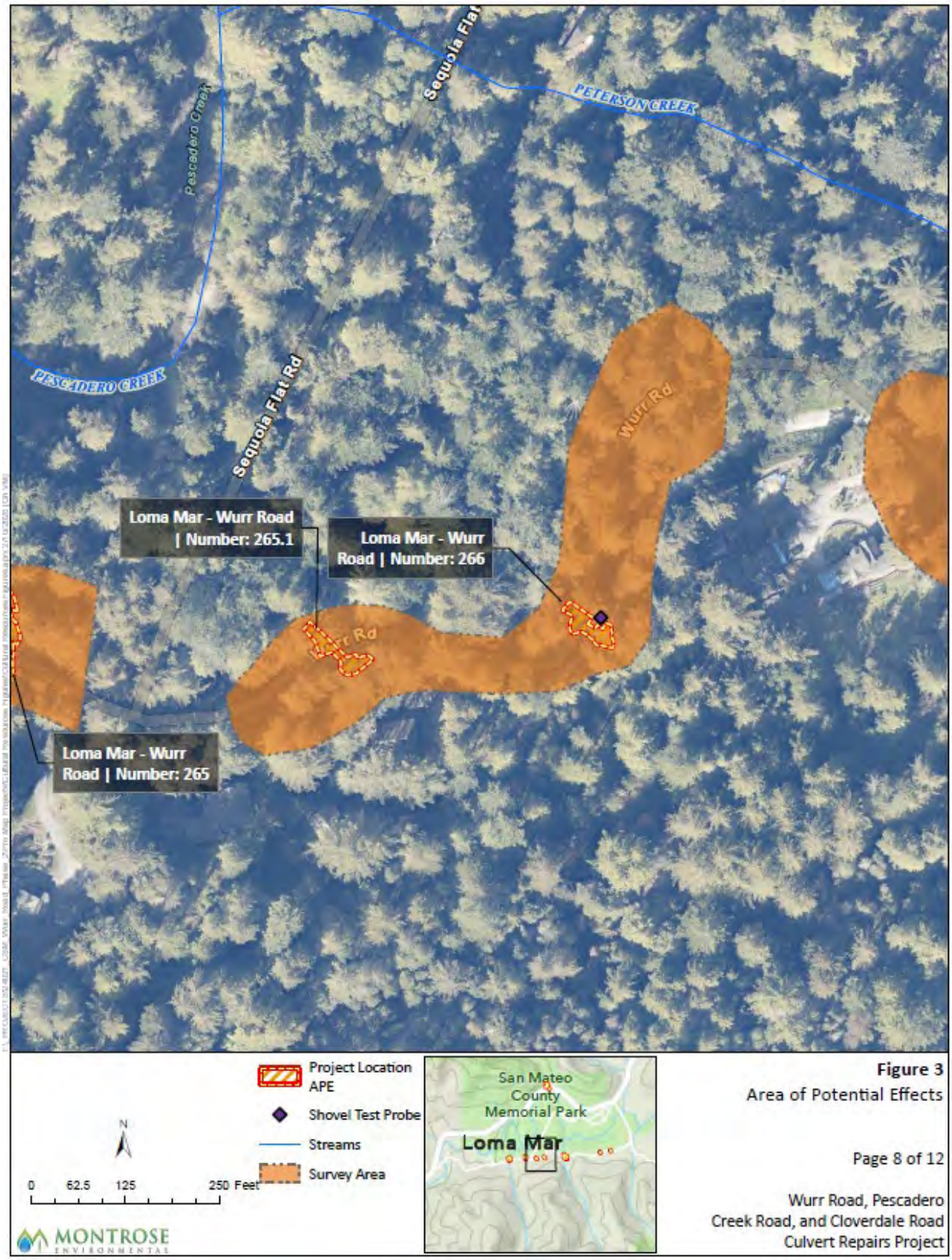
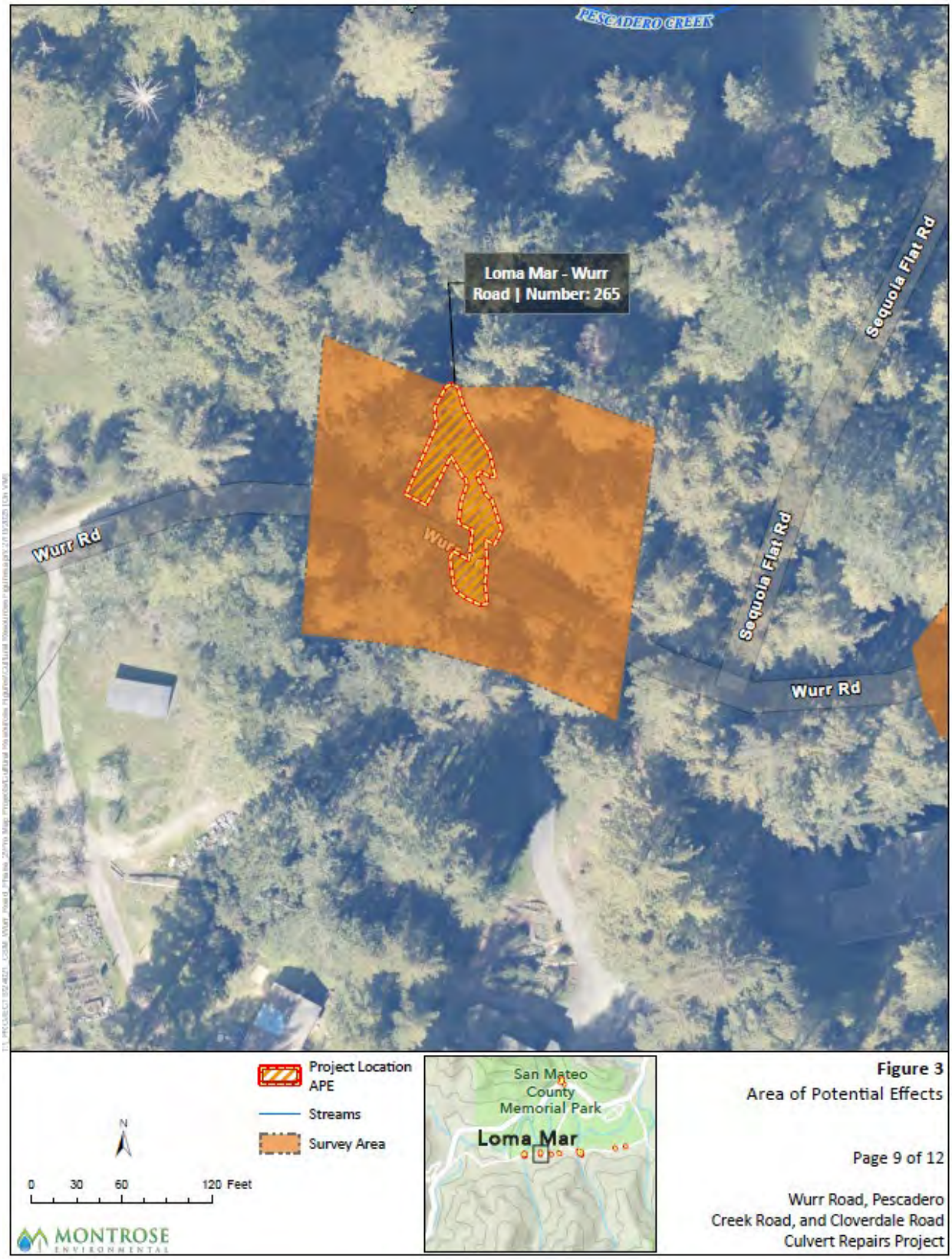


Figure 3
Area of Potential Effects

Page 8 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project


PESCADERO CREEK
Loma Mar - Wurr Road | Number: 265
Sequoia Flat Rd
Sequoia Flat Rd
Wurr Rd
Wurr Rd
Wurr
Project Location APE
Streams
Survey Area
N
0 30 60 120 Feet
MONTROSE ENVIRONMENTAL
San Mateo County Memorial Park
Loma Mar
Figure 3
Area of Potential Effects
Page 9 of 12
Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

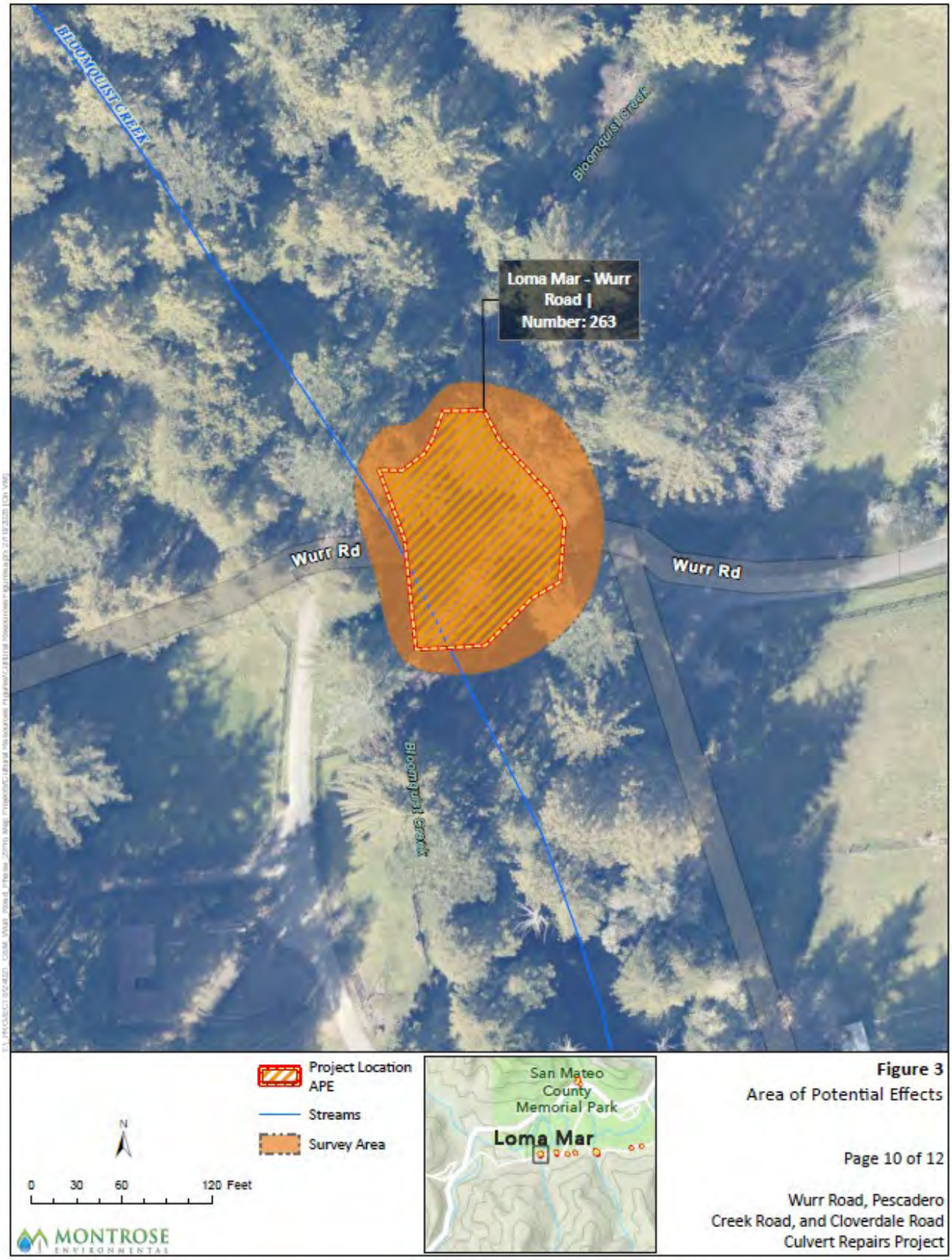


Figure 3
Area of Potential Effects

Page 10 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

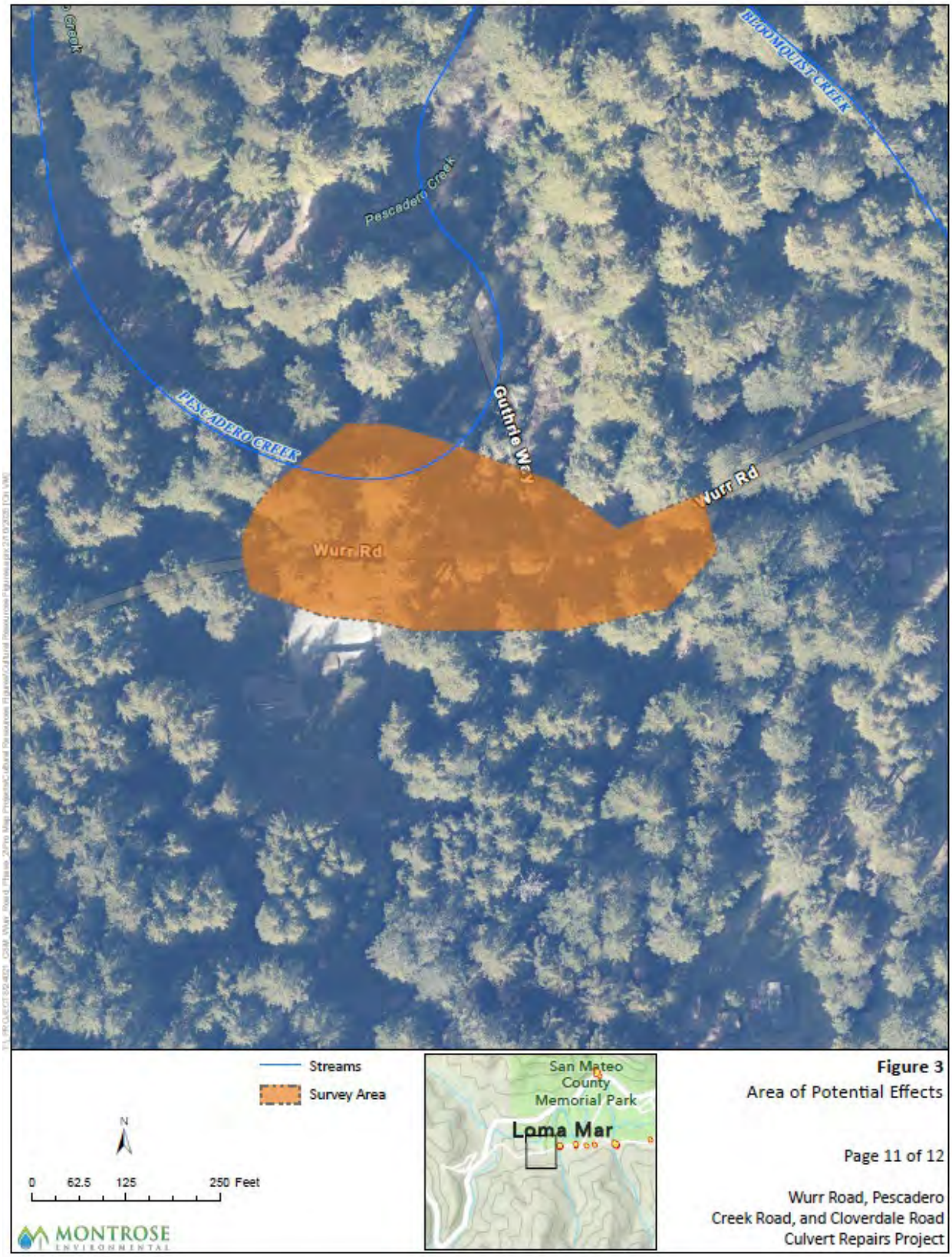


Figure 3
Area of Potential Effects

Page 11 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

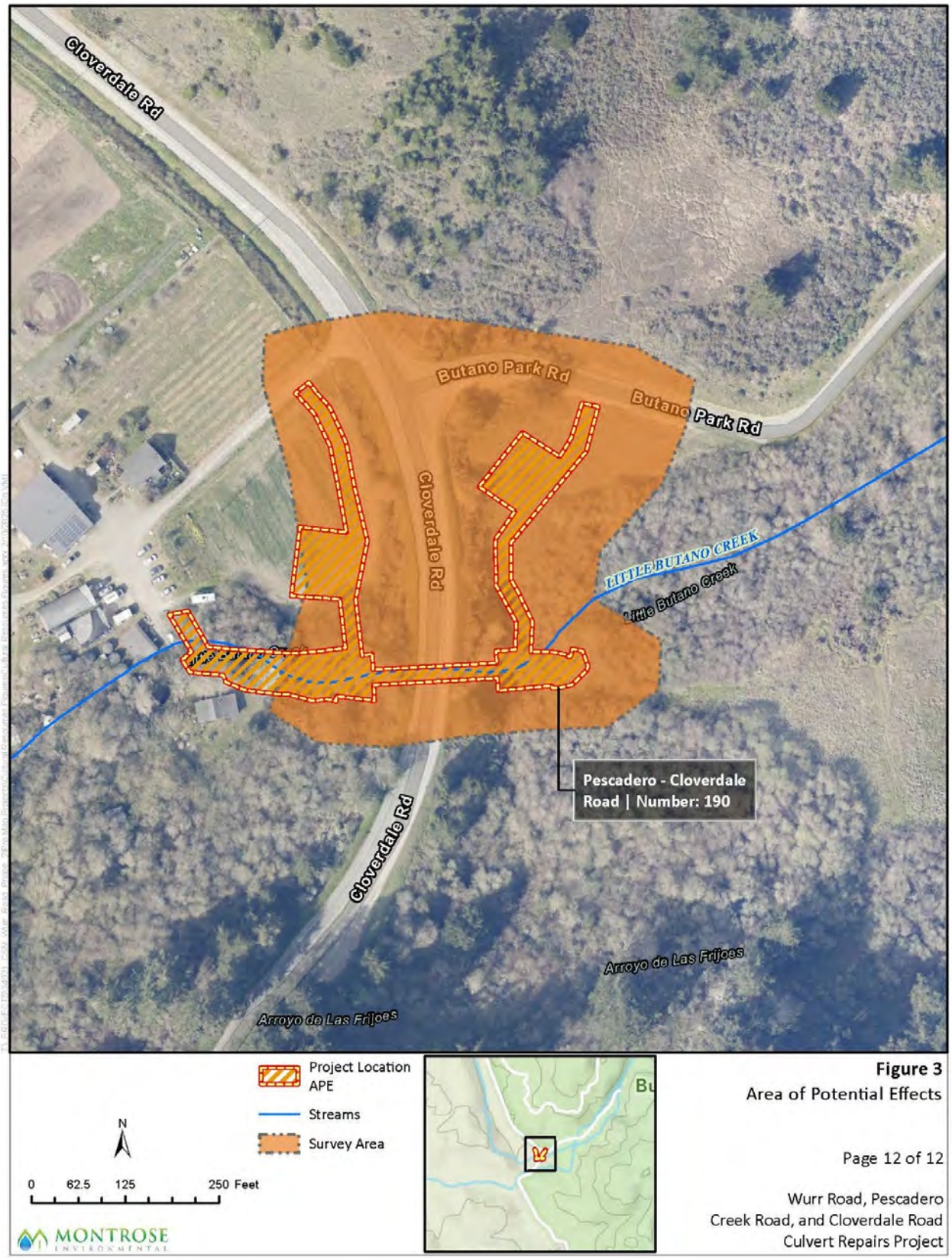


Figure 3
Area of Potential Effects

Page 12 of 12

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

5 Study Findings and Management Recommendations

A cultural resource survey of the Project area was conducted on June 8, 2024, by qualified archaeologist Brian Sanford, B.S. The areas surveyed are substantially altered by roadway hardscaping and channelization; however, areas of exposed native surface were inspected using shovel test pits and trowel scrapes when necessary. No archaeological deposits or built environment resources were identified. As discussed in the geoarchaeological context, most of the individual locations that will be subject to repairs and replacements are located along road cuts and steep slopes within very difficult terrain, which would not suggest that substantial archaeological deposits would be present as well as the potential for buried deposits is considered low.

However, the culvert repairs at the location Cloverdale Road, Site No. 190 (see Figure 3, Sheet 11) would have the highest potential for archaeological deposits due to its location on a stream (Little Butano Creek) and relatively flat, alluvial terrain. The Witter (2006) analysis suggests that this location is underlain by unconsolidated deposits. The proposed actions at this site include to sediment removal from a large box culvert, demolition of existing concrete structures both upstream and downstream of the double box crossing, and channel restoration that would require ground disturbance. As previously discussed in Section 4, approximately 0.25-acres of Site No. 190 were not subject to pedestrian survey. Although the survey of this location was negative, due to the higher sensitivity of this location for both surface and buried archaeological deposits, as well as the overall lack of surface visibility, it is recommended that a qualified archaeologist monitor the ground disturbing activities during the project actions at this location. The monitoring archaeologist will have the authority to discontinue monitoring if the undertaking does not appear to create a mechanism to cause deleterious effects to an unknown archaeological resource.

Based on these results, the Proposed Project will have no adverse effect to historic properties (according to 36 CFR Section 800.4(d)(1)) or an historical resource (per PRC 5024.1(k).

If pre-contact or historic-era materials are encountered during fieldwork, all work in the vicinity should halt until a qualified archaeologist can evaluate the discovery and make recommendations in accordance with 36 CFR Section 800.13(b). Pre-contact materials would most likely include obsidian and chert flaked-stone tools (e.g., projectile points, knives, choppers), tool-making debris, or milling equipment such as mortars and pestles. Historic-era materials might include remains of agricultural implements; stone or concrete footings and walls; and deposits of metal, glass, and/or ceramic refuse.

The possibility of encountering human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, work must halt in the vicinity of the remains and, as required by law, the San Mateo County coroner must be notified immediately. An archaeologist should also be contacted to evaluate the find. If human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of that determination. Pursuant to California PRC Section 5097.98, the NAHC, in turn, will immediately contact an individual who is most likely descended from the remains (the "Most Likely Descendant"). The Most Likely Descendant has 48 hours from the time access to the finds is granted to inspect the site and recommend treatment of the remains. The landowner is obligated to work with the Most Likely Descendant in good faith to find a respectful resolution to the situation and entertain all reasonable options regarding the Most Likely Descendant's preferences for treatment. The analysis and reporting were carried out by professionals who meet the U.S. Secretary of the Interior's Professional Standards for Archaeology (per Title 48 of the CFR, Section 44716, as amended in 1983).

6 References

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Appendix A
Native American Correspondence

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Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

■ **CEQA Tribal Consultation List (AB 52)** – ***Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☐ **General Plan (SB 18)** - ***Per Government Code § 65352.3.***

Local Action Type:

☐ **General Plan** ☐ **General Plan Element** ☐ **General Plan Amendment**

☐ **Specific Plan** ☐ **Specific Plan Amendment** ☐ **Pre-planning Outreach Activity**

Required Information

Project Title: San Mateo County Wurr Road Culverts Project

Local Government/Lead Agency: San Mateo

Contact Person: Dean Martorana

Street Address: 1 Kaiser Plaza, Suite 340

City: Oakland **Zip:** 94612

Phone: 916-205-6087 **Fax:**

Email: dmartorana@montrose-env.com

Specific Area Subject to Proposed Action

County: San Mateo **City/Community:** Pescadero

Project Description:

The proposed project entails the repair and replacement of various culverts along Pescadero Road.

Additional Request

■ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): La Honda

Township: 7S **Range:** 4W **Section(s):** 26,27,34,4,3

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
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Pauma-Yuima Band of Luiseño Indians

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

June 12, 2024

Dean Martorana
Montrose Environmental

Via Email to: dmartorana@montrose-env.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, San Mateo County Wurr Road Culverts Project, San Mateo County

To Whom It May Concern:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

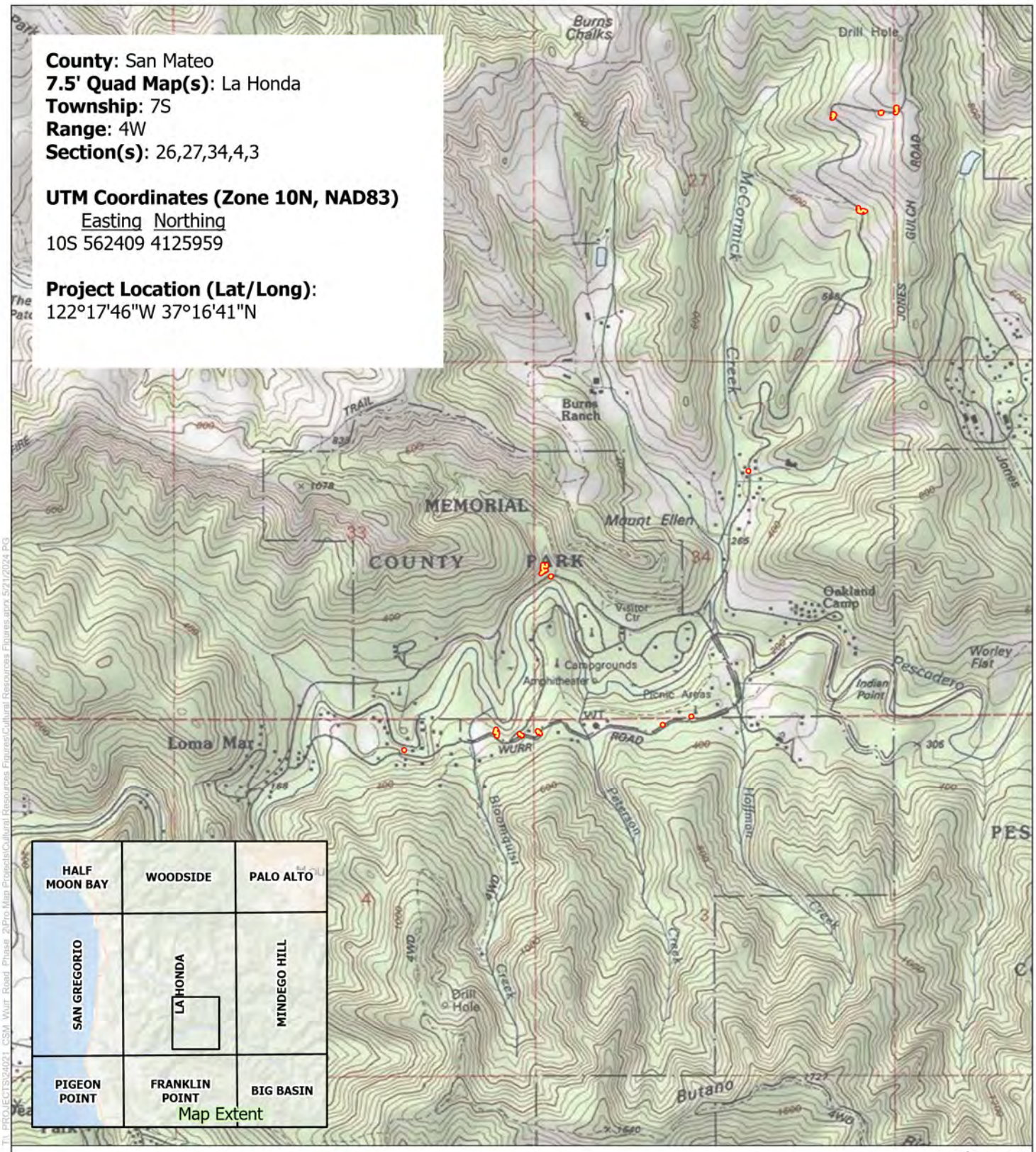


Figure 2
Project Location

MONTROSE ENVIRONMENTAL

County of San Mateo - Wurr Road
Culverts Project

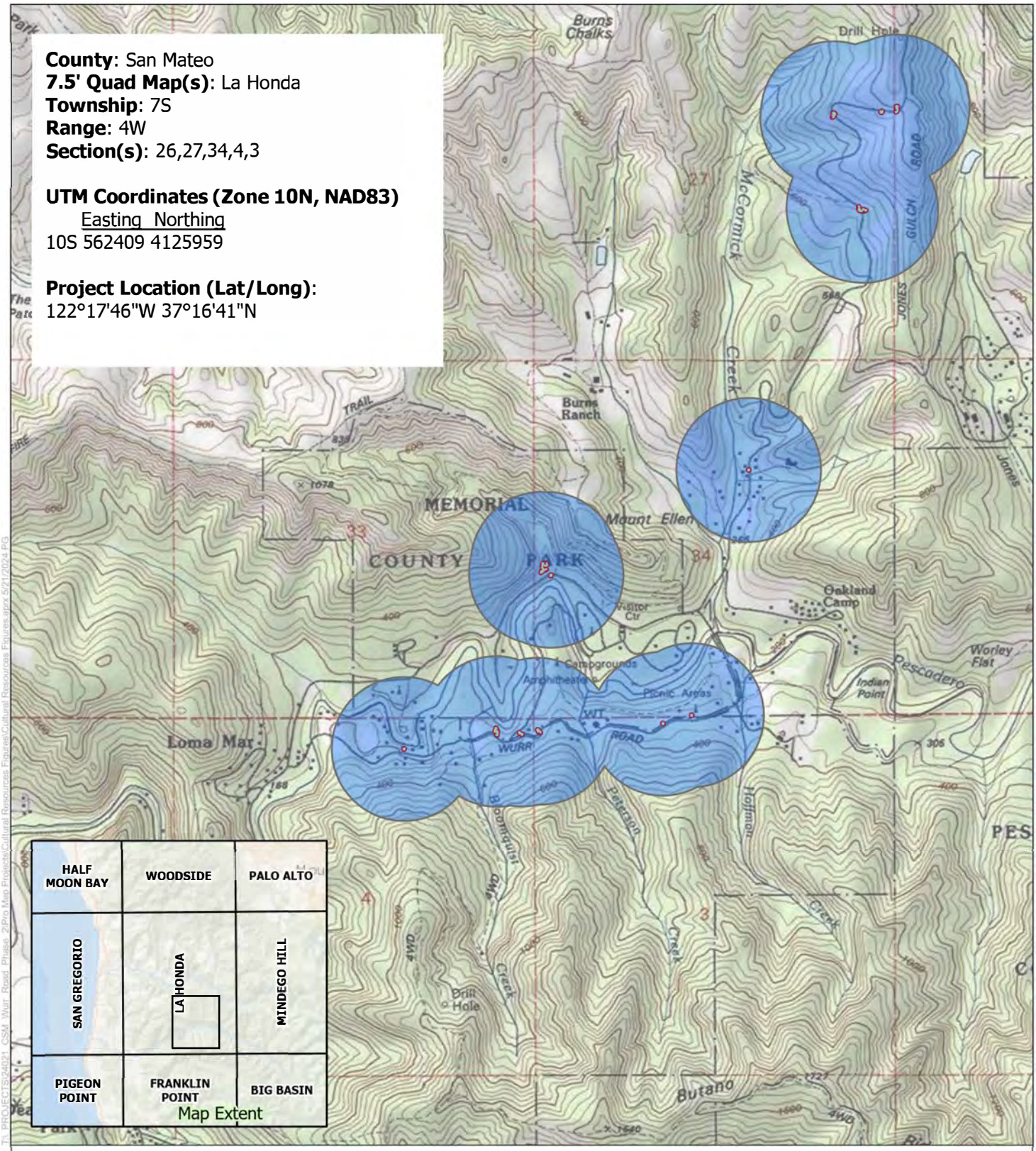


Figure 1 Project Location

MONTROSE ENVIRONMENTAL

County of San Mateo - Wurr Road Culverts Project

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Valentin Lopez, Chairperson

Amah Mutsun Tribal Band

P.O. Box 5272 Galt, CA, 95632

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Valentin Lopez, Chairperson,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

A record search from the Northwest Information Center revealed that no previously recorded pre-contact archaeological resources occur within the proposed culvert repair locations or within the quarter-mile search radius. An archaeological survey was conducted at each location, including an approximately 200-foot buffer, that did not identify any cultural deposits.

A search of the Sacred Lands Files by the Native American Heritage Commission (NAHC) was also conducted for the Project vicinity, which did not identify a sacred site within the vicinity of the project area. The NAHC suggested that local tribes could have information that may not be on file at the NAHC, and your contact information was provided on their List of Native American Contacts for the area as a traditionally and culturally affiliated California Native American tribal representative. We would appreciate hearing any concerns you have regarding tribal cultural resources (as defined by Public Resources Code 21074) within the Project area so that this information can be further incorporated into project planning, and ensure our work avoids impacts to tribal cultural resources. We respectfully request input from you within 30

days of receipt of this letter.

Your comments and concerns are important to us, and we look forward to hearing from you. Please contact me or Sina Oshaghi at (650) 363-4100 if you have any questions. They can also be reached by e-mail at:

wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Enclosures: Figure 1 - Location Map

Cc: Krzysztof Lisaj, Deputy Director, Engineering and Resource Protection
Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562071	4126133

Project Location (Lat/Long):
122°17'59"W 37°16'47"N

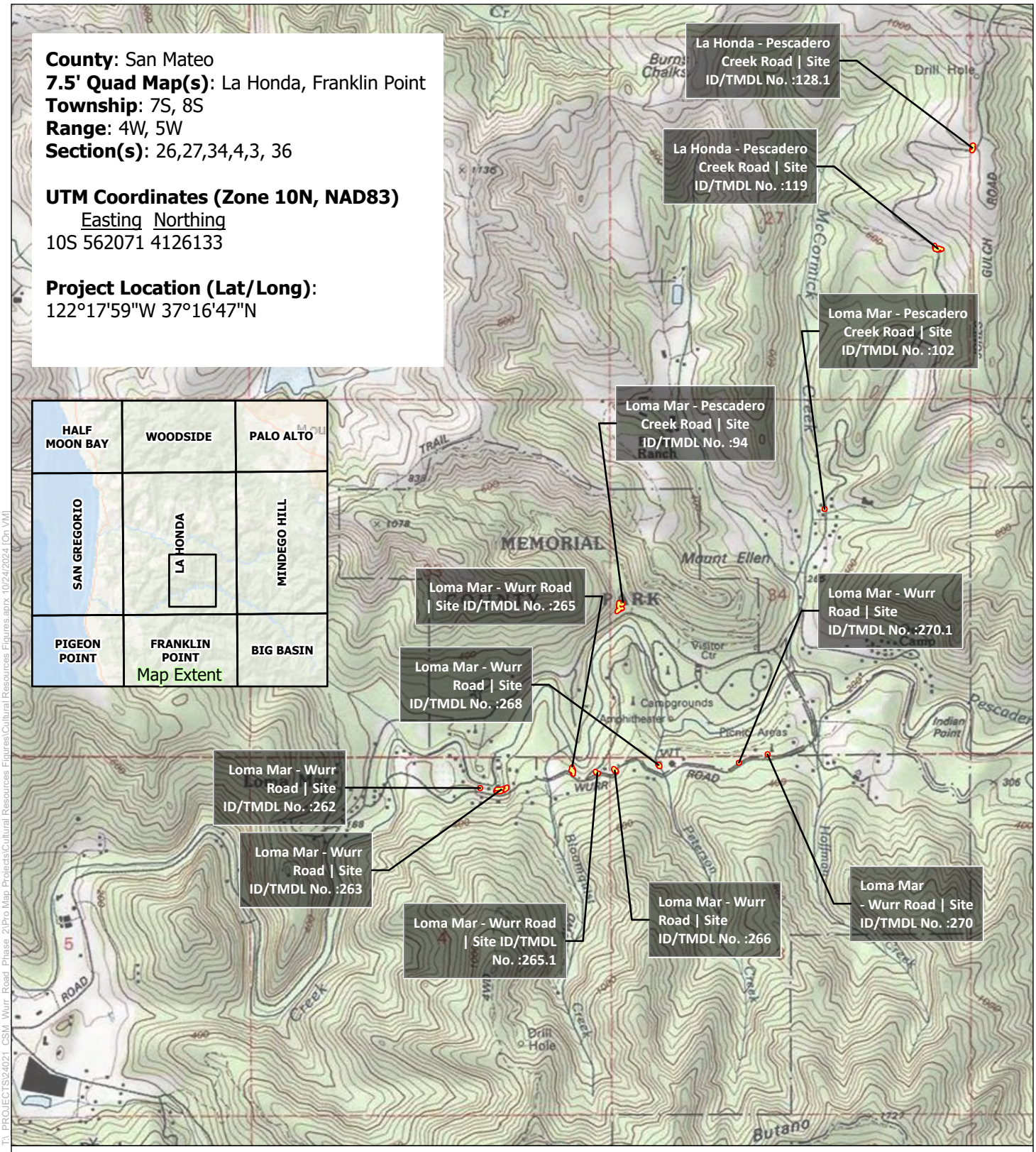
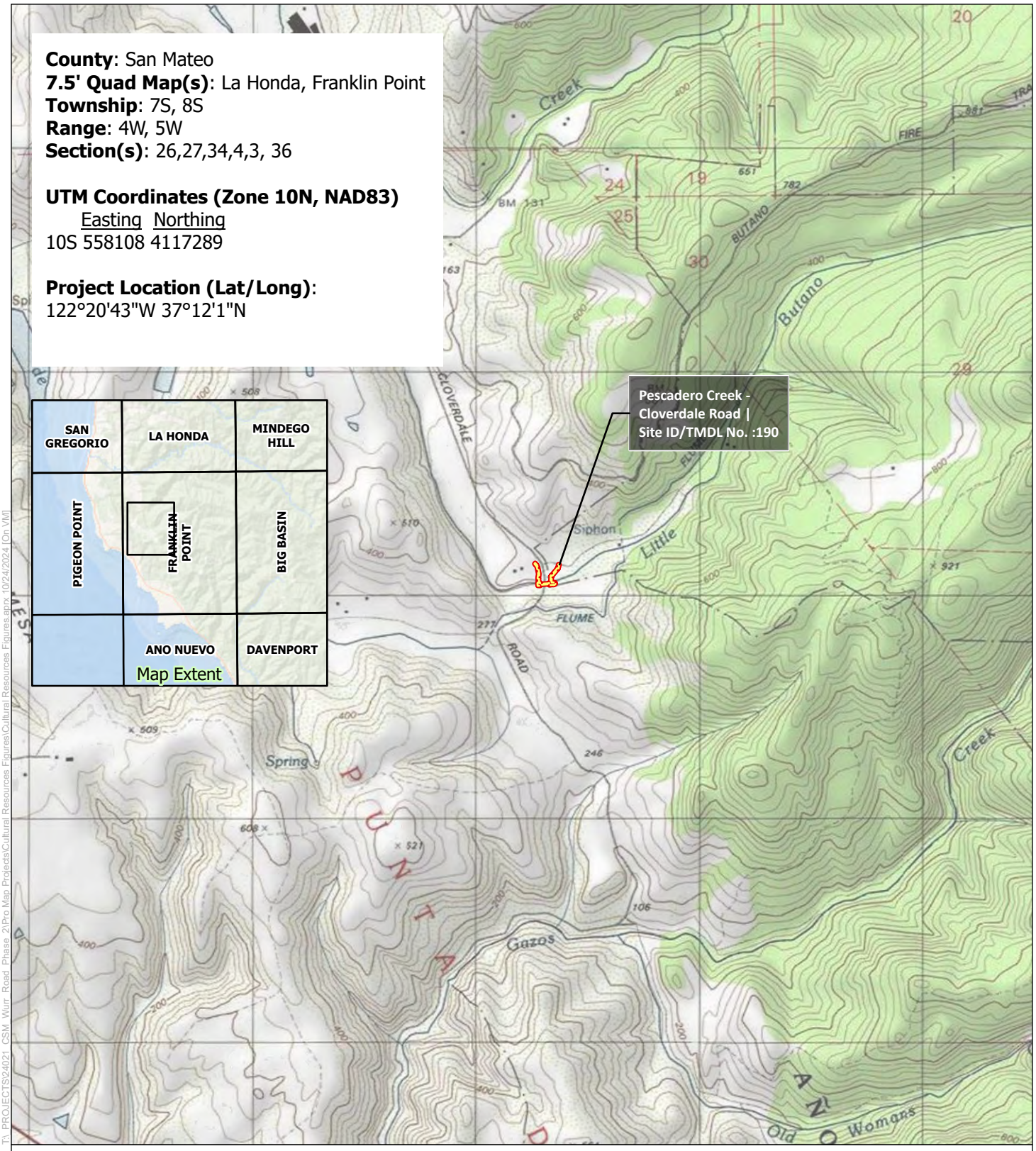


Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

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Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Irene Zwierlein, Chairperson

Amah MutsunTribal Band of Mission San Juan Bautista

3030 Soda Bay Road Lakeport, CA, 95453

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Irene Zwierlein, Chairperson,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Enclosures: Figure 1 - Location Map

Cc: Krzysztof Lisaj, Deputy Director, Engineering and Resource Protection
Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
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Range: 4W, 5W
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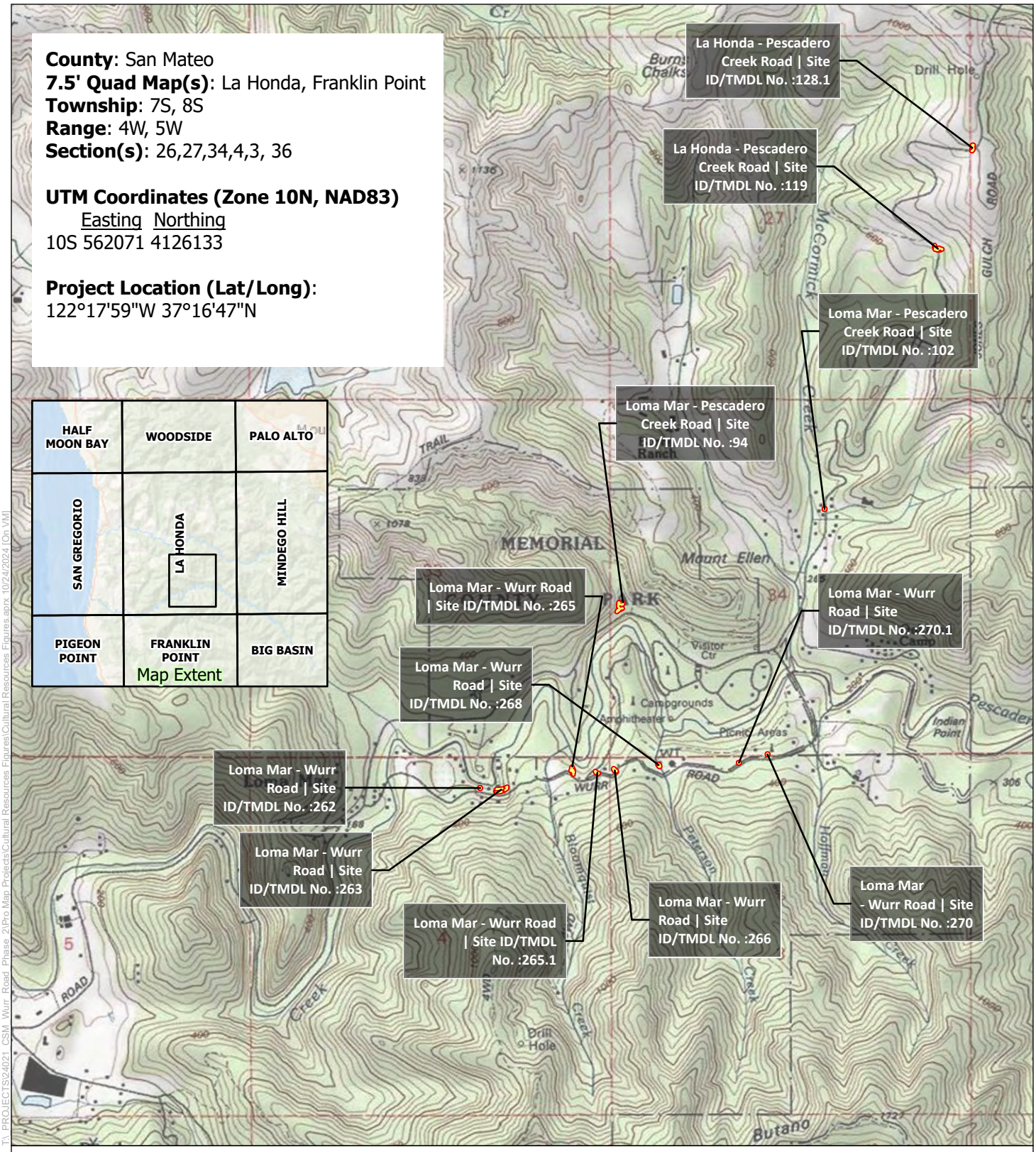
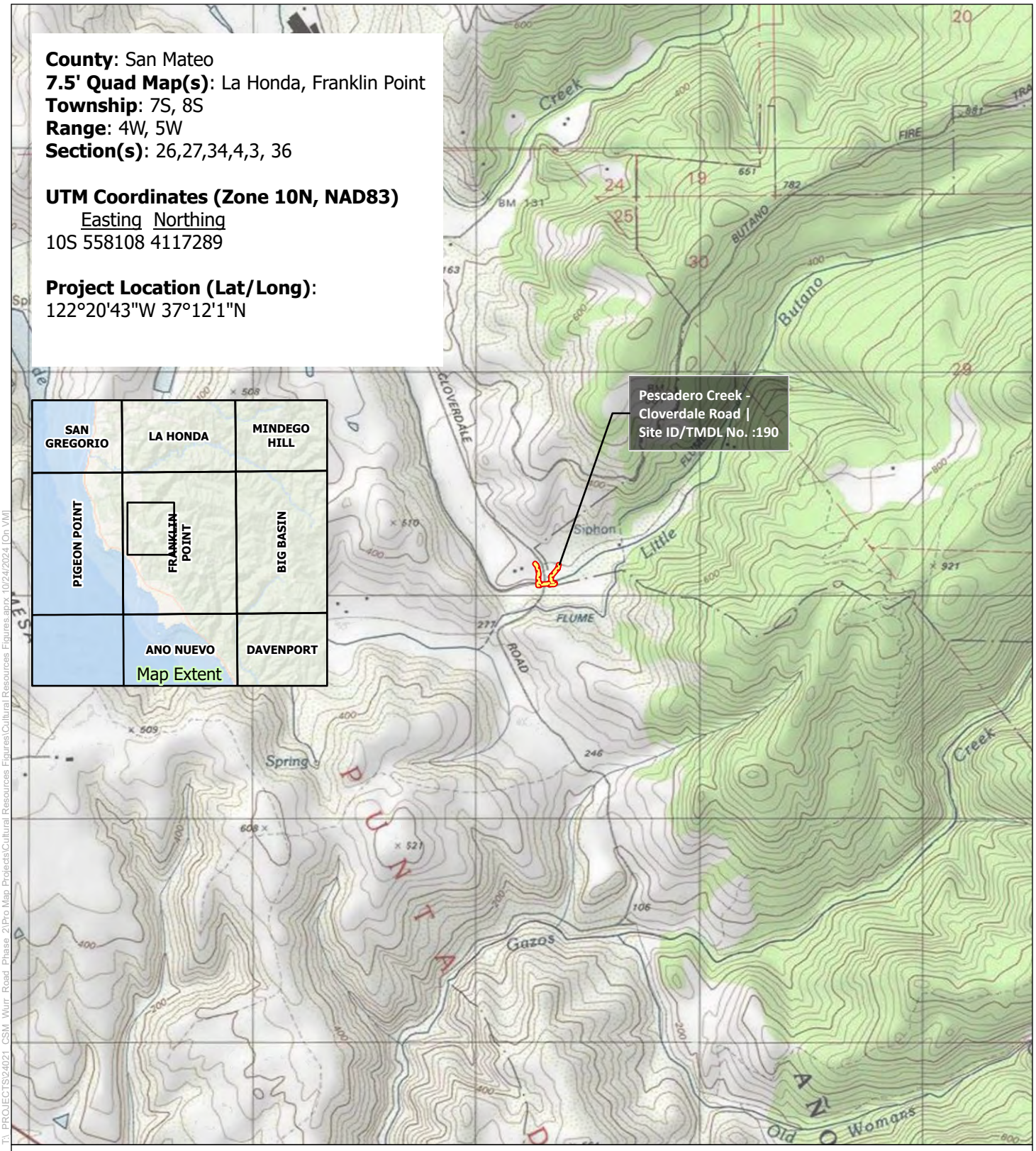


Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

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Figure 1
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Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Carla Munoz, Tribal Council

Costanoan Rumsen Carmel Tribe

P.O. BOX 29352 SAN FRANCISCO CA 94129

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Carla Munoz, Tribal Council,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562071	4126133

Project Location (Lat/Long):
122°17'59"W 37°16'47"N

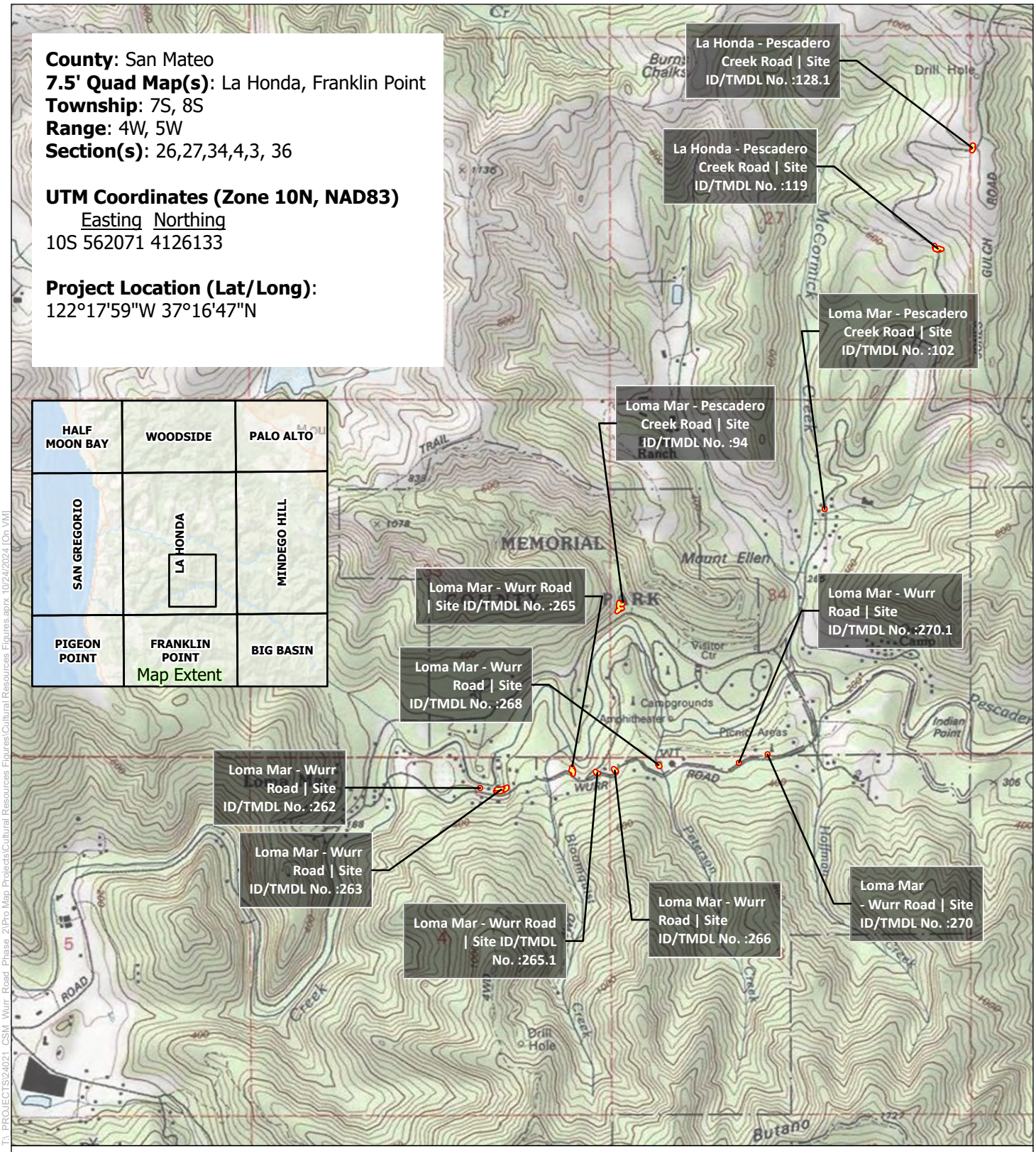
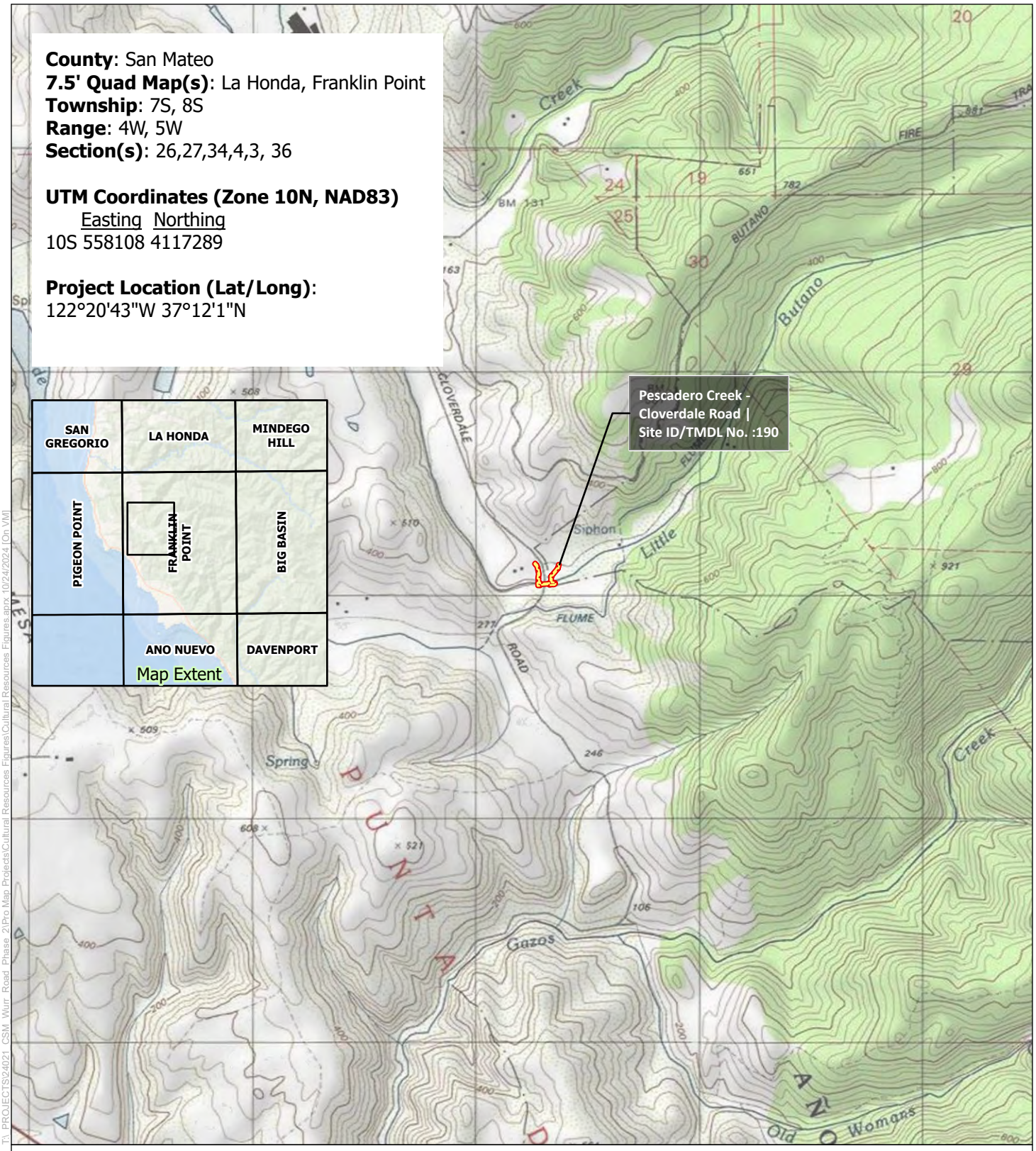


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MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
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650-363-4100 T
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www.smcgov.org

October 28, 2024

Desiree Munoz, Tribal Liaison

Costanoan Rumsen Carmel Tribe

P.O. BOX 29352 SAN FRANCISCO CA 94129

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Desiree Munoz, Tribal Liaison,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
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Project Location (Lat/Long):
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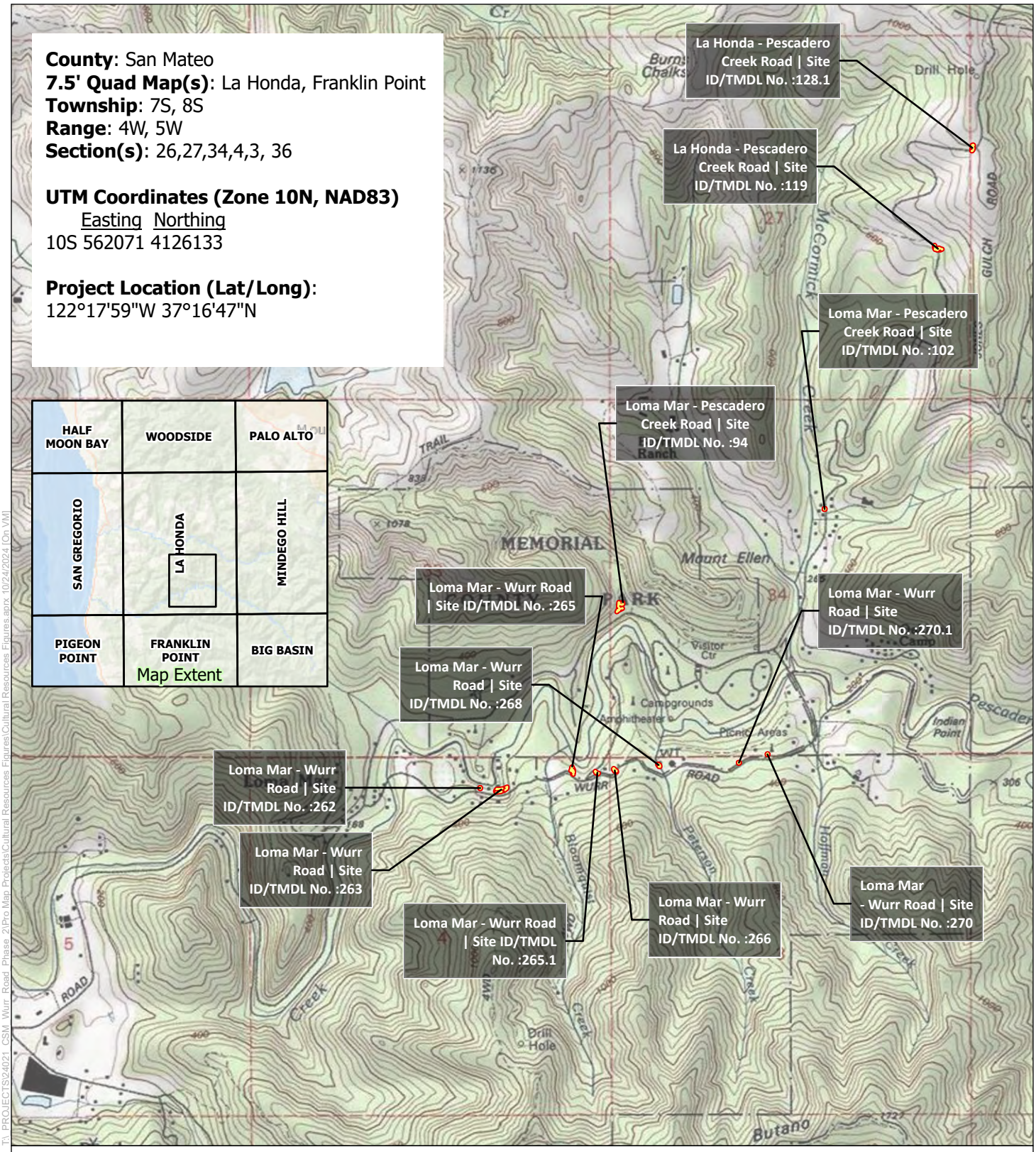
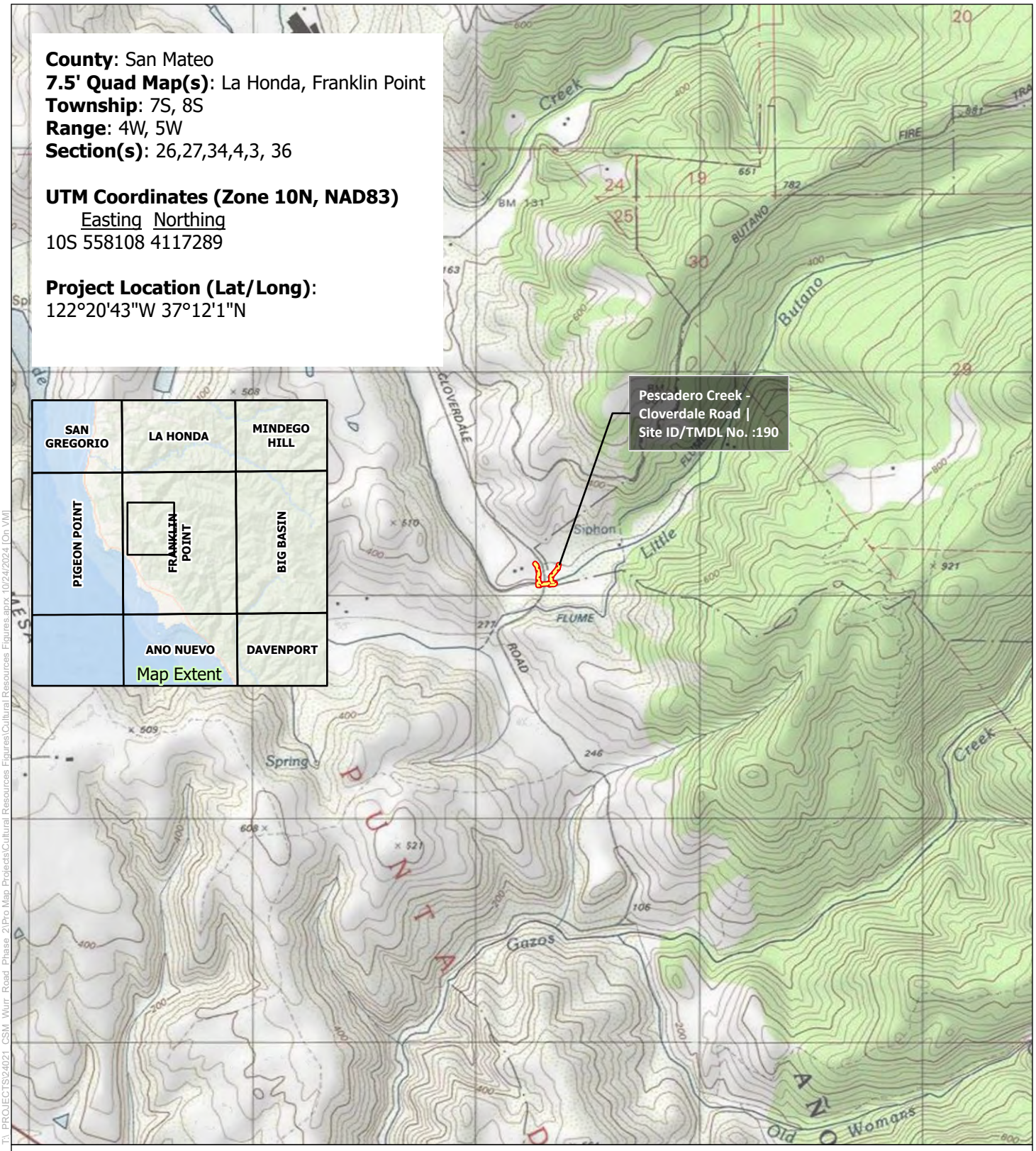


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MONTROSE ENVIRONMENTAL

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Director

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www.smcgov.org

October 28, 2024

Henry Muñoz

Costanoan Rumsen Carmel Tribe

P.O. BOX 29352 SAN FRANCISCO CA 94129

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Henry Muñoz,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
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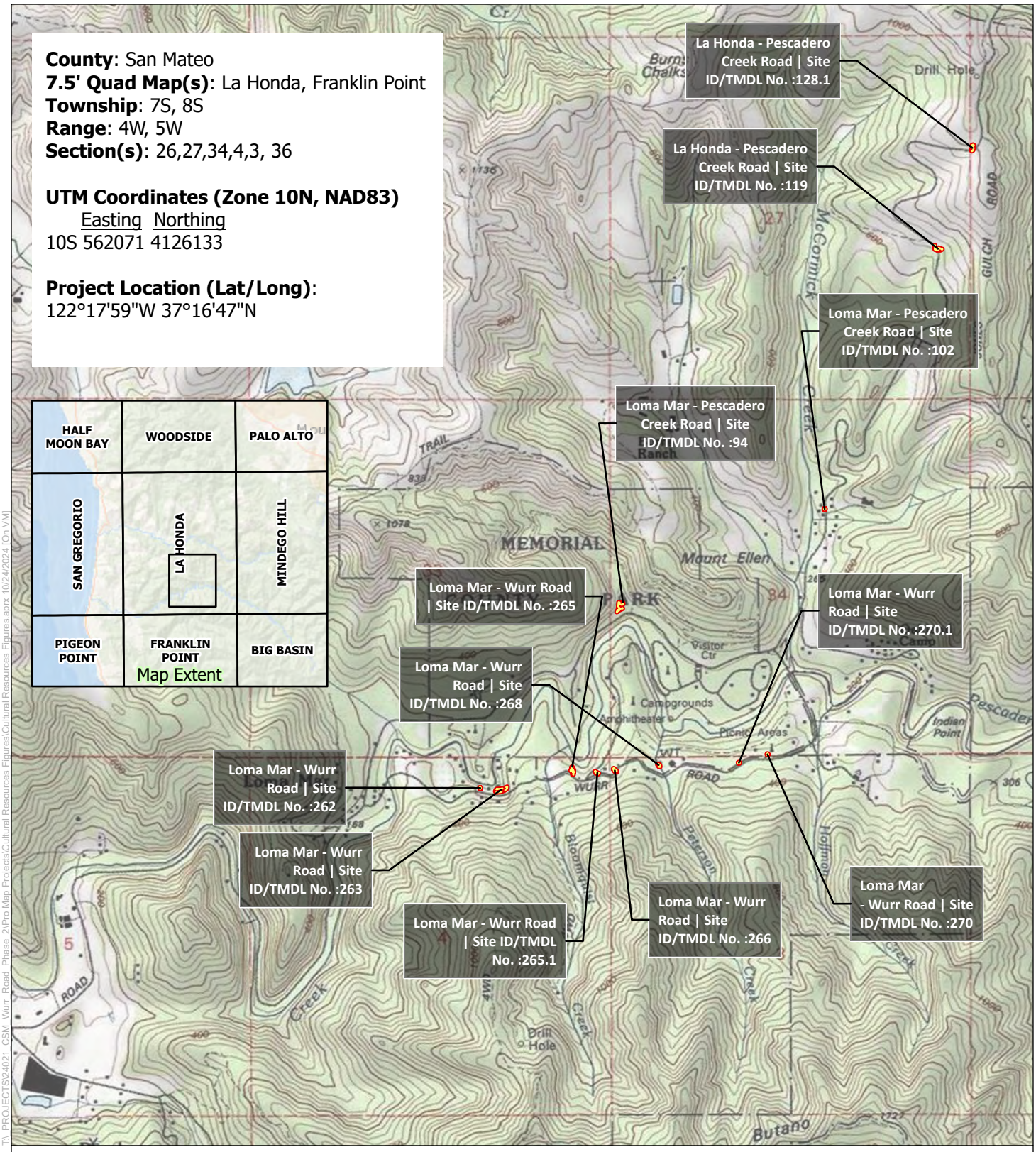
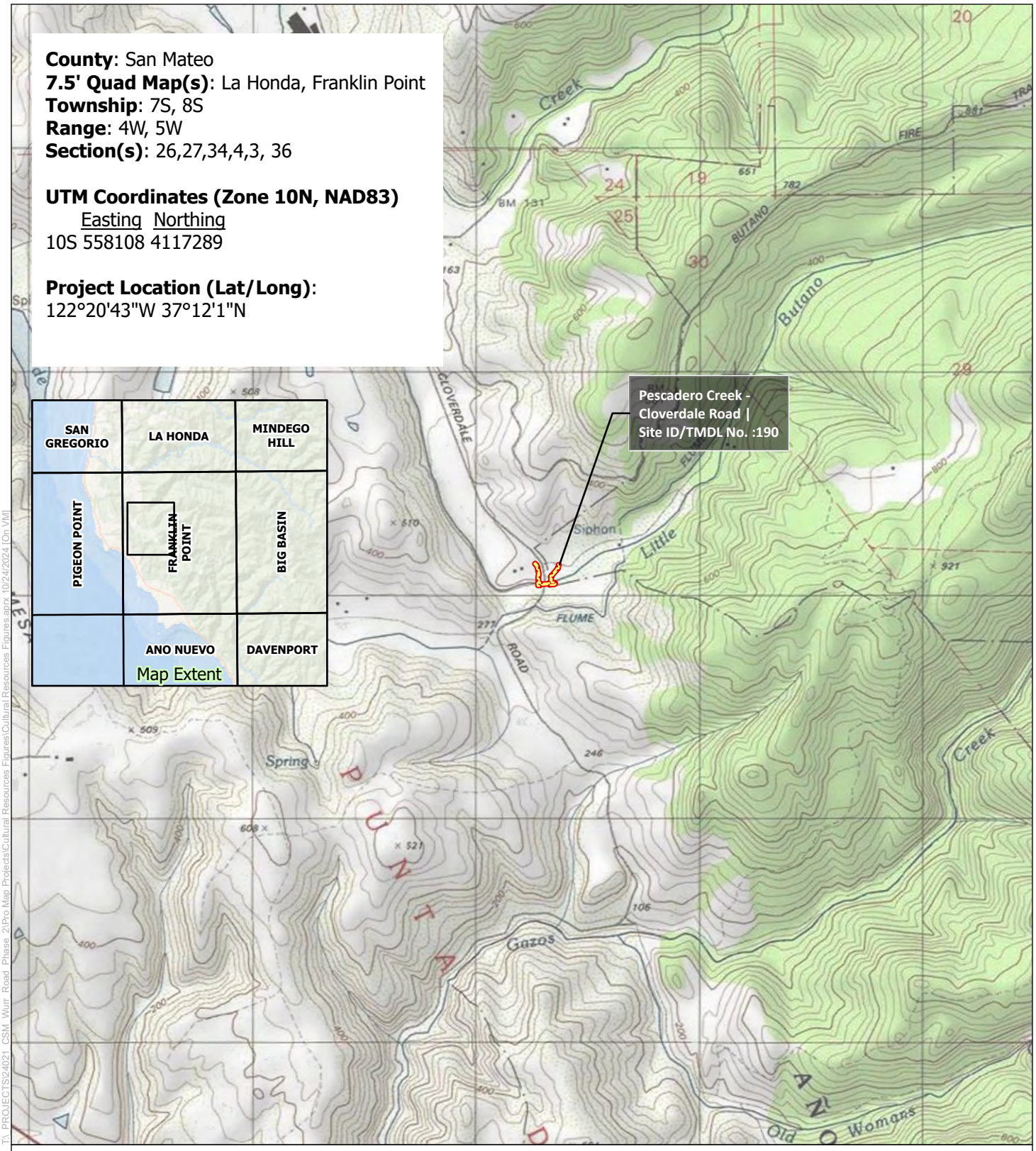


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MONTROSE ENVIRONMENTAL

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MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
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Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Samuel Rodriguez

Costanoan Rumsen Carmel Tribe

P.O. BOX 29352 SAN FRANCISCO CA 94129

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Samuel Rodriguez,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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Department of Public Works

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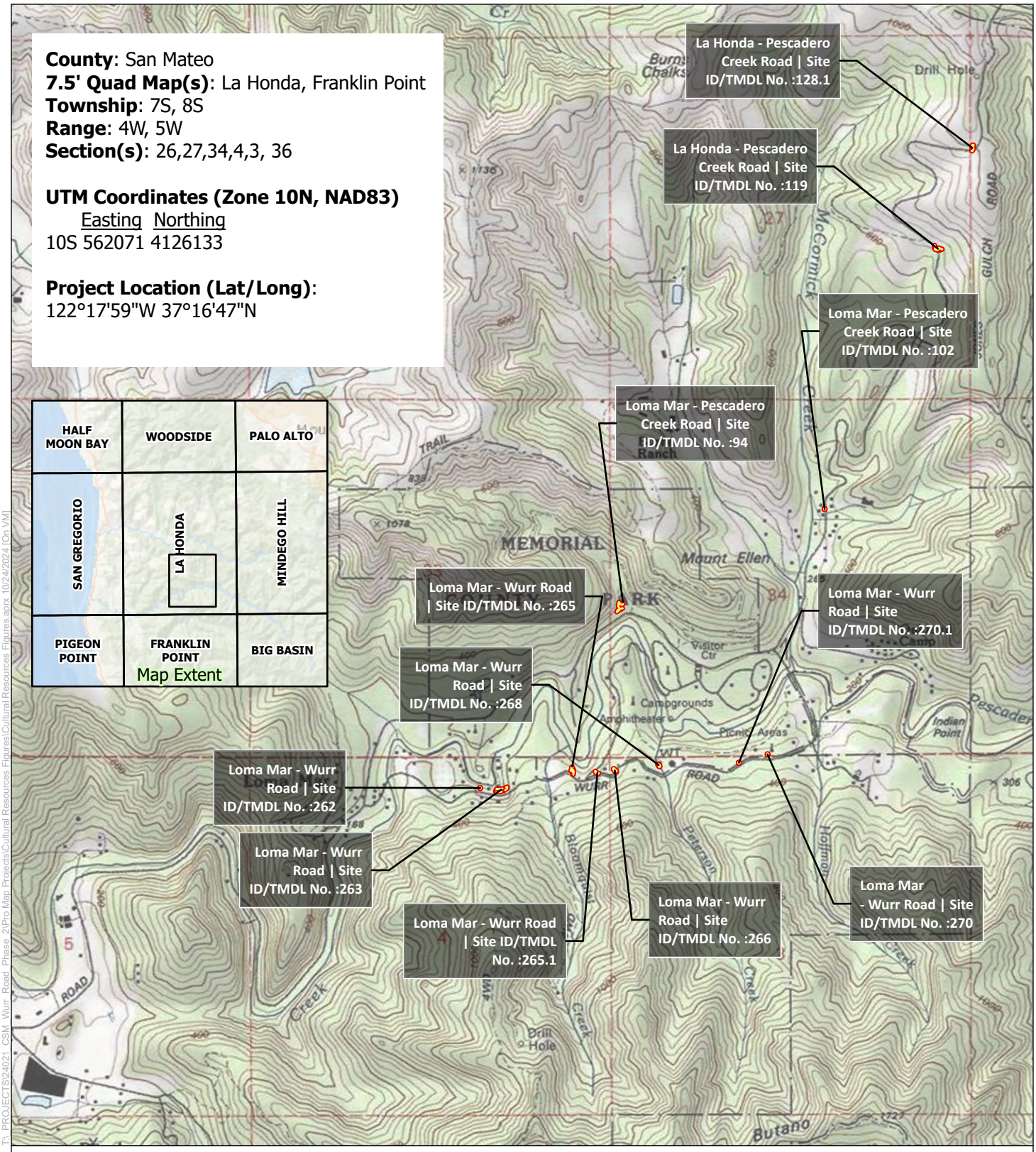
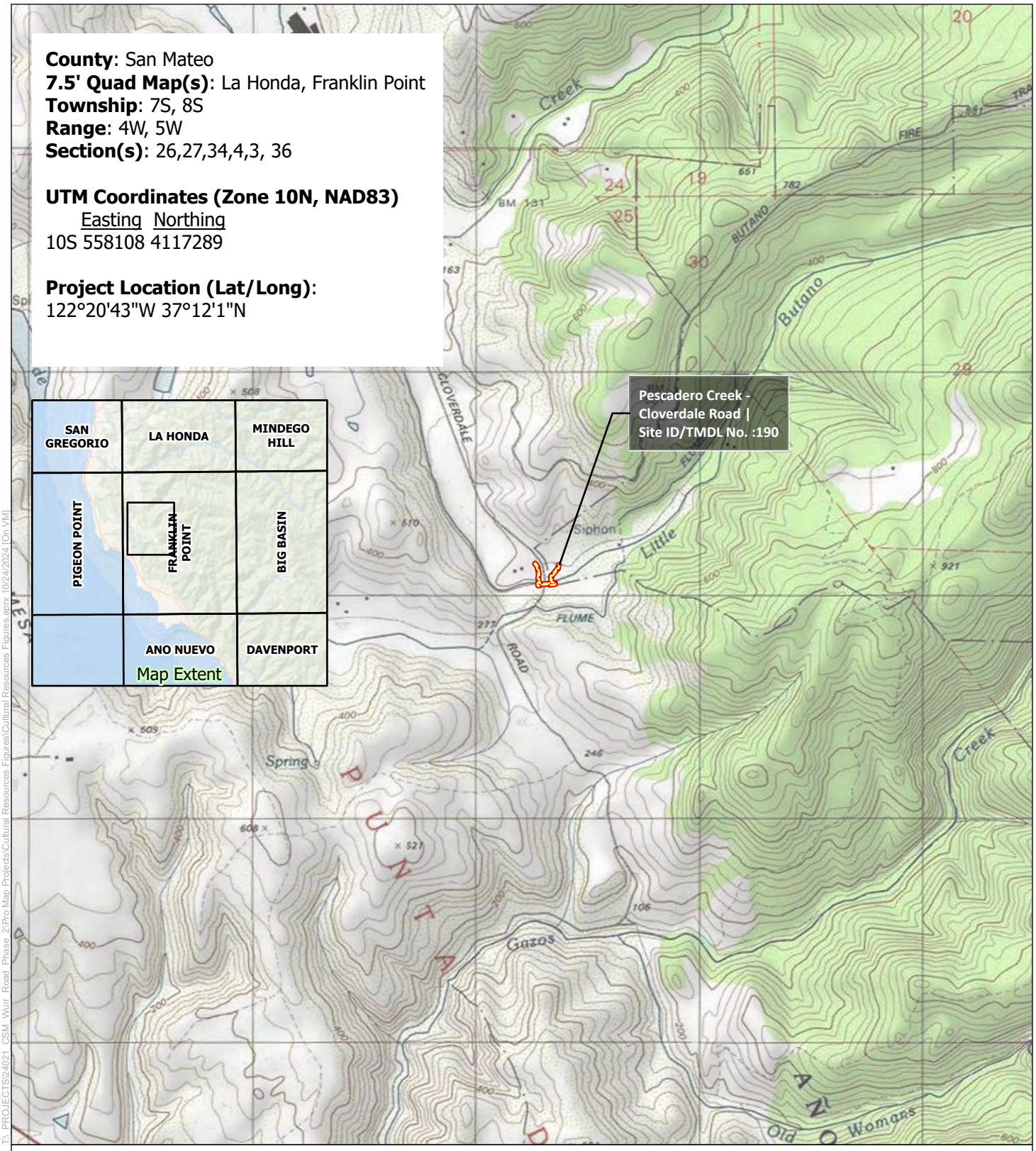


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Director

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October 28, 2024

Kanyon Sayers-Roods, MLD Contact

Indian Canyon Mutsun Band of Costanoan

1615 Pearson Court San Jose, CA, 95122

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Kanyon Sayers-Roods, MLD Contact,

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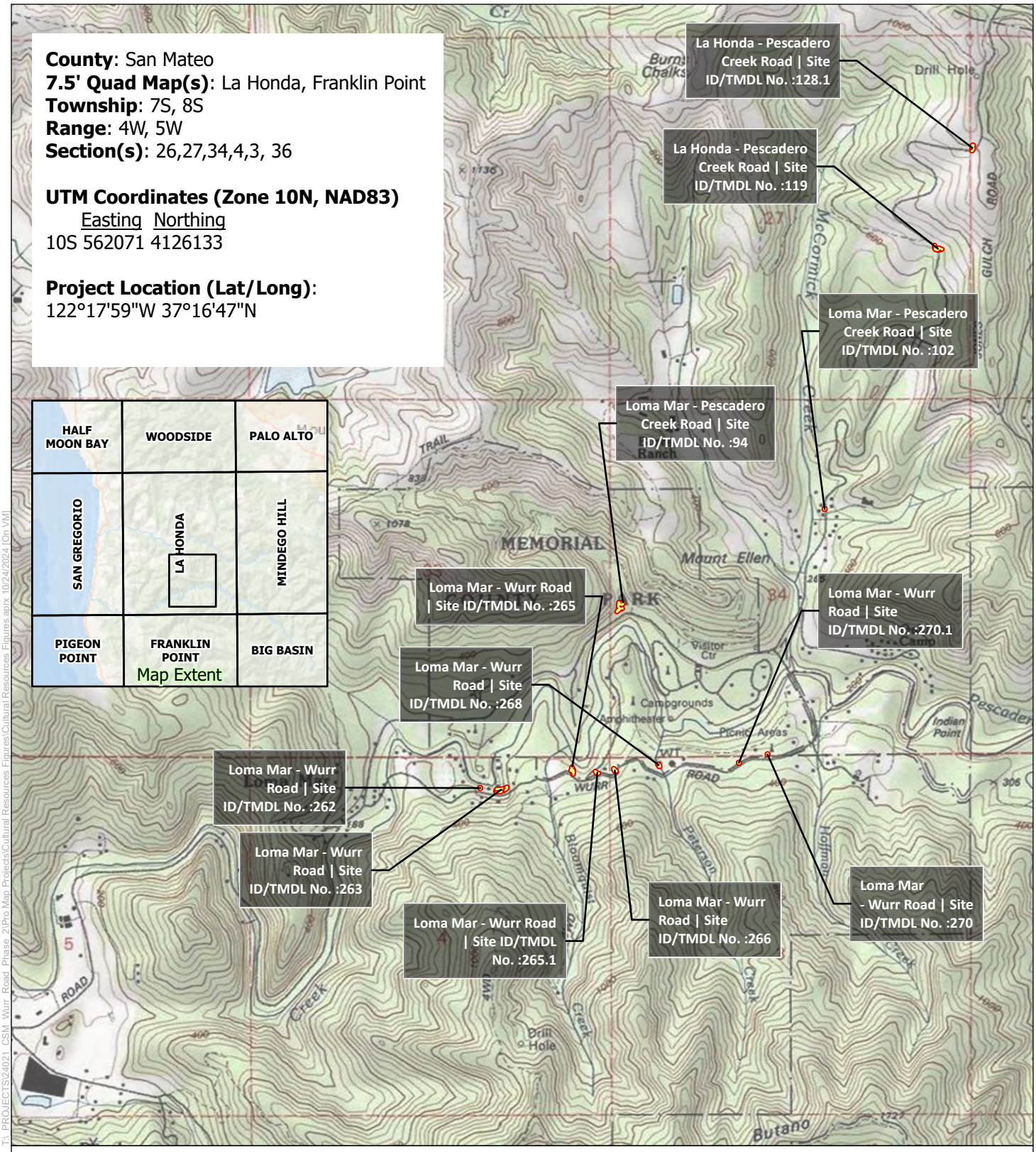
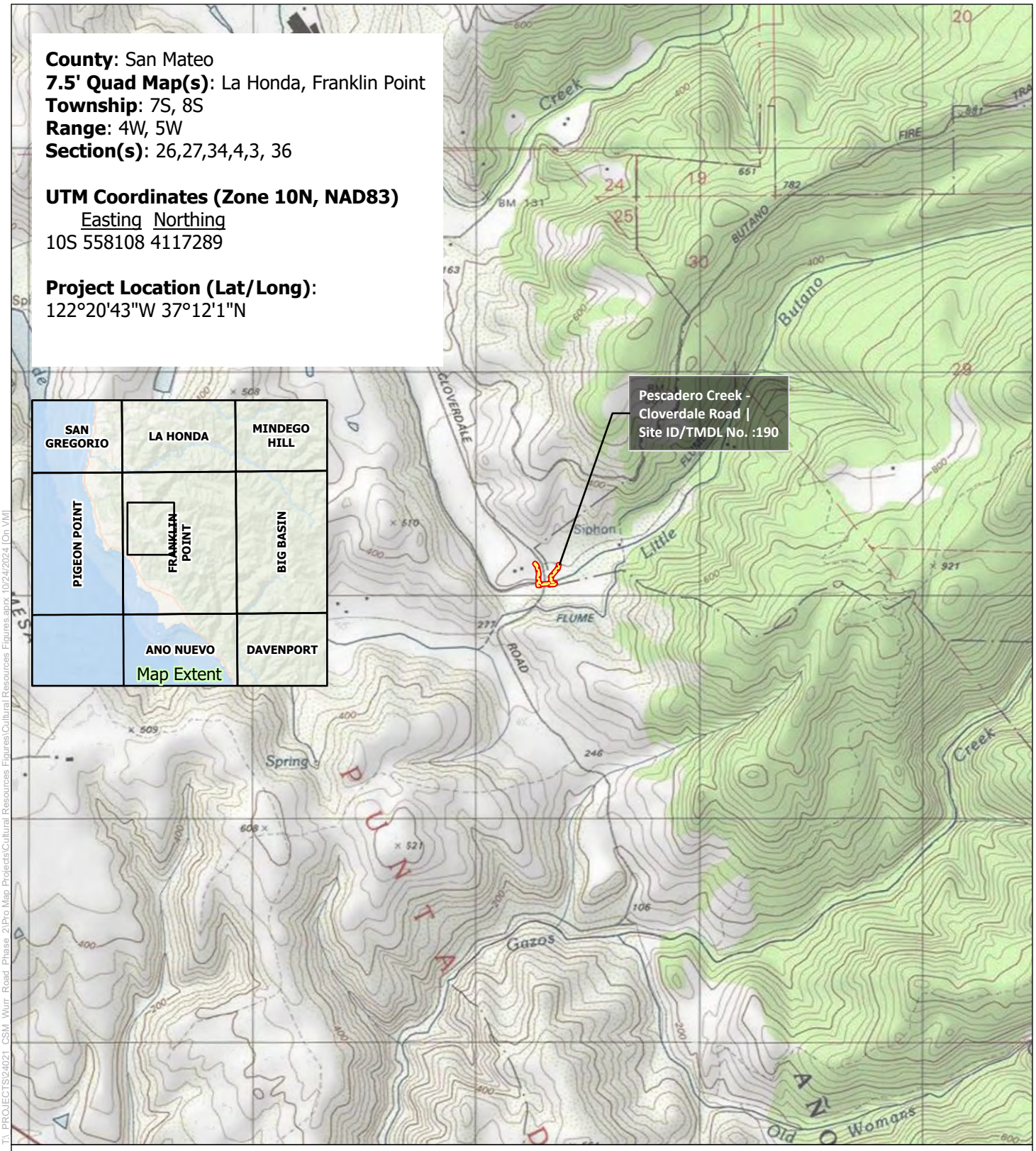


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October 28, 2024

Ann Marie Sayers, Chairperson

Indian Canyon Mutsun Band of Costanoan

P.O. Box 28 Hollister, CA, 95024

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Ann Marie Sayers, Chairperson,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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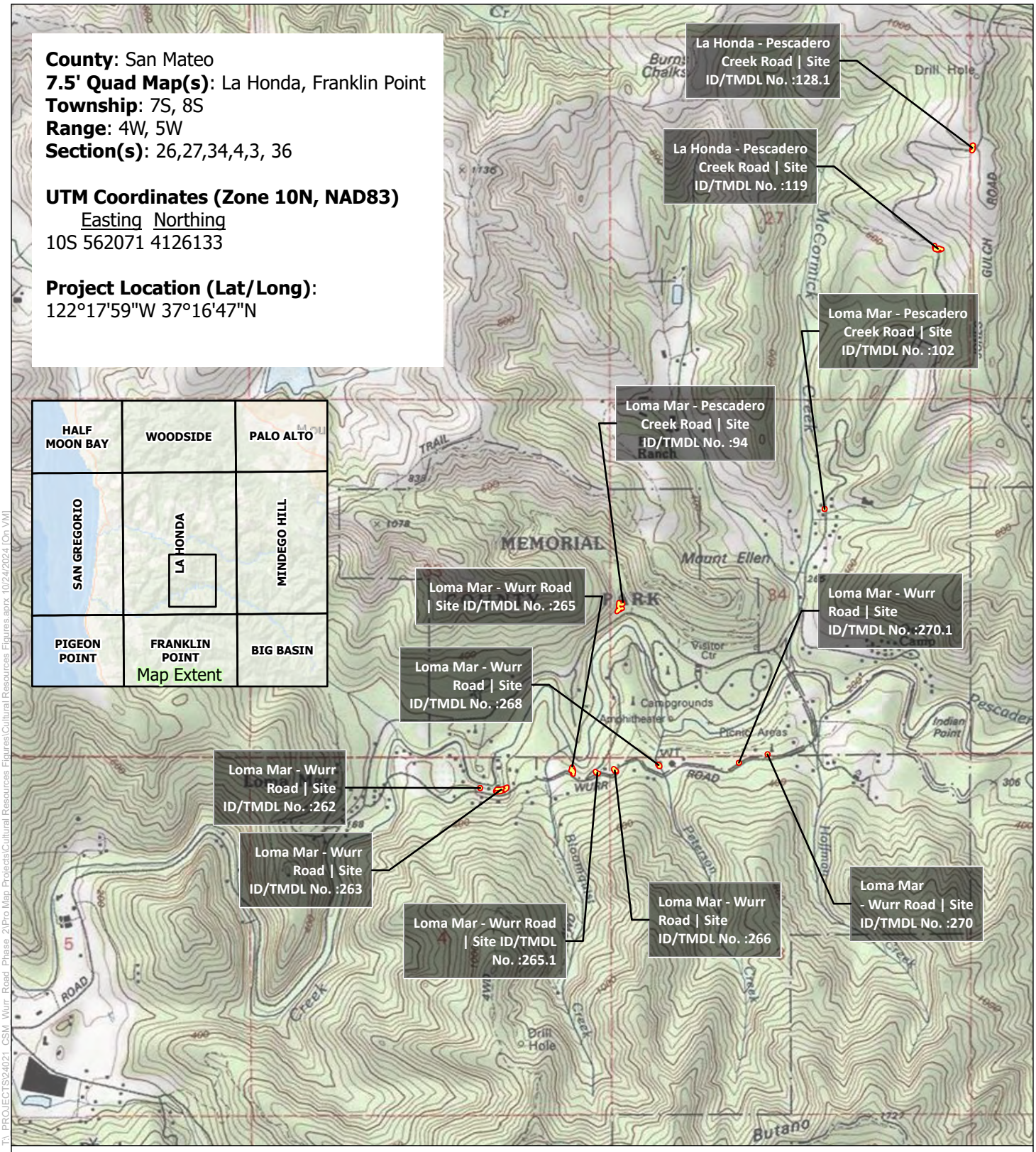
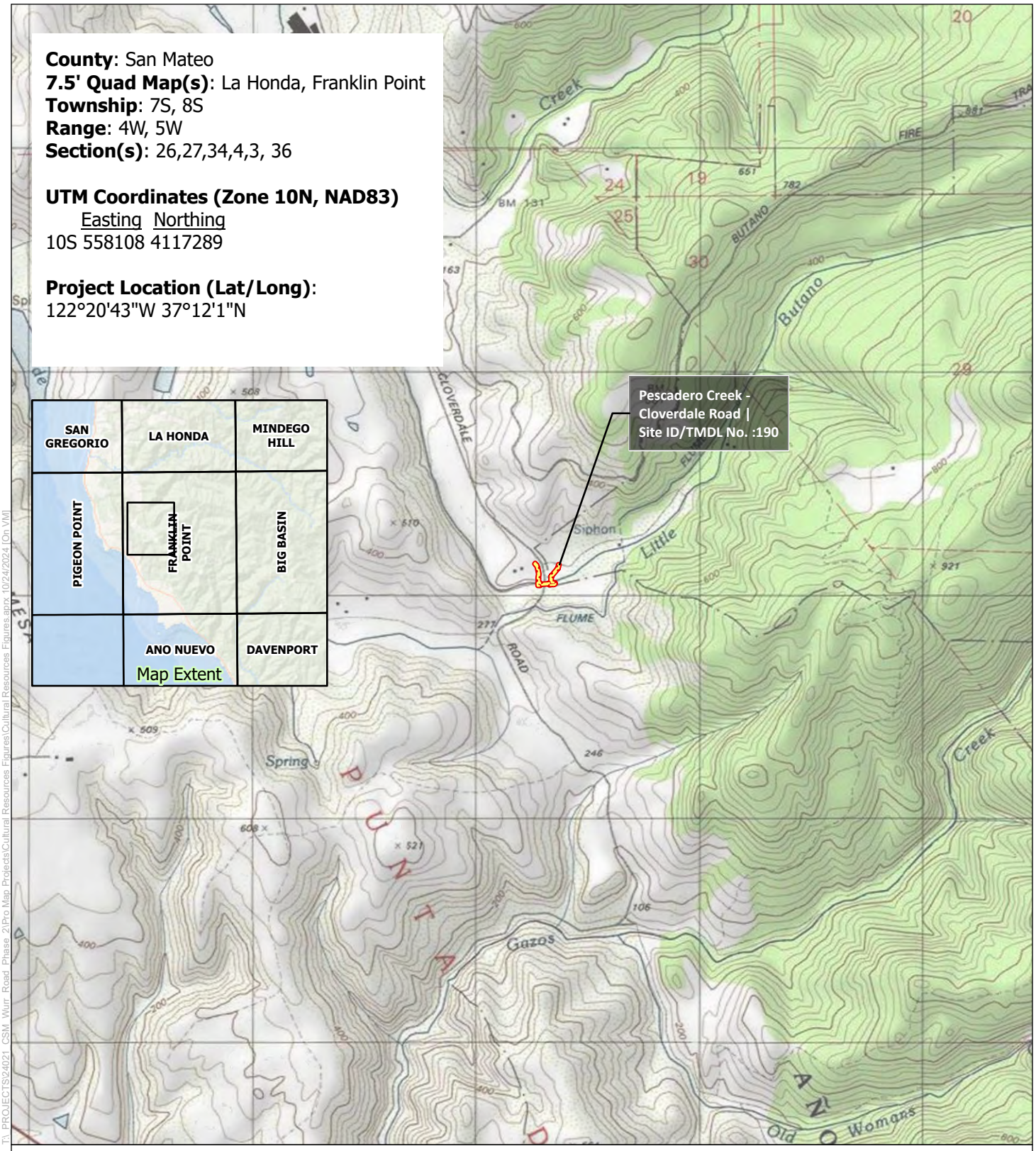


Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

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Figure 1
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Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Charlene Nijmeh, Chairperson

Muwekma Ohlone Tribe of the SF Bay Area

1169 S. Main Street, Ste. 336 Manteca, CA, 95377

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Charlene Nijmeh, Chairperson,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562071	4126133

Project Location (Lat/Long):
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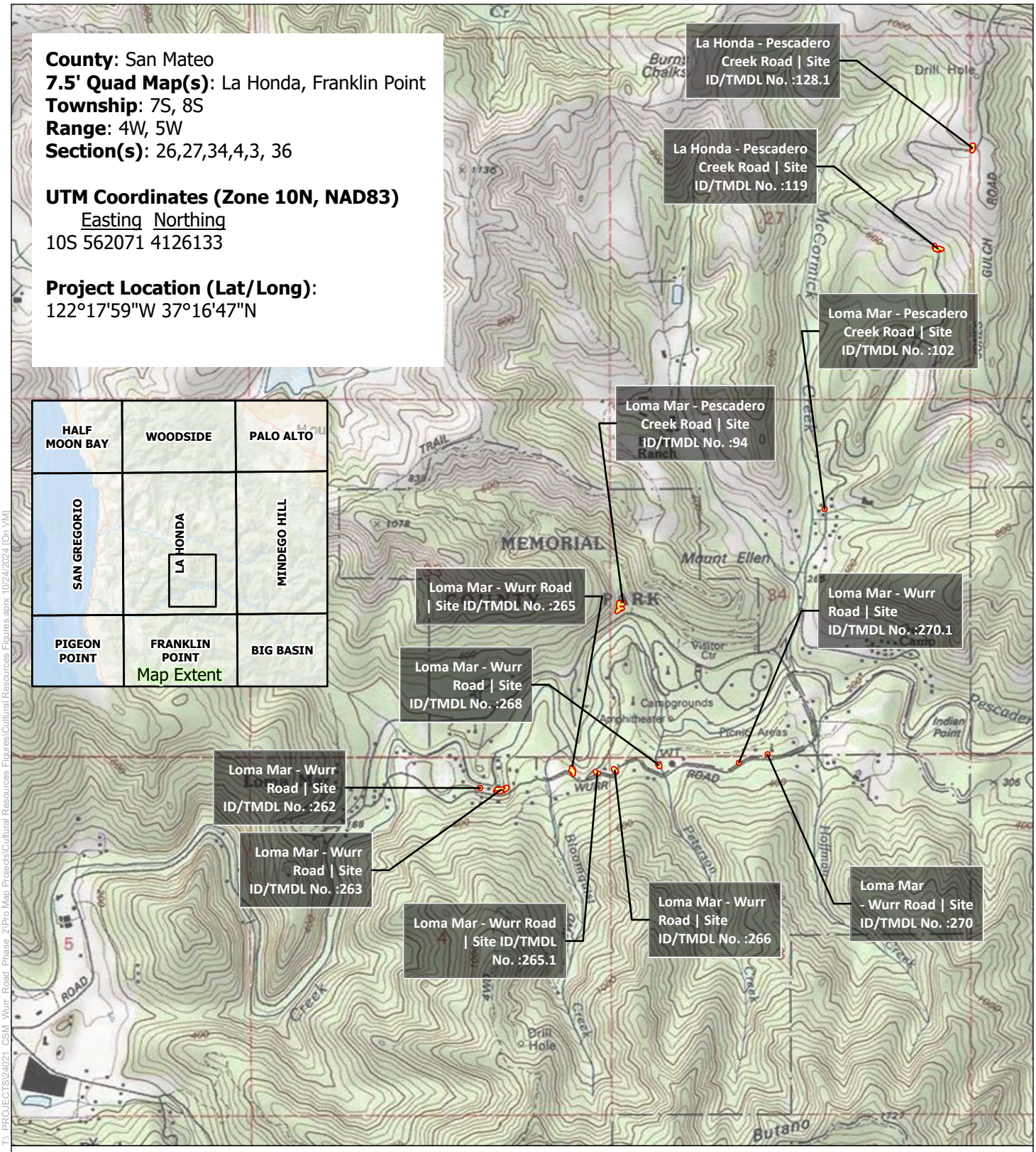
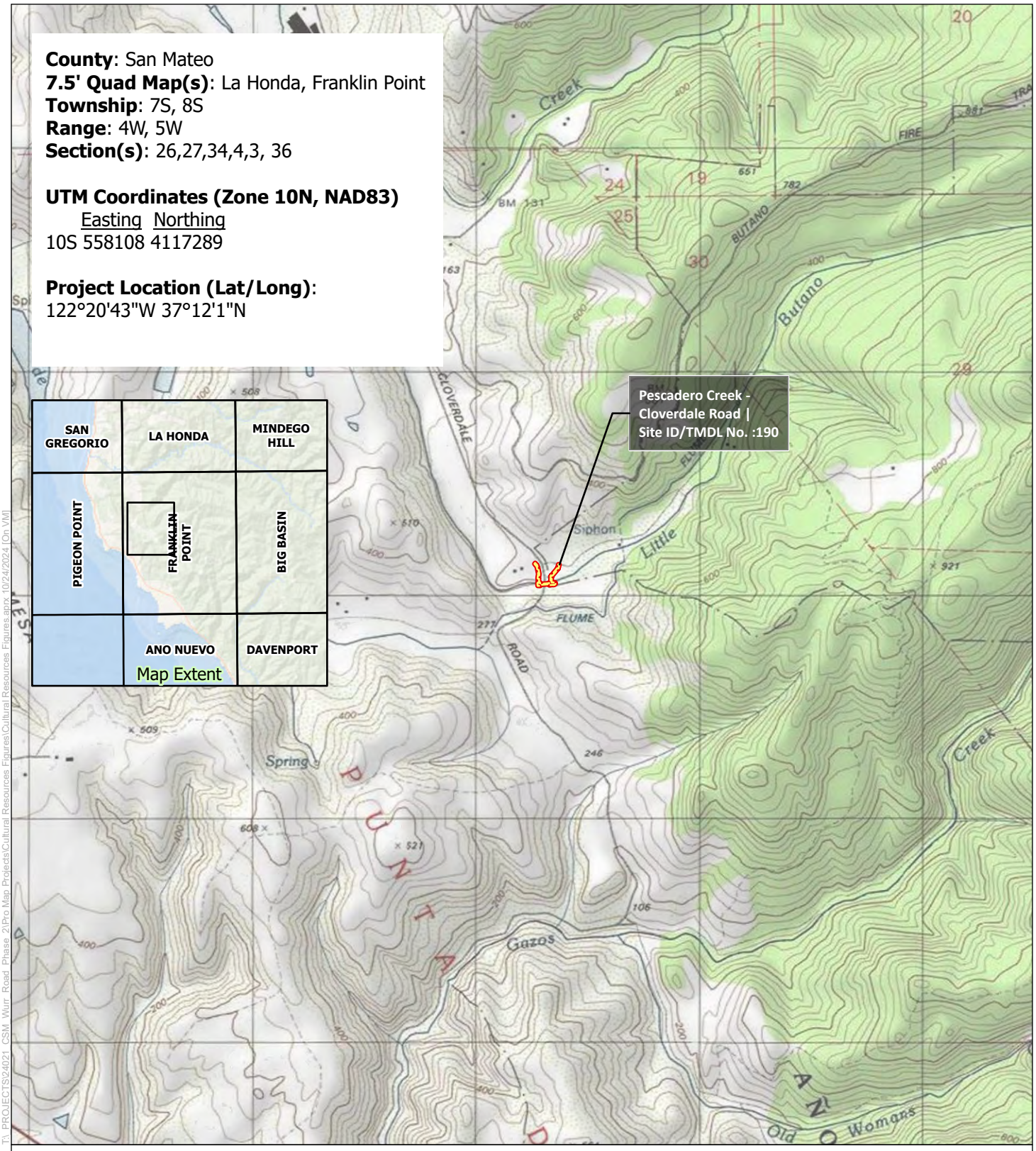


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MONTROSE ENVIRONMENTAL

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Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
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October 28, 2024

Richard Massiatt, Councilmember/MLD Tribal Rep.

Muwekma Ohlone Tribe of the SF Bay Area

1169 S. Main Street, Ste. 336 Manteca, CA, 95377

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Richard Massiatt, Councilmember/MLD Tribal Rep.,

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aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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Julie Casagrande, Natural Resource Manager, Utilities
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County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
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Section(s): 26,27,34,4,3, 36

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Project Location (Lat/Long):
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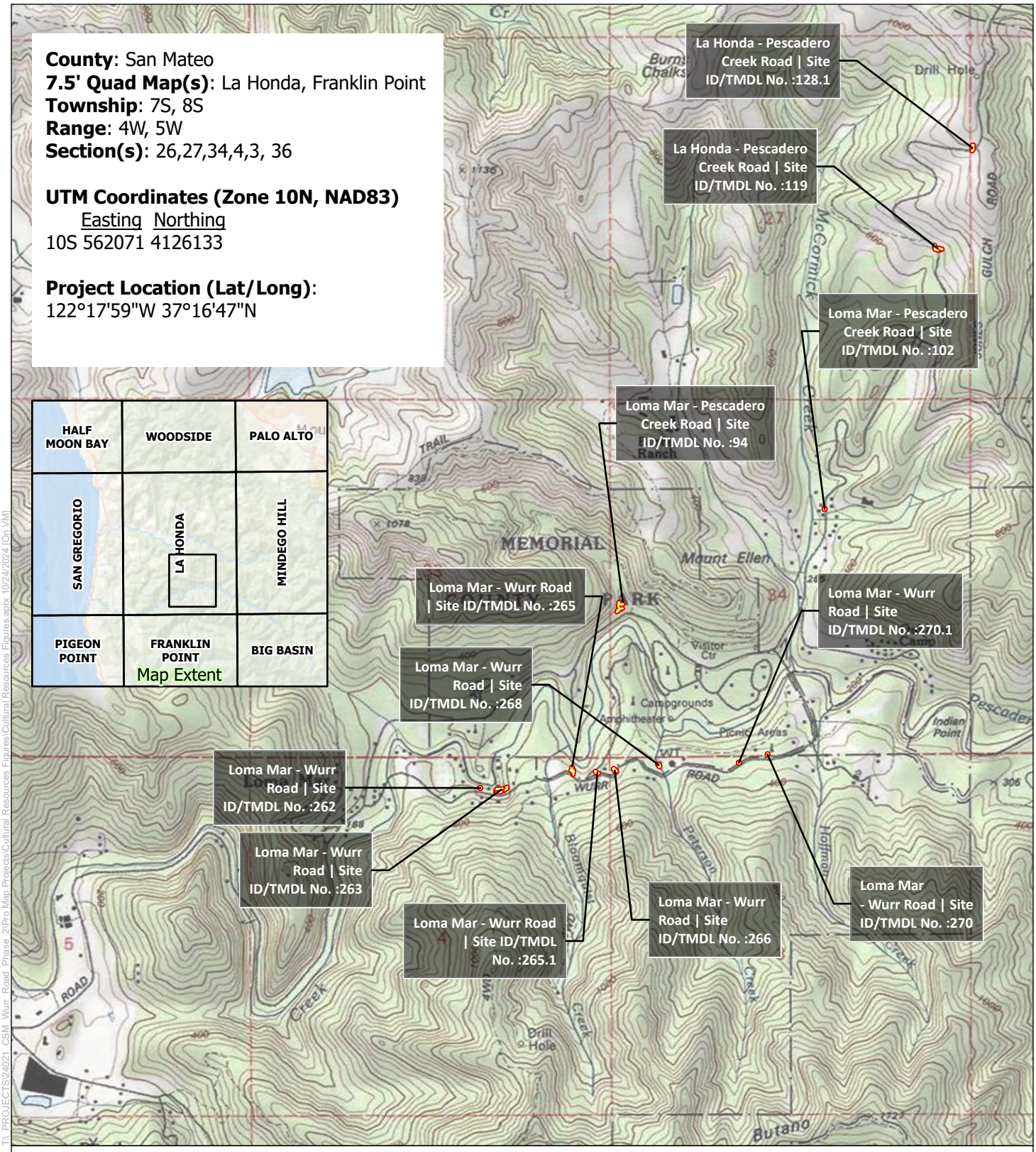
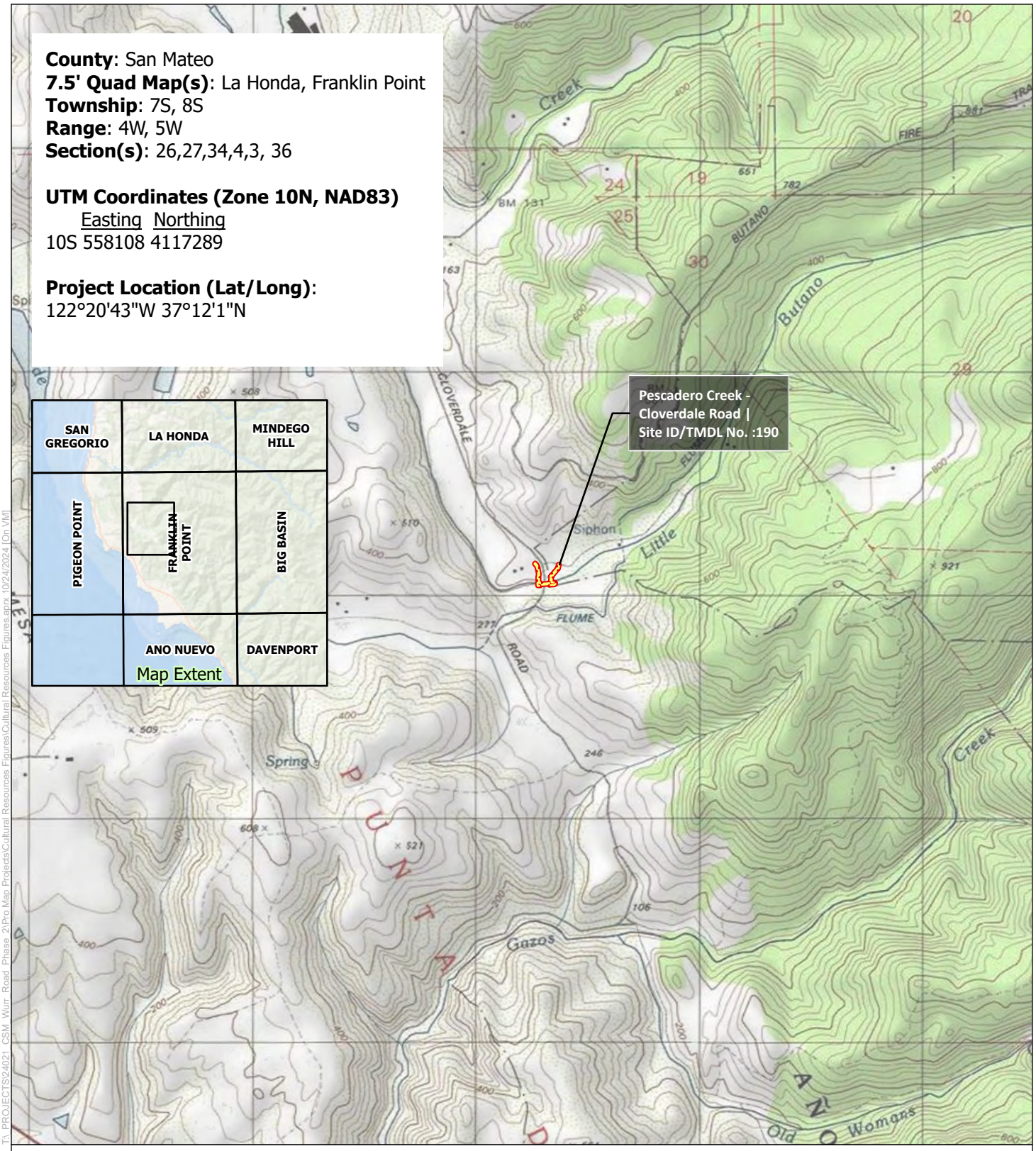


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MONTROSE ENVIRONMENTAL

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MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

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www.smcgov.org

October 28, 2024

Andrew Galvan, Chairperson

The Ohlone Indian Tribe

P.O. Box 3388 Fremont, CA, 94539

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Andrew Galvan, Chairperson,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

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County: San Mateo
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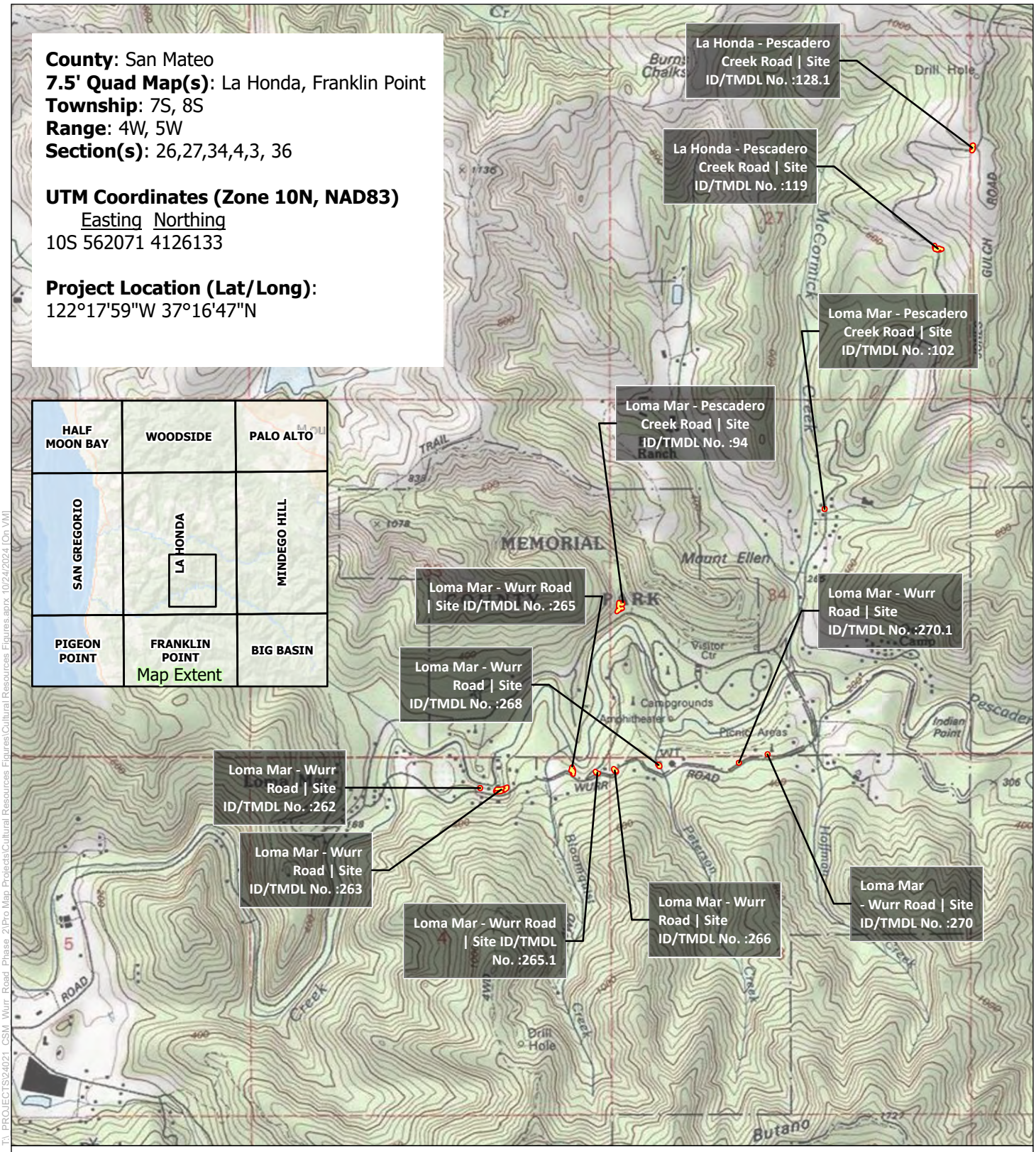
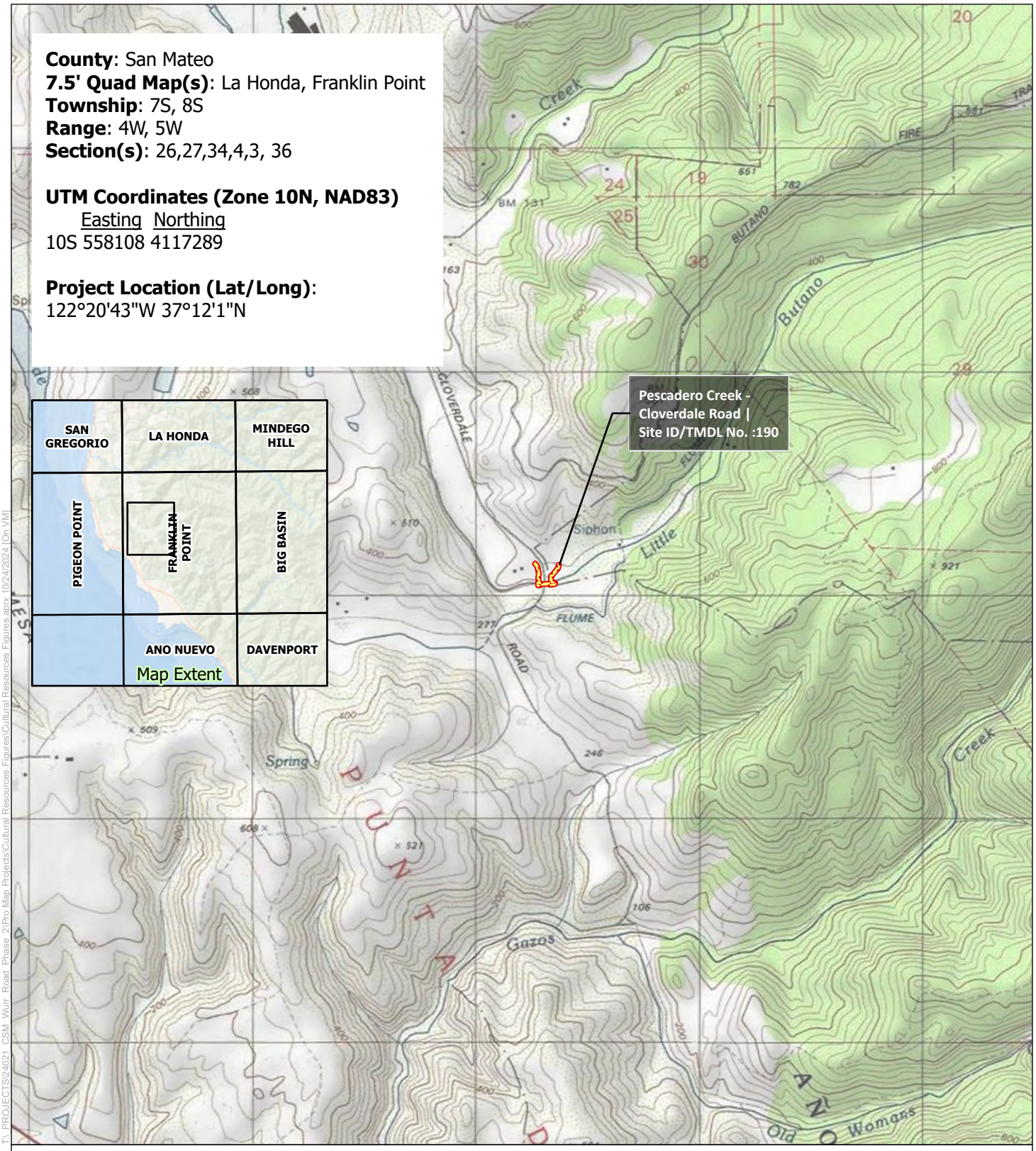


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MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Desiree Vigil, THPO

The Ohlone Indian Tribe

259 Winwood Avenue Pacifica, CA, 94044

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Desiree Vigil, THPO,

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

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Department of Public Works

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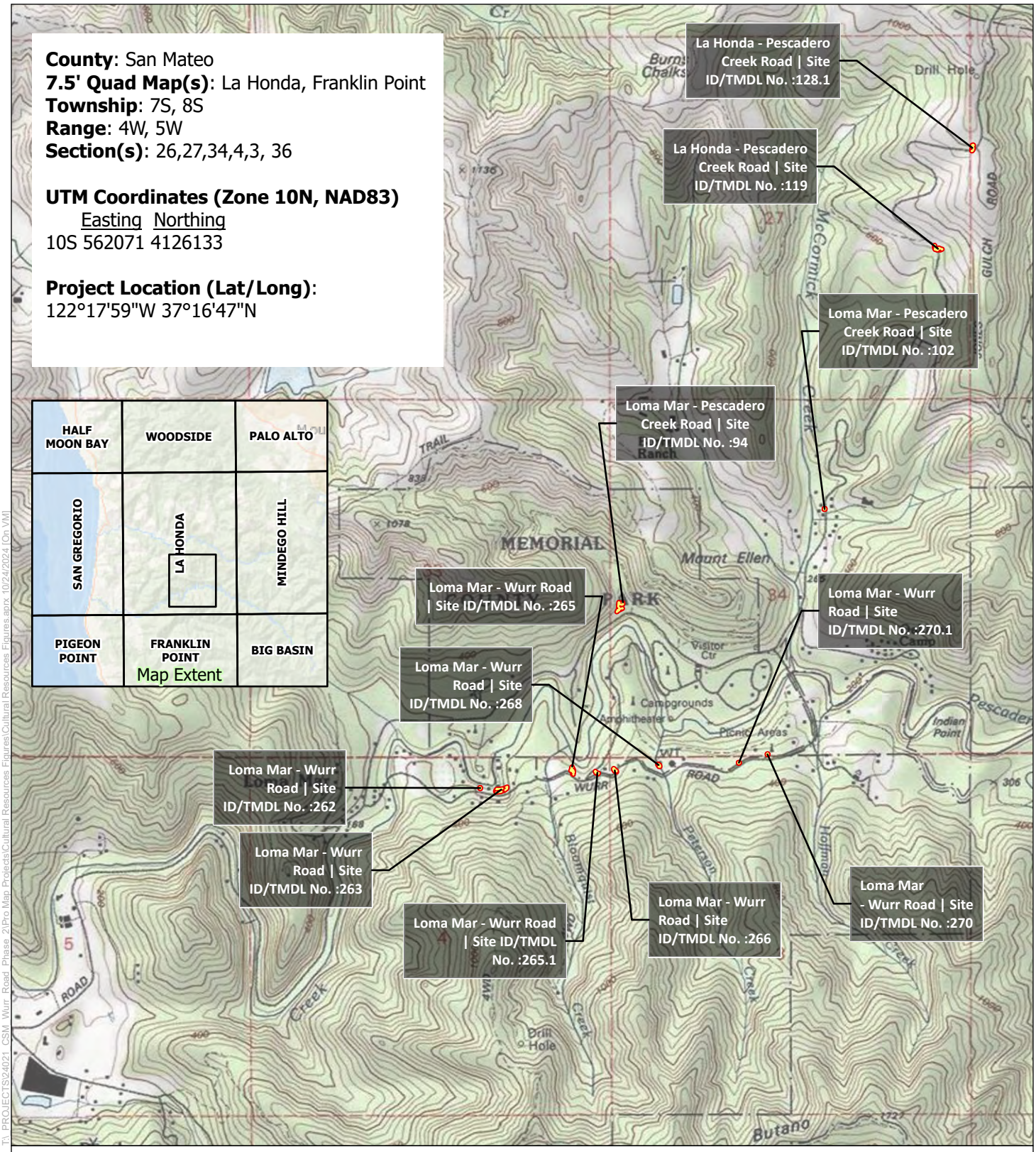
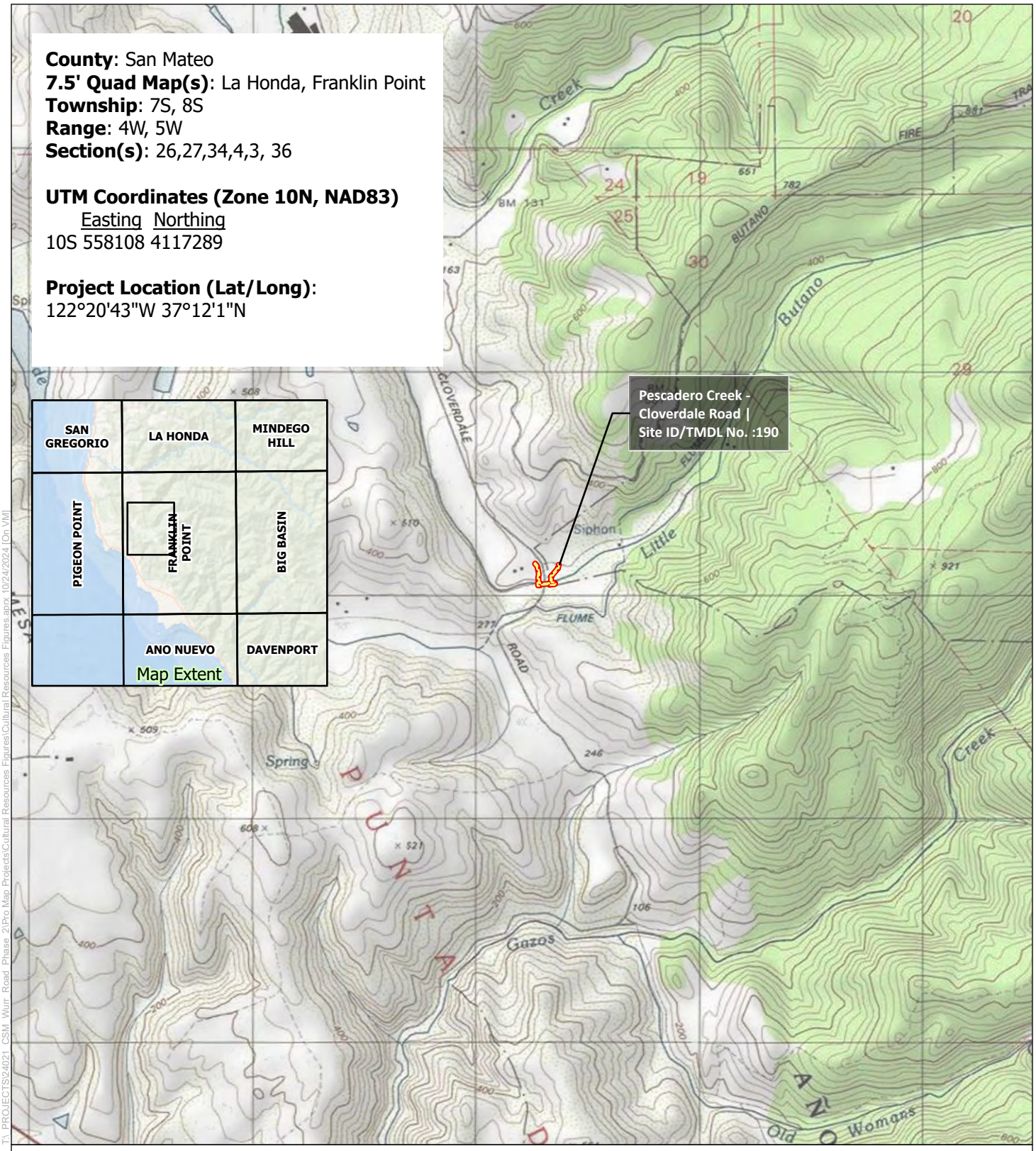


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MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

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Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

October 28, 2024

Vincent Medina, Cultural Leader

The Ohlone Indian Tribe

17365 Via Del Rey San Lorenzo, CA, 94580

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Vincent Medina, Cultural Leader,

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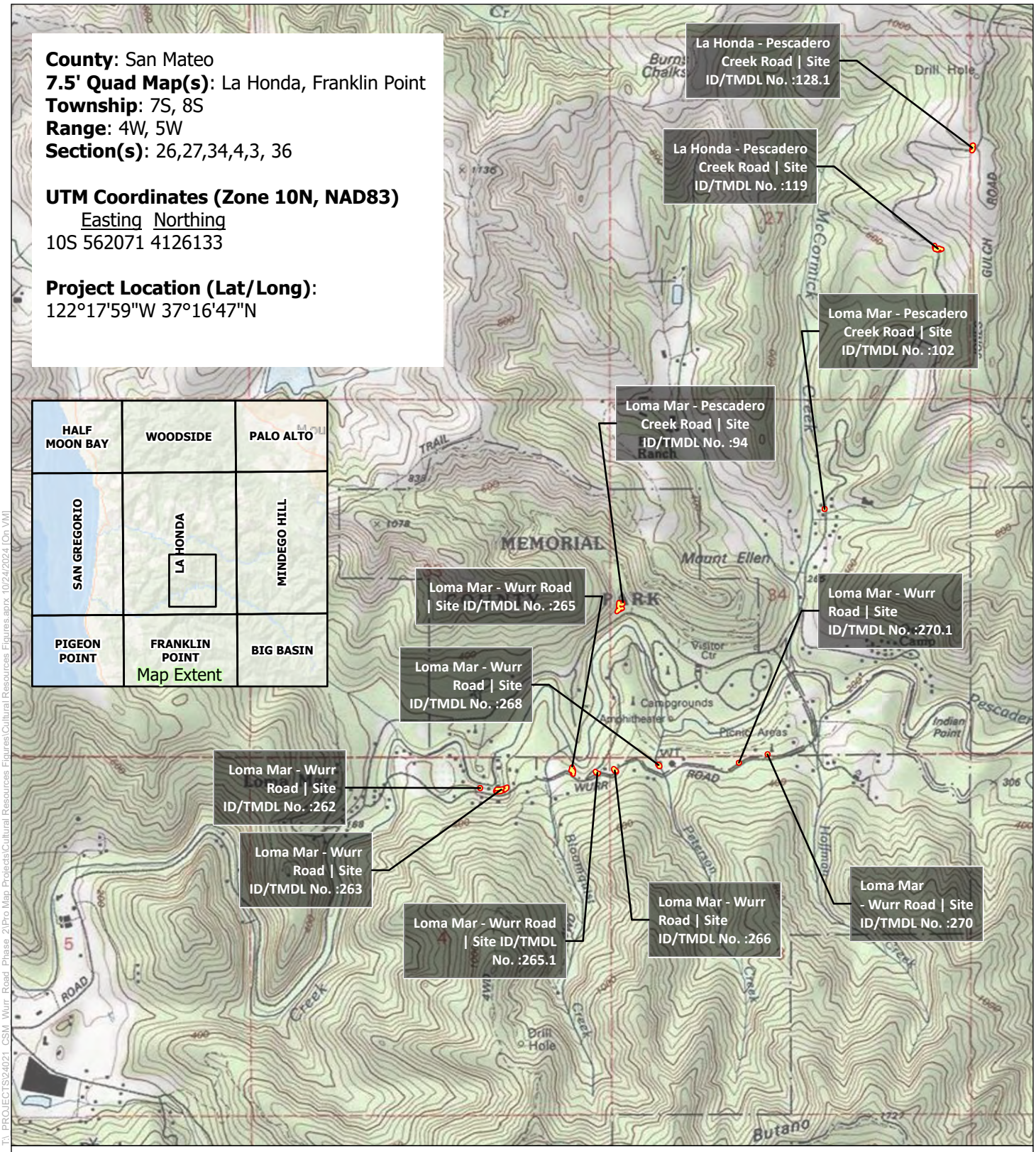
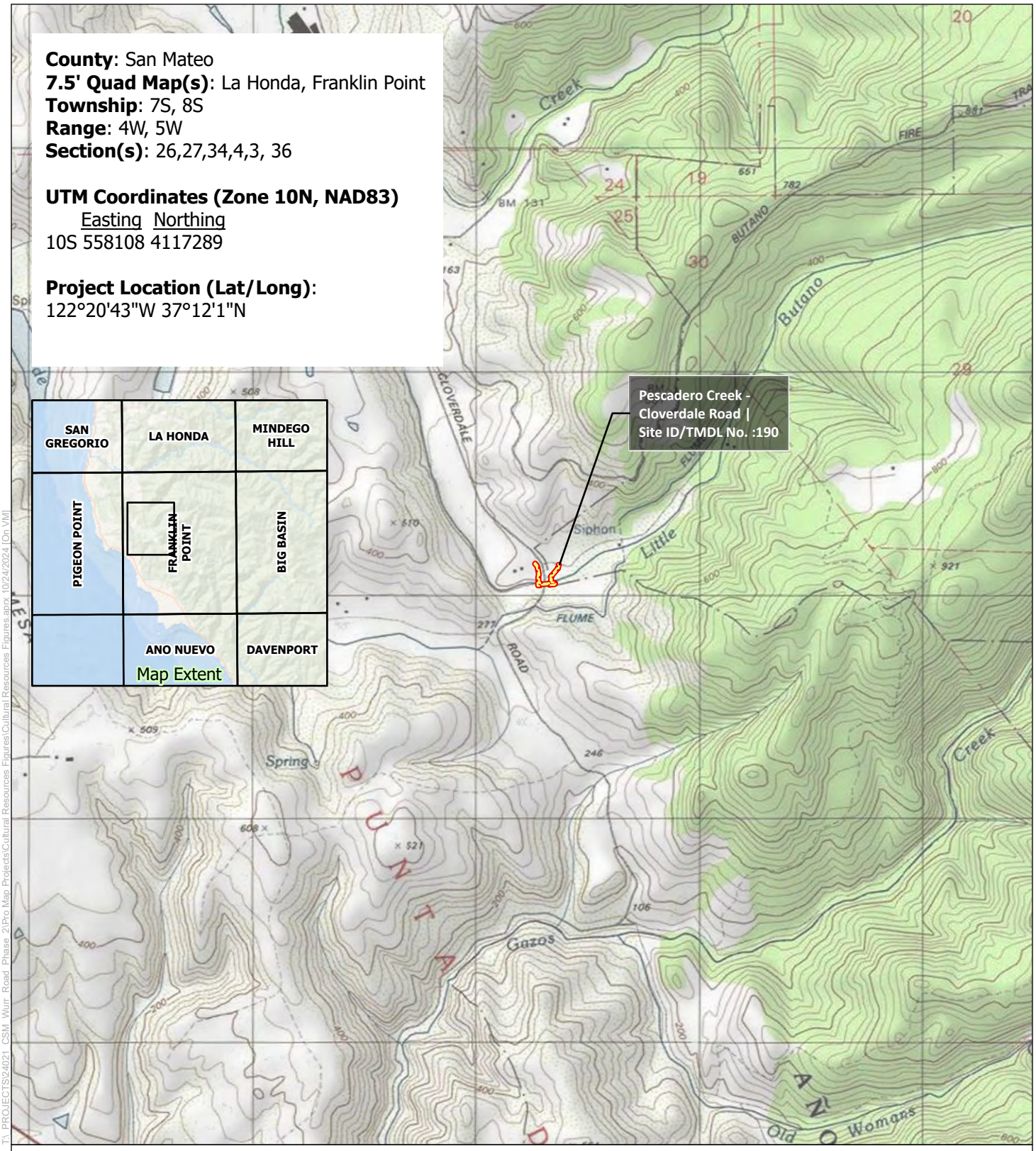


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October 28, 2024

Kenneth Woodrow, Chairperson

Wuksachi Indian Tribe/Eshom Valley Band

1179 Rock Haven Ct. Salinas, CA, 93906

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Kenneth Woodrow, Chairperson,

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Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562071	4126133

Project Location (Lat/Long):
122°17'59"W 37°16'47"N

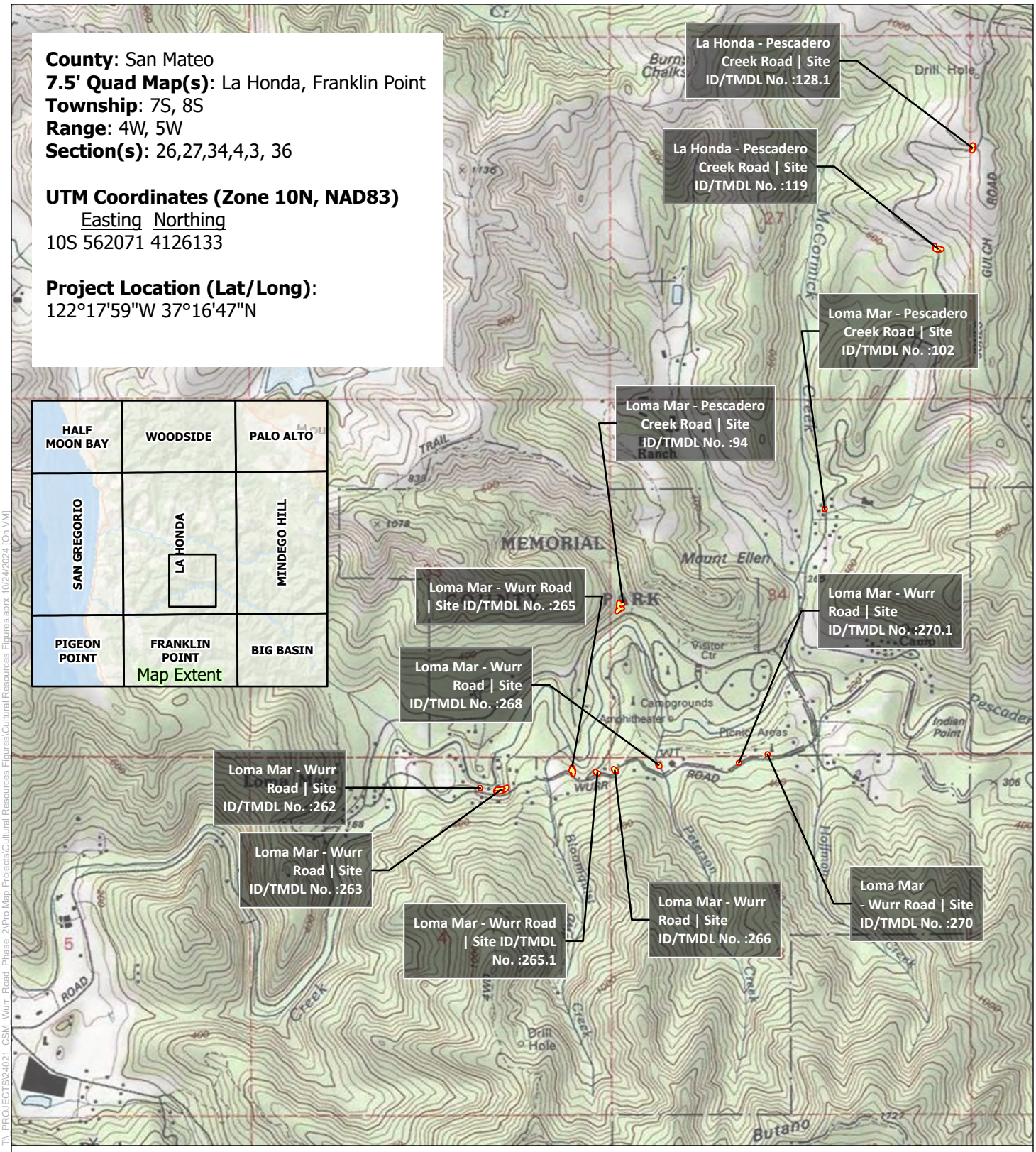
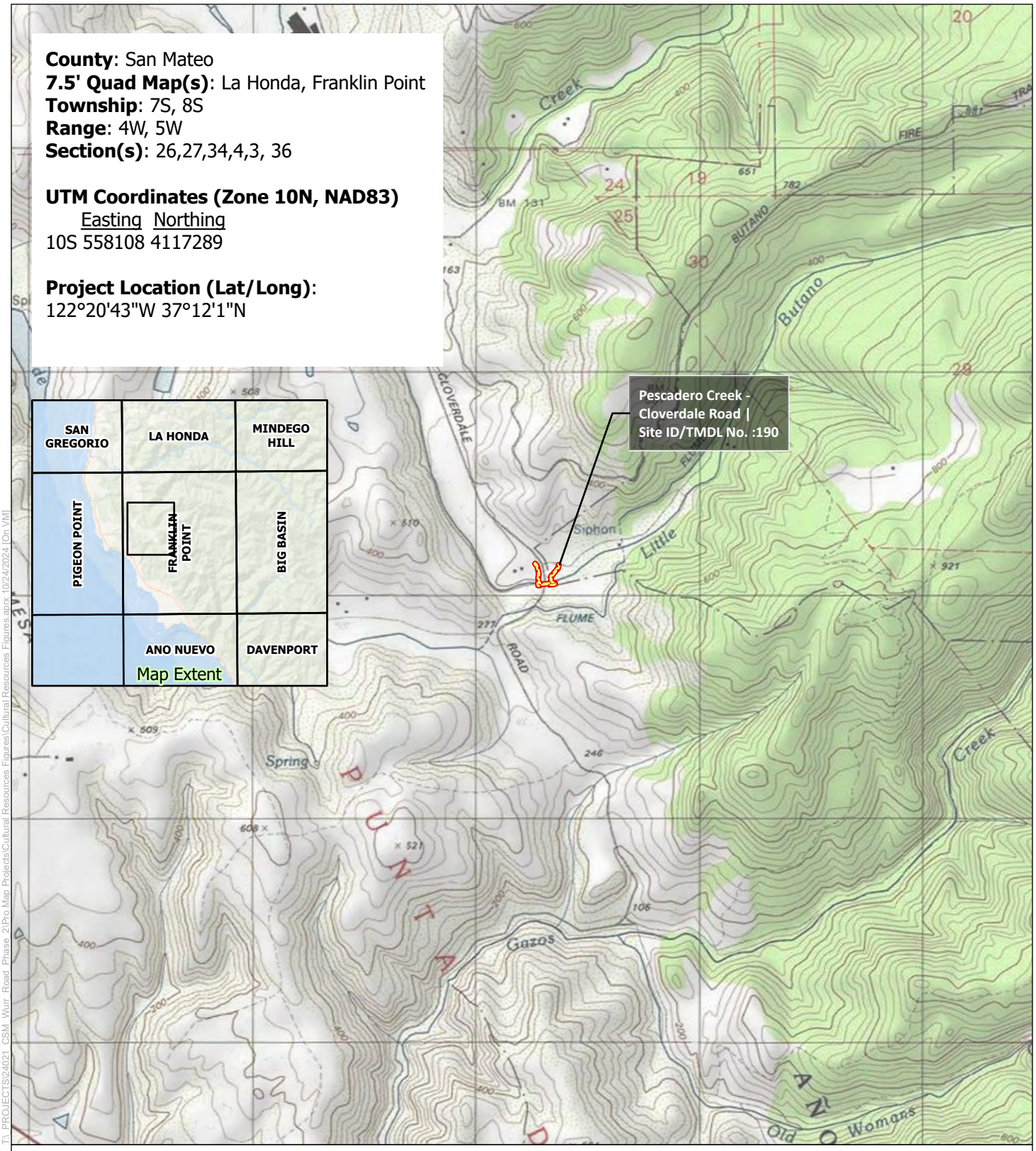


Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

T:_PROJECTS\2021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Cultural Resources Figures\Cultural Resources Figures.aprx 10/24/2024 (On VM)



T:\PROJECTS\2021 CSM Wurr Road Phase 2\Pro Map Projects\Cultural Resources Figures\Cultural Resources Figures.aprx 10/24/2024 [On VM]

Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Ann M. Stillman
Director

County Government Center
555 County Center, 5th Floor
Redwood City, CA 94063
650-363-4100 T
650-361-8220 F
www.smcgov.org

November 1, 2024

Ed Ketchum, Vice-Chairperson

Amah Mutsun Tribal Band

Sent via email

Re: AB 52 Formal Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project, San Mateo County, California

Dear Ed Ketchum, Vice-Chairperson

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Proposed Project or Project) to improve stormwater conveyance at thirteen (13) road crossings along Wurr Road and Pescadero Creek Road and Cloverdale Road. This includes installing three (3) new culverts and replacing remaining existing culverts. In addition, the Proposed Project would remove segments of existing sacked concrete banks and accumulated sediment inside and directly adjacent to the box culvert at Cloverdale Road. The anticipated work at Cloverdale Road will include demolition of existing concrete structures upstream of the crossing to provide unimpeded fish passage, as well as developing access downstream of the site to remove accumulated sediments and obstructive vegetation. See Figure 1 for the Project Location Map.

A record search from the Northwest Information Center revealed that no previously recorded pre-contact archaeological resources occur within the proposed culvert repair locations or within the quarter-mile search radius. An archaeological survey was conducted at each location, including an approximately 200-foot buffer, that did not identify any cultural deposits.

A search of the Sacred Lands Files by the Native American Heritage Commission (NAHC) was also conducted for the Project vicinity, which did not identify a sacred site within the vicinity of the project area. The NAHC suggested that local tribes could have information that may not be on file at the NAHC, and your contact information was provided on their List of Native American Contacts for the area as a traditionally and culturally affiliated California Native American tribal representative. We would appreciate hearing any concerns you have regarding tribal cultural resources

(as defined by Public Resources Code 21074) within the Project area so that this information can be further incorporated into project planning, and ensure our work avoids impacts to tribal cultural resources. We respectfully request input from you within 30 days of receipt of this letter.

Your comments and concerns are important to us, and we look forward to hearing from you. Please contact me or Sina Oshaghi at (650) 363-4100 if you have any questions. They can also be reached by e-mail at:

wng@smcgov.org
aoshaghi@smcgov.org

Sincerely,



Wency Ng
Senior Civil Engineer
Department of Public Works

WN:SO

F:\Users\design\C3D\E5084000_Wurr Rd and Pescadero Creek Rd Culverts\10 Environmental Permits\Tribal Letter\ Montrose_Tribal Letter_CSM Wurr_Pescadero_Cloverdale Road Culvert Repair.DOCX

Enclosures: Figure 1 - Location Map

Cc: Krzysztof Lisaj, Deputy Director, Engineering and Resource Protection
Carter Choi, Principal Civil Engineer, Engineering and Construction
Sina Oshaghi, Associate Engineer, Project Development and Design
Julie Casagrande, Natural Resource Manager, Utilities
Melia Green, Natural Resource Specialist, Utilities

County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
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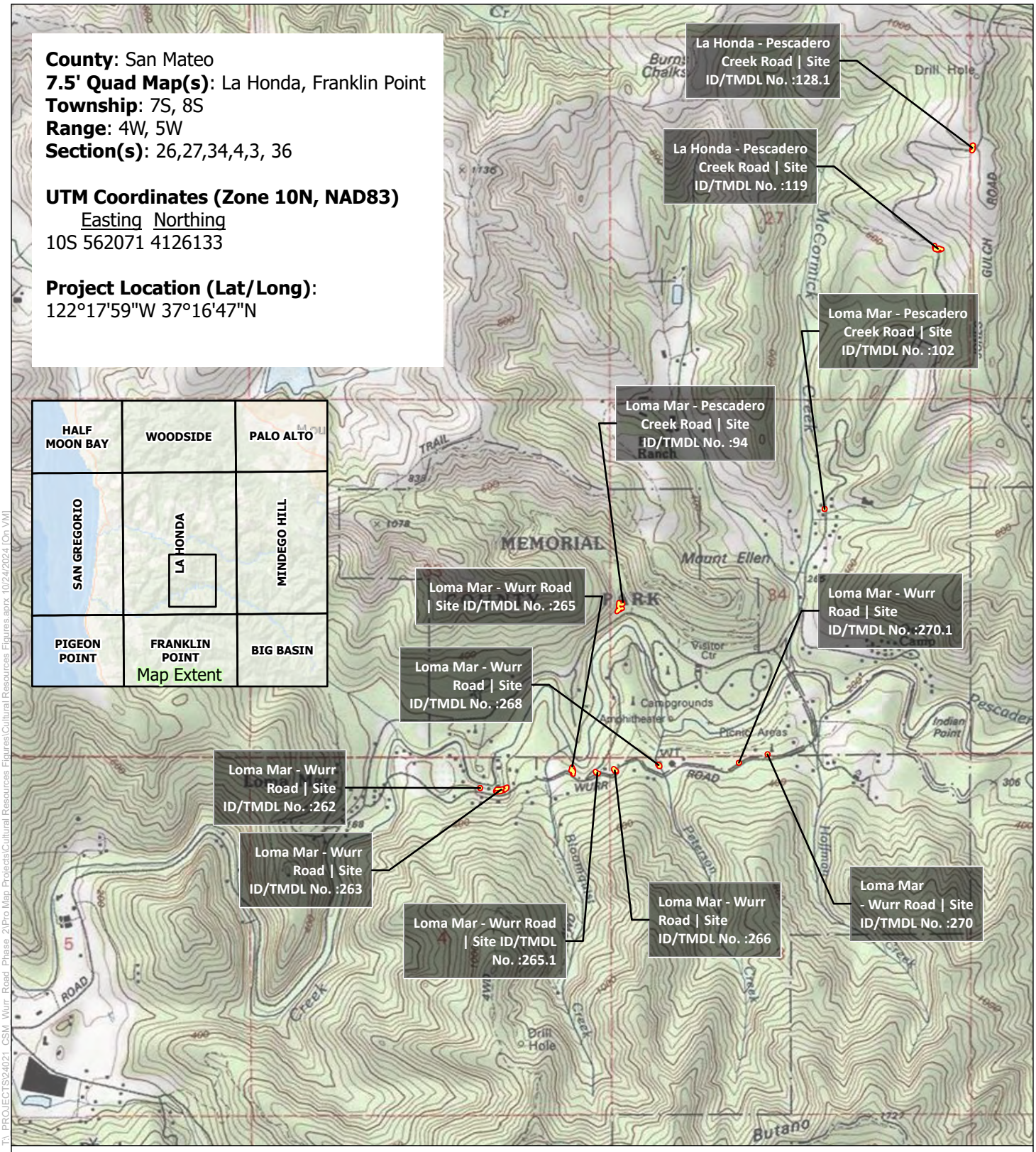
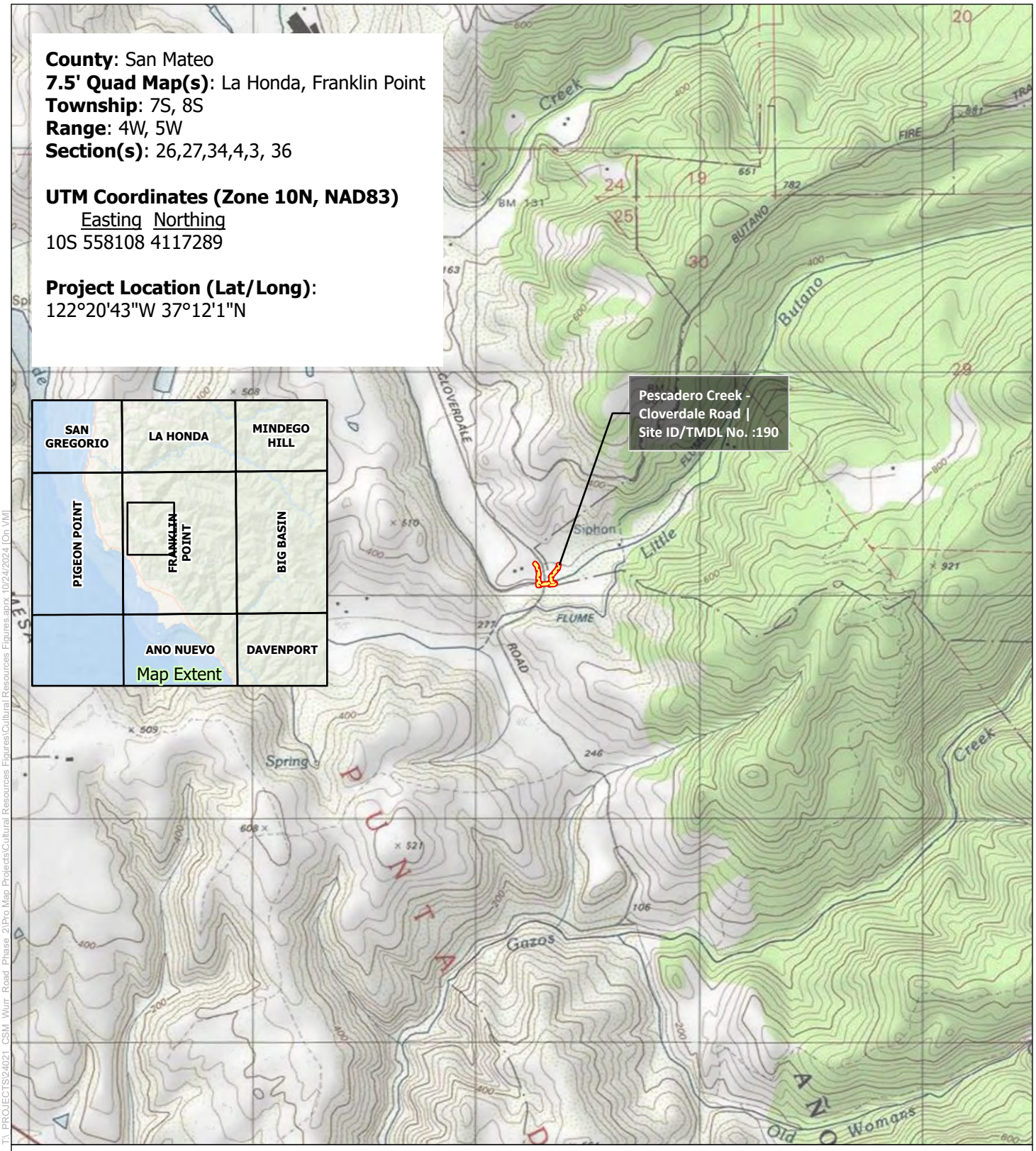


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MONTROSE ENVIRONMENTAL

T:_PROJECTS\2021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Cultural Resources Figures\Cultural Resources Figures.aprx 10/24/2024 (On VM)



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Figure 1
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Outlook

Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

From Bridget Parry <BridgetParry@montrose-env.com>
Date Fri 11/1/2024 10:45 AM
To vjltestingcenter@aol.com <vjltestingcenter@aol.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Lopez_Wurr_AB52_102824.pdf;

Dear Valentin Lopez, Chairperson,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

Please find attached the copies of the notification letter and location maps sent via Certified Mail on October 28, 2024.

If you have any questions or comments regarding the project, please contact Wency Ng or Sina Oshaghi at the County of San Mateo Department of Public Works. Their contact info is listed below:

Wency Ng
Senior Civil Engineer
(650) 363-4100
wng@smcgov.org

Sina Oshaghi
Associate Engineer
(650) 363-4100
aoshaghi@smcgov.org

Best,
Bridget Parry

Bridget Parry, M.A.
Project Archaeologist
Montrose Environmental
Mobile: 925-286-9405

Outlook

Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

From Bridget Parry <BridgetParry@montrose-env.com>
Date Fri 11/1/2024 10:45 AM
To carlamarieohlone@gmail.com <carlamarieohlone@gmail.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
CMunoz_Wurr_AB52_102824.pdf; Figure 1 Location Map_Wurr.pdf;

Dear Carla Munoz, Tribal Council,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Outlook

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Date Fri 11/1/2024 10:45 AM
To ohlonesisters@gmail.com <ohlonesisters@gmail.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
DMunoz_Wurr_AB52_102824.pdf; Figure 1 Location Map_Wurr.pdf;

Dear Desiree Munoz, Tribal Liaison,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Outlook

Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

From Bridget Parry <BridgetParry@montrose-env.com>
Date Fri 11/1/2024 10:45 AM
To henrymunoz425@yahoo.com <henrymunoz425@yahoo.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; HMunoz_Wurr_AB52_102824.pdf;

Dear Henry Muñoz,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Outlook

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Date Fri 11/1/2024 10:45 AM
To samthunder.sr@gmail.com <samthunder.sr@gmail.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Rodriguez_Wurr_AB52_102824.pdf;

Dear Samuel Rodriguez,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Date Fri 11/1/2024 10:45 AM
To ams@indiancanyons.org <ams@indiancanyons.org>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Sayers_Wurr_AB52_102824.pdf;

Dear Ann Marie Sayers, Chairperson,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Best,
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Outlook

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From Bridget Parry <BridgetParry@montrose-env.com>
Date Fri 11/1/2024 10:45 AM
To kanyon@kanyonkonsulting.com <kanyon@kanyonkonsulting.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; SayersRoods_Wurr_AB52_102824.pdf;

Dear Kanyon Sayers-Roods, MLD Contact,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Date Fri 11/1/2024 10:45 AM
To rmassiatt@muwekma.org <rmassiatt@muwekma.org>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Massiatt_Wurr_AB52_102824.pdf;

Dear Richard Massiatt, Councilmember/MLD Tribal Rep.,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Date Fri 11/1/2024 10:45 AM
To cnijmeh@muwekma.org <cnijmeh@muwekma.org>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Nijmeh_Wurr_AB52_102824.pdf;

Dear Charlene Nijmeh, Chairperson,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Date Fri 11/1/2024 10:45 AM
To vincent.d.medina@gmail.com <vincent.d.medina@gmail.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Medina_Wurr_AB52_102824.pdf;

Dear Vincent Medina, Cultural Leader,

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Date Fri 11/1/2024 10:45 AM
To dirwin0368@yahoo.com <dirwin0368@yahoo.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Vigil_Wurr_AB52_102824.pdf;

Dear Desiree Vigil, THPO,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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Date Fri 11/1/2024 10:45 AM
To kwood8934@aol.com <kwood8934@aol.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; jcasagrande@smcgov.org <jcasagrande@smcgov.org>; aoshaghi@smcgov.org <aoshaghi@smcgov.org>; wng@smcgov.org <wng@smcgov.org>

2 attachments (3 MB)
Figure 1 Location Map_Wurr.pdf; Woodrow_Wurr_AB52_102824.pdf;

Dear Kenneth Woodrow, Chairperson,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

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If you have any questions or comments regarding the project, please contact Wency Ng or Sina Oshaghi at the County of San Mateo Department of Public Works. Their contact info is listed below:

Wency Ng
Senior Civil Engineer
(650) 363-4100
wng@smcgov.org

Sina Oshaghi
Associate Engineer
(650) 363-4100
aoshaghi@smcgov.org

Best,
Bridget Parry

Bridget Parry, M.A.
Project Archaeologist
Montrose Environmental
Mobile: 925-286-9405

Outlook

[External] - RE: Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

From Julie Casagrande <jcasagrande@smcgov.org>
Date Wed 12/11/2024 8:24 AM
To andrew galvan <chochenyo@aol.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; Sina Oshaghi <aoshaghi@smcgov.org>; Wency Ng <wng@smcgov.org>; Bridget Parry <bridgetparry@montrose-env.com>; Melia Green <mgreen@smcgov.org>

1 attachment (595 KB)
NAHC Response_AB52 No San Mateo County Wurr Road Culverts Project 6.12.2024 (1).pdf;

Hello,

Thank you for your response. As requested, attached is the NAHC response letter with results of the SLF search (#3 - negative) and the contact list.

Feel free to reach out if you have any additional questions about the proposed project.

Thanks,

JULIE

From: andrew galvan <chochenyo@aol.com>
Sent: Saturday, November 02, 2024 1:16 PM
To: Bridget Parry <bridgetparry@montrose-env.com>
Cc: Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; Julie Casagrande <jcasagrande@smcgov.org>; Sina Oshaghi <aoshaghi@smcgov.org>; Wency Ng <wng@smcgov.org>
Subject: Re: Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

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Hi there,

Could you and would you provide me a copy of the SLF search from the NAHC?

Also, could you include the CONTACT LIST provided by the NAHC

Thank you,

Andrew Galvan

An Ohlone Man
The Ohlone Indian Tribe

On Friday, November 1, 2024, 10:45:35 AM PDT, Bridget Parry <bridgetparry@montrose-env.com> wrote:

Dear Andrew Galvan, Chairperson,

I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.

Please find attached the copies of the notification letter and location maps sent via Certified Mail on October 28, 2024.

If you have any questions or comments regarding the project, please contact Wency Ng or Sina Oshaghi at the County of San Mateo Department of Public Works. Their contact info is listed below:

Wency Ng
Senior Civil Engineer
(650) 363-4100
wng@smcgov.org

Sina Oshaghi
Associate Engineer
(650) 363-4100
aoshaghi@smcgov.org

Best,
Bridget Parry

Bridget Parry, M.A.
Project Archaeologist
Montrose Environmental
Mobile: 925-286-9405

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Outlook

RE: [External] - Re: Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

From Julie Casagrande <jcasagrande@smcgov.org>
Date Wed 12/11/2024 9:40 AM
To Amah Mutsun <amahmutsuntribal@gmail.com>
Cc Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; Sina Oshaghi <aoshaghi@smcgov.org>; Wency Ng <wng@smcgov.org>; Bridget Parry <BridgetParry@montrose-env.com>; Melia Green <mgreen@smcgov.org>

2 attachments (781 KB)

CSM Wurr Cultural Methods and Results.pdf; NAHC Response_AB52 No San Mateo County Wurr Road Culverts Project 6.12.2024 (1).pdf;

Hi Lorelei,

Thank you for your response and recommendations for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project.

As stated in our project notification letter, a record search from the Northwest Information Center of the California Historical Resources Information System (CHRIS) was conducted and revealed that no previously recorded pre-contact archaeological resources occur within the proposed culvert repair locations or within the quarter-mile search radius. A search of the Sacred Lands Files by the Native American Heritage Commission (NAHC) was also conducted for the project vicinity, which did not identify any sacred site within the vicinity of the project area (NAHC response letter attached).
The project will include Best Management Practices (BMPs) to avoid and minimize potential impacts to cultural resources. BMPs will include cultural sensitivity awareness training, construction monitoring by a qualified archaeologist at the Cloverdale Road site (#190), and protocols should any resources be discovered during project implementation. We will also take the additional recommendations regarding treatment of ancestral remains, grave regalia and subsurface feature discoveries outlined in your Letter of Response into consideration as we continue to develop the project.

We are currently preparing a cultural resources report for the project. The report will include a detailed summary of the cultural resources review process, the cultural sensitivity of each site, BMPs, site specific recommendations, and detail on the protocols should human remains be discovered during project implementation. Please note this project will include work at several locations, some of which will not involve excavation outside the existing road prism.

I have attached a summary of our cultural review process and results to date. If you have additional questions or concerns, feel free to reach out. We are happy to set up a meeting to review our process and provide more details on the proposed work, sites, etc.

Thank you,

JULIE

Julie Casagrande

Natural Resource Manager
County of San Mateo
Department of Public Works
555 County Center, 5th floor
Redwood City, CA 94063-1665
ph:(650) 599-1457
jcasagrande@smcgov.org

From: Bridget Parry <BridgetParry@montrose-env.com>
Sent: Friday, November 01, 2024 1:13 PM
To: Amah Mutsun <amahmutsuntribal@gmail.com>
Cc: Dean Martorana <dmartorana@montrose-env.com>; Kathlyn Osagie <kaosagie@montrose-env.com>; Julie Casagrande <jcasagrande@smcgov.org>; Sina Oshaghi <aoshaghi@smcgov.org>; Wency Ng <wng@smcgov.org>
Subject: Re: [External] - Re: Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

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Dear Lorelei,

Thank you for your response regarding the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. Please direct any future correspondence to the County of San Mateo Department of Public Works. I have included the County's representatives, Wency Ng and Sina Oshaghi, on this email and their contact information is also listed below.

Wency Ng
Senior Civil Engineer
(650) 363-4100
wng@smcgov.org

Sina Oshaghi
Associate Engineer
(650) 363-4100
aoshaghi@smcgov.org

Best,
Bridget Parry

From: Amah Mutsun <amahmutsuntribal@gmail.com>
Sent: Friday, November 1, 2024 10:56 AM
To: Bridget Parry <BridgetParry@montrose-env.com>
Subject: [External] - Re: Notification for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

Hello Bridget,

Thank you for the information and please see the attached documents with our recommendations. If you have any questions, or would like to set up a meeting for consultation,

please give us a call at 650-851-7489 or email us at amtbinc21@gmail.com.

Thank you,

Lorelei Alli

AMTB Inc.

On Fri, Nov 1, 2024 at 10:45 AM Bridget Parry <BridgetParry@montrose-env.com> wrote:

> Dear Irene Zwierlein, Chairperson,
>
> I hope this email finds you well. On behalf of the County of San Mateo Department of Public Works (County), I am writing to inform you of the upcoming Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. In line with the cultural resources assessment for projects under CEQA and Assembly Bill 52 (AB 52), the County invites your Tribe to share any concerns you may have about cultural resources and tribal cultural resources significant to your community that could be affected by the project.
>
> Please find attached the copies of the notification letter and location maps sent via Certified Mail on October 28, 2024.
>
> If you have any questions or comments regarding the project, please contact Wency Ng or Sina Oshaghi at the County of San Mateo Department of Public Works. Their contact info is listed below:
>
> Wency Ng
> Senior Civil Engineer
> (650) 363-4100
> wng@smcgov.org
>
> Sina Oshaghi
> Associate Engineer
> (650) 363-4100
> aoshaghi@smcgov.org
>
> Best,
> Bridget Parry
>
> **Bridget Parry, M.A.**
> Project Archaeologist
> Montrose Environmental
> Mobile: 925-286-9405
>
> CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and may contain confidential, proprietary and/or privileged information and may be legally protected from disclosure. If you are not the intended recipient of this message or their agent, or if this message has been addressed to you in error, please immediately alert the sender by reply email and then delete this message and any attachments and the reply from your system. If you are not the intended recipient, you are hereby notified that any disclosure, use, dissemination, copying, or storage of this message or its attachments is strictly prohibited.

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Appendix B
Records Search Results
[Confidential Information Redacted]

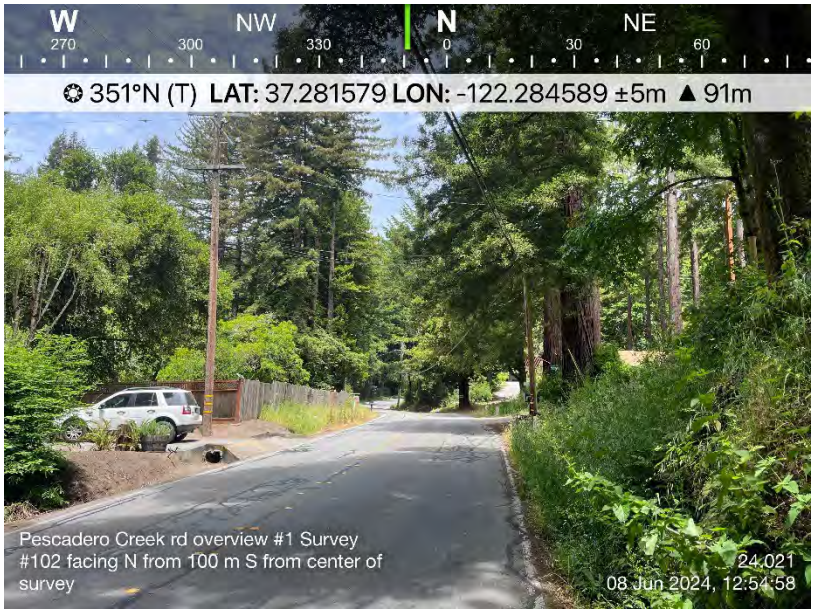
This page intentionally left blank.

Appendix C
Photographic Record

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Attachment C. Photographic Record

Photo No. 1	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #94	

Photo No. 2	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #102	

Attachment C. Photographic Record

Photo No. 3	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #119	

Photo No. 4	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #119 STP	

Attachment C. Photographic Record

Photo No. 5	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #128-1	

Photo No. 6	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #128	

Photo No. 7	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #128 STP	



Photo No. 8	Date: 6/08/2024
Description: Pescadero Creek Road, Site Location #126	



Attachment C. Photographic Record

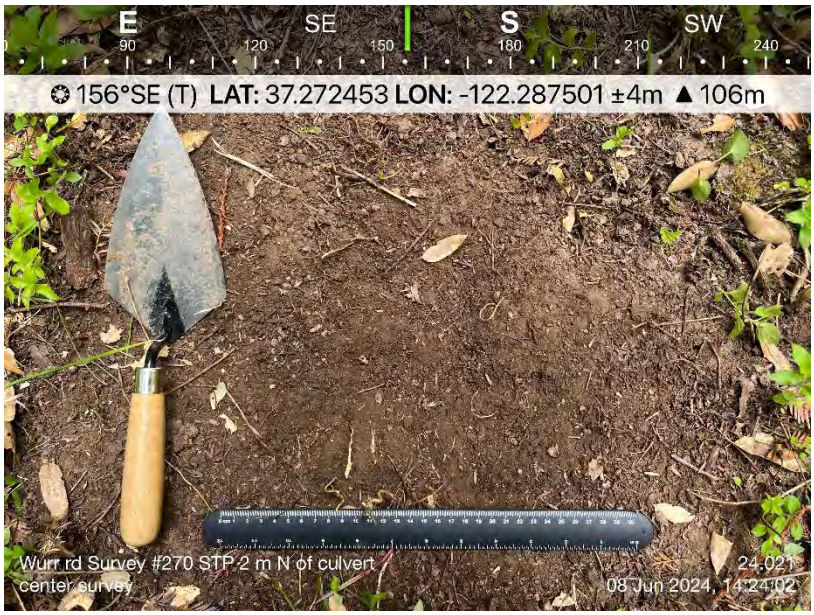
Photo No. 9	Date: 6/08/2024
Description: Wurr Road, Site Location #270 STP	

Photo No. 10	Date: 6/08/2024
Description: Wurr Road, Site Location #270-1 STP	

Attachment C. Photographic Record

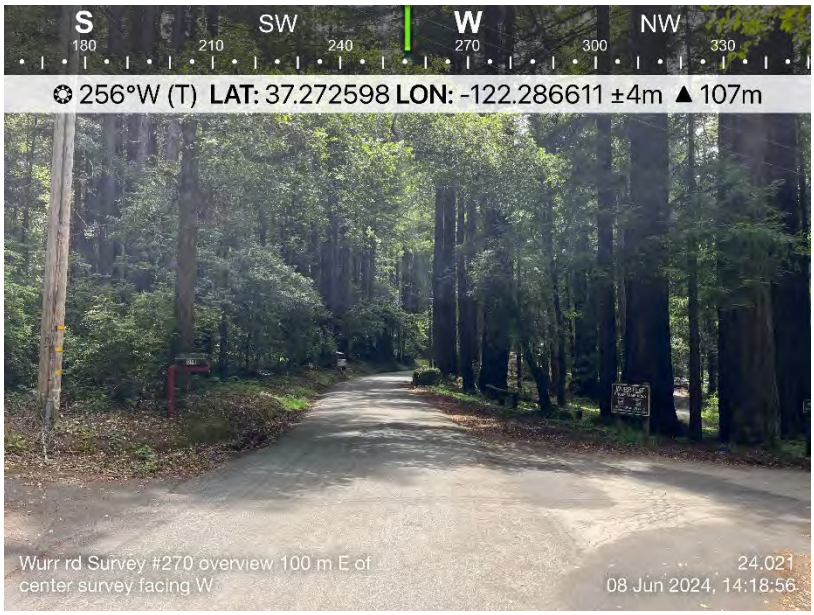
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Description: Wurr Road, Site Location #270	

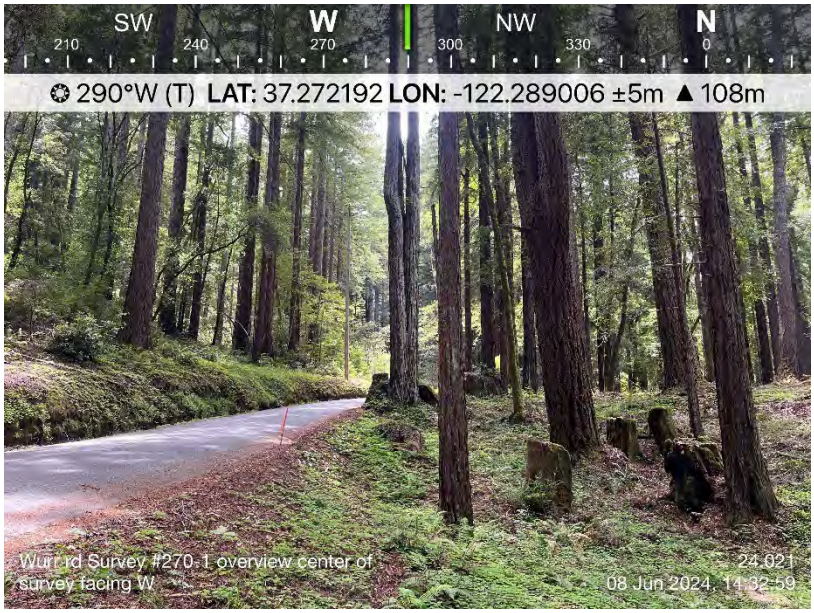
Photo No. 12	Date: 6/08/2024
Description: Wurr Road, Site Location #270-1	

Photo No. 13	Date: 6/08/2024
Description: Wurr Road, Site Location #268	



Photo No. 14	Date: 6/08/2024
Description: Wurr Road, Site Location #266 STP	



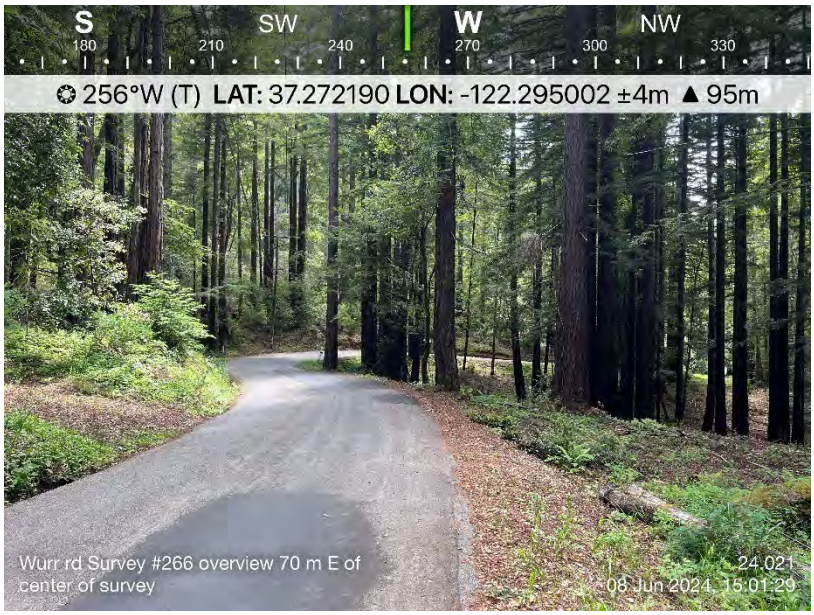
Photo No. 15	Date: 6/08/2024
Description: Wurr Road, Site Location #266	

Photo No. 16	Date: 6/08/2024
Description: Wurr Road, Site Location #265/265-1	

Photo No. 17	Date: 6/08/2024
Description: Wurr Road, Site Location #265-1	



Photo No. 18	Date: 6/08/2024
Description: Wurr Road, Site Location #263/262	



Attachment C. Photographic Record

Photo No. 19	Date: 6/08/2024
Description: Wurr Road, Site Location #262	

Photo No. 20	Date: 5/31/2024
Description: Cloverdale Road overview	

Appendix E

Biological Conditions Report

Draft Technical Report

BIOLOGICAL CONDITIONS REPORT
WURR ROAD, PESCADERO CREEK ROAD, AND CLOVERDALE ROAD CULVERT REPAIRS PROJECT
SAN MATEO COUNTY, CA

September 2025

Prepared for:

County of San Mateo Department of Public Works
555 County Center, 5th Floor
Redwood City, CA 94063

Prepared by:

Montrose Environmental
1 Kaiser Plaza, Suite 340
Oakland, CA 94612
Contact: Zachary Cornejo
ZacharyCornejo@montrose-env.com

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Appendices

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Figure 2 Project Location
Figure 3 Special-status Plant Species Occurrences
Figure 4 Special-status Wildlife Species Occurrences

Acronyms and Abbreviations

BMP	best management practice
CDFW	California Department of Fish and Wildlife
County	County of San Mateo
CCR	California Code of Regulations
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPW	Department of Public Works
ESA	Endangered Species Act
FR	Federal register
IPaC	Information for Planning and Conservation
LF	linear feet
MBTA	Migratory Bird Treaty Act
Montrose	Montrose Environmental
NAVD 88	North American Vertical Datum 1988
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
Project	Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
°F	degrees Fahrenheit

1 Introduction

1.1 Project Overview

The County of San Mateo (County) proposes the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project (Project) to improve and repair twelve (12) culverts along Wurr Road, Pescadero Creek Road, and Cloverdale Road (see **Figure 1** and **Figure 2**). The Project is located near the communities of Pescadero and Loma Mar in unincorporated San Mateo County. An assessment of the existing drainage infrastructure and a hydrologic conditions study determined improvements at each proposed site were needed to address drainage infrastructure deficiencies and provide adequate conveyance capacity commensurate with the site hydrology.

The Project includes installation of three (3) new culverts, replacement of two (2) culverts, upsizing five (5) culverts, the addition of trash/debris racks at one (1) location, and additional improvements such as new headwalls and rock inlet protection and outfall energy dissipation. Additionally, the Project will remove sediment and enhance habitat at one (1) location along Cloverdale Road. The anticipated work at Cloverdale Road will include removing accumulated sediment and obstructive vegetation, demolishing existing concrete structures that impede fish passage near the double box culvert, and restoring streambed habitat both upstream and downstream of the crossing. The sites were identified as priority locations in the Pescadero-Butano Watershed County Road Inventory and Sediment Assessment (Waterways 2022) and will help to reduce erosion and sediment delivery throughout the Pescadero-Butano Creek watershed in accordance with objectives of the Total Maximum Daily Load (TMDL) for Sediment and Habitat Enhancement Plan for Pescadero-Butano Watershed (California Regional Water Quality Control Board 2018).

The Project's objectives include maintaining and improving local flood protection along Wurr Road and Pescadero Creek Road; improving water quality by repairing failing culverts and stabilizing eroding outfall areas; restoring anadromous fish passage at Little Butano Creek; and enhancing aquatic habitat along creek and tributary sites.

1.2 Location and Study Area

The site locations and IDs (as identified in the TMDL road inventory) are as follows:

- **Pescadero Creek Road**, four (4) sites: Sites 94, 102, 119, and 128.1.
- **Wurr Road**, seven (7) sites. Sites: 263, 265, 265.1, 266, 268, 270, and 270.1
- **Cloverdale Road**, one (1) site: Site 190.

For the purposes of this report, "Project area" refers to the locations where work activities would occur, including all construction areas, staging areas, access points, and areas that would be temporarily or permanently disturbed. "Study area" refers to the geographic extent of environmental changes (i.e., the physical, chemical and biotic effects) that may result directly and indirectly from the action. For this Project, the study area includes the Project area with a 300-foot buffer to account for temporary construction-related noise.

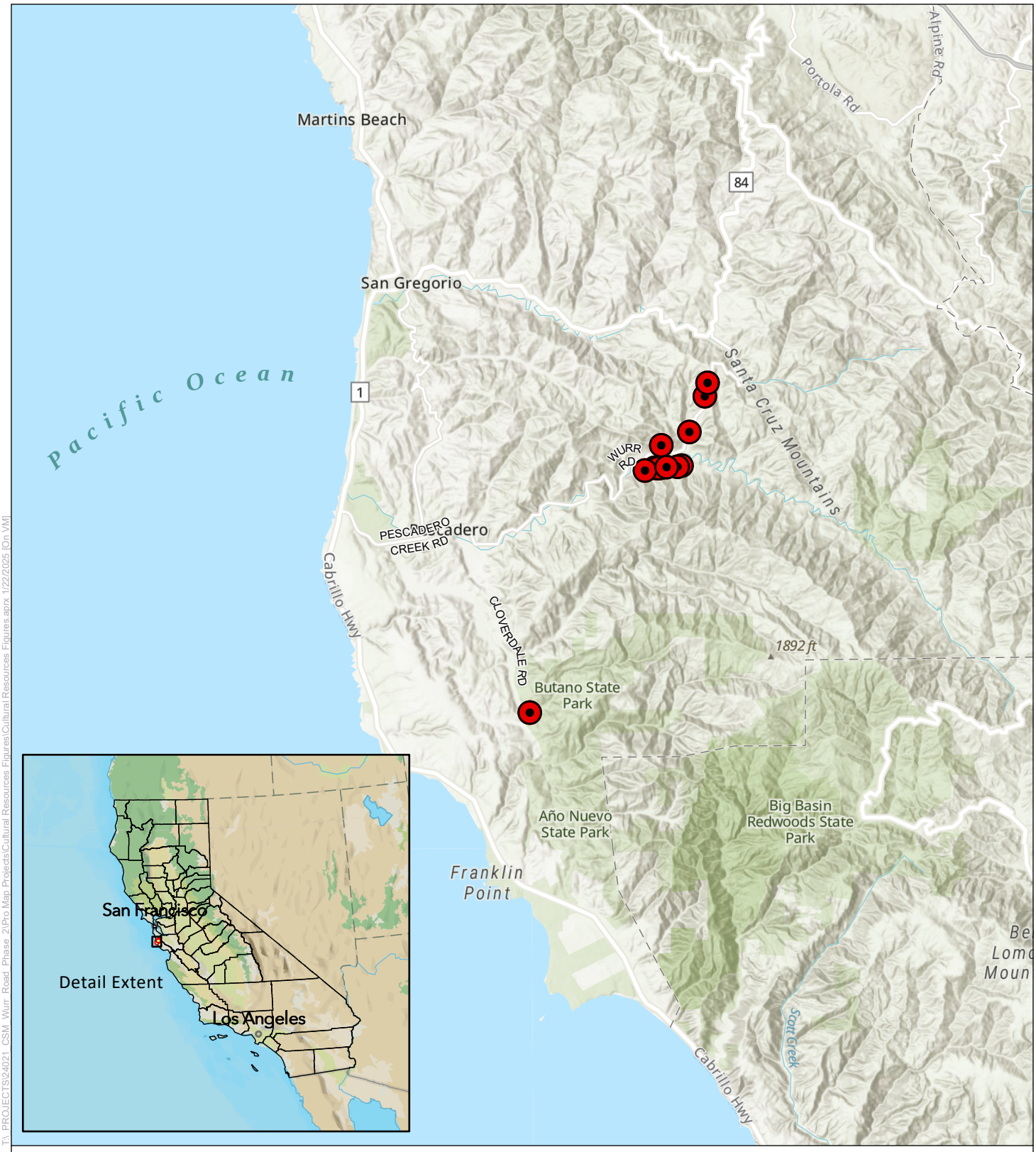
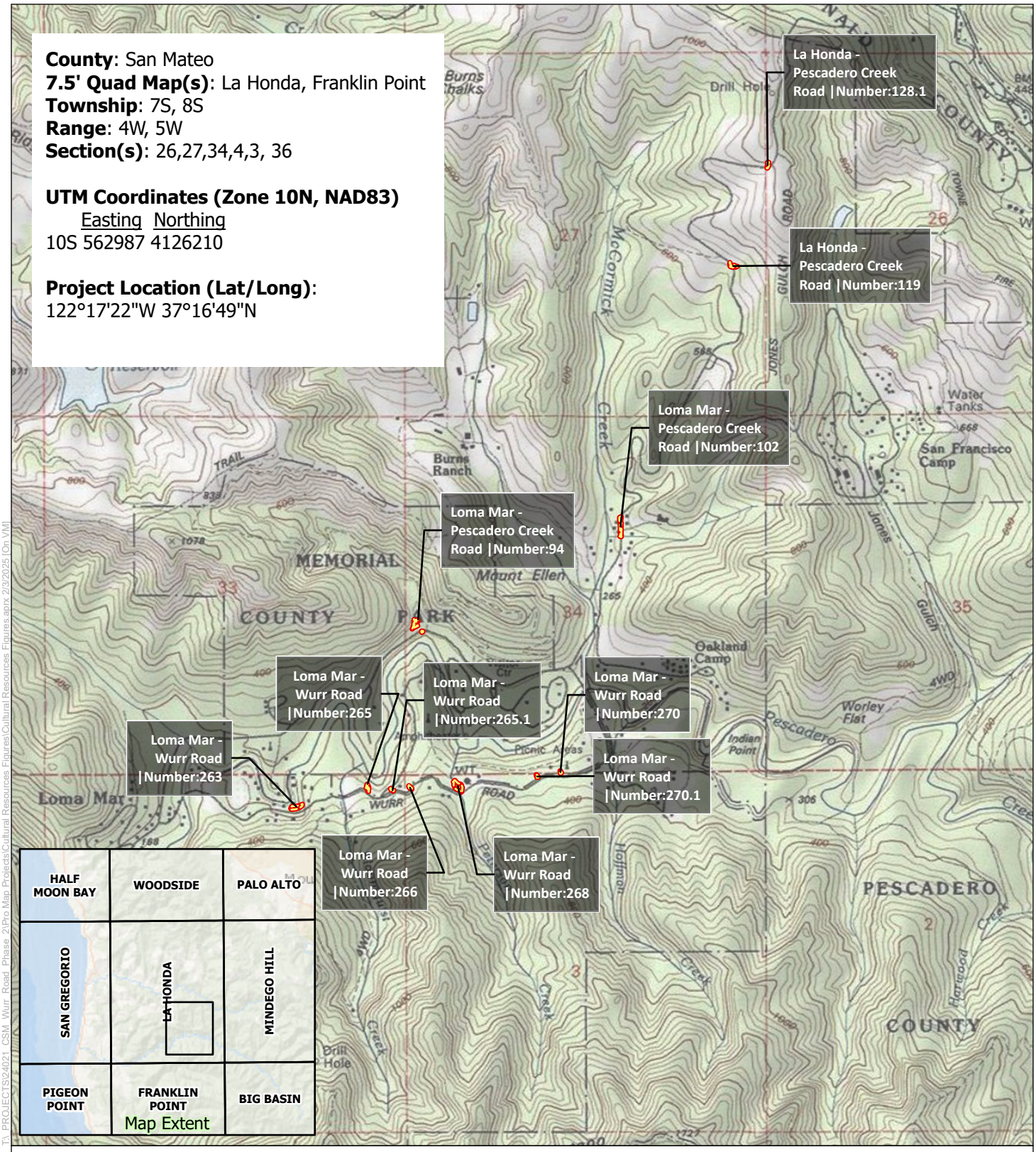


Figure 1
Project Vicinity

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Cultural Resources Figures\Cultural Resources Figures.aprx 1/22/2025 [On VM]



County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562987	4126210

Project Location (Lat/Long):
122°17'22"W 37°16'49"N

Figure 2
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

T:_PROJECTS\2021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Cultural Resources Figures\Cultural Resources Figures.aprx 2/3/2025 [On VM]

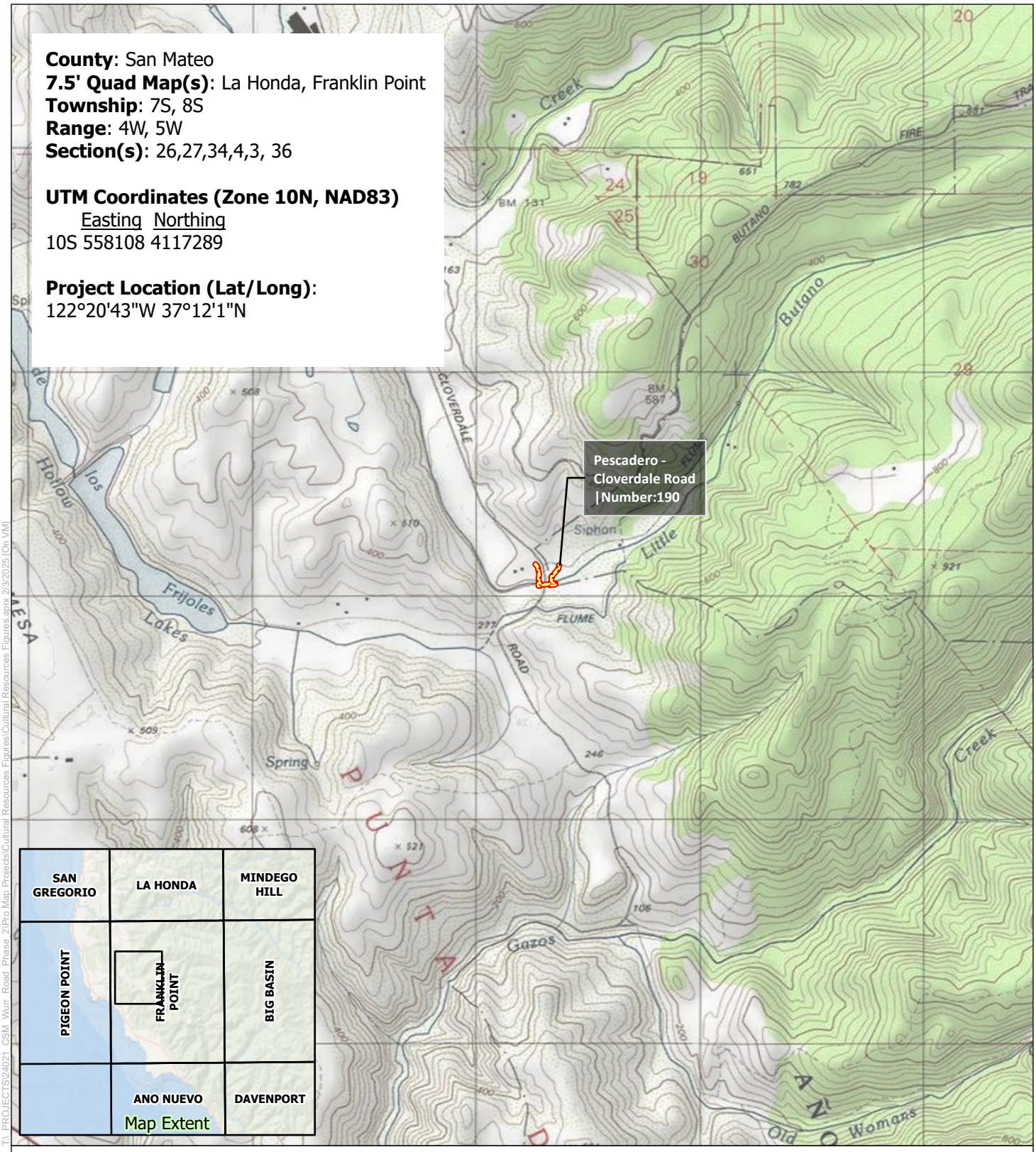


Figure 2
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

2 Study Area Description

2.1 Environmental Setting

2.1.1 Watershed and Topography

The study area is located within the Pescadero-Butano watershed. The watershed has two principal streams, Pescadero Creek and Butano Creek, which have their confluence in Pescadero Marsh. The watershed drains approximately 81 square miles within the Santa Cruz Mountains and the coastal valleys into the Pacific Ocean near the Town of Pescadero. The headwaters of Pescadero and Butano creeks originate within the Santa Cruz Mountains before transitioning to a more gradually sloped alluvial valley and relatively flat coastal terrace at the confluence in Pescadero Marsh Natural Preserve and eventually flowing into the Pacific Ocean. The Project area ranges from approximately 1,000 feet (Sites 128.1 on Pescadero Creek Road) to 210 feet (Site 190 at Cloverdale Road) in elevation.

Culvert sites are located along perennial and intermittent streams, including Little Butano Creek, Peterson Creek, Bloomquist Creek, and unnamed intermittent and ephemeral drainages to Pescadero Creek. Bloomquist and Peterson Creeks are tributaries of Pescadero Creek, flowing south to north and draining to Pescadero Creek in Memorial County Park. Existing stormwater infrastructure within the Project area includes roadside ditches and culverts that convey stormwater to ephemeral channels and/or tributary creeks to Pescadero Creek. The Project sites are located in a rural and sparsely inhabited area that is not served by a municipal storm sewer system.

The study area also includes Little Butano Creek at Cloverdale Road (Site 190), a main tributary to Butano Creek. Little Butano Creek originates in Butano State Park and passes through the Project area at Cloverdale Road, flowing north parallel to the west side of Cloverdale Road before discharging to Butano Creek near Eden W Road approximately 1.5 miles north of the Project area.

2.1.2 Climate

The study area exhibits a Mediterranean climate with mild, wet winters and warm, dry summers. Regional climatic conditions are moderated by a cooler, moist marine layer from the Pacific Ocean with precipitation patterns influenced by the orographic effects of the relatively steep Santa Cruz Mountains. Average annual precipitation in the study area may range from 22-29 inches of precipitation along the Pacific Coast, and 42-50 inches in the upper watershed areas, with the majority of precipitation occurring from November through April (WRCC 2024). Temperatures are strongly influenced by the Pacific Ocean to the west, and the Santa Cruz Mountains, which results in a variety of microclimates. The coast side region has a stronger maritime influence on its climate, characterized by cool, foggy summers and moist winters (NRCS 2024a).

2.1.3 Soils

Eleven (11) soil types are present within the study area (NRCS 2025a). These soil mapping units are listed in **Table 1**. Due to the dispersed nature of the study area, only soils within 50 feet of the individual project sites were included in the table below. Two soil types mapped within the study area were included on the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) list of Hydric Soils, these soils were: (1) Mixed alluvial land, and (2) Lockwood loam, nearly level, imperfectly drained (NRCS 2025b).

Table 1. NRCS Soil Types Mapped in the Study Area

Map Unit Symbol	Map Unit Name	Map Unit Details	Hydric Soil	Site
LIE2	Lobitos loam	steep, eroded	No	128.1
LID2	Lobitos loam	moderately steep, eroded	No	128
HuF	Hugo and Josephine loams	very steep	No	119, 94
HuD2	Hugo and Josephine loams	moderately steep, eroded	No	102
HuD	Hugo and Josephine loams	moderately steep	No	94
HvC	Hugo and Josephine loams	very deep, sloping	No	94
HzD	Hugo and Josephine sandy loams	very deep, moderately steep	No	263, 265, 265.1, 266, 268, 270, 270.1
HyF	Hugo and Josephine sandy loams	very steep	No	266
Ma	Mixed alluvial land	--	Yes	190
LmB	Lockwood loam	gently sloping	No	190
LoA	Lockwood loam	nearly level, imperfectly drained	Yes	190

2.1.4 Land Use

The study area is located in the Santa Cruz Mountains near the communities of Loma Mar and Pescadero in unincorporated San Mateo County. The upper watershed area is undeveloped, forested, natural watershed lands. The study area generally consist of parklands and open space areas, rural residential communities, and rural County roadways. Several sites are adjacent to Memorial County Park and one is adjacent to Butano State Park.

3 Existing Biological Resources

3.1 Inventory Methods

Baseline biological resources in the study area were evaluated by reviewing pertinent literature and conducting a field survey in order to supplement background information with representative site-specific data. The methods are described below.

3.1.1 Literature Reviewed

Biological resource information in the study area was evaluated by reviewing the following data sources:

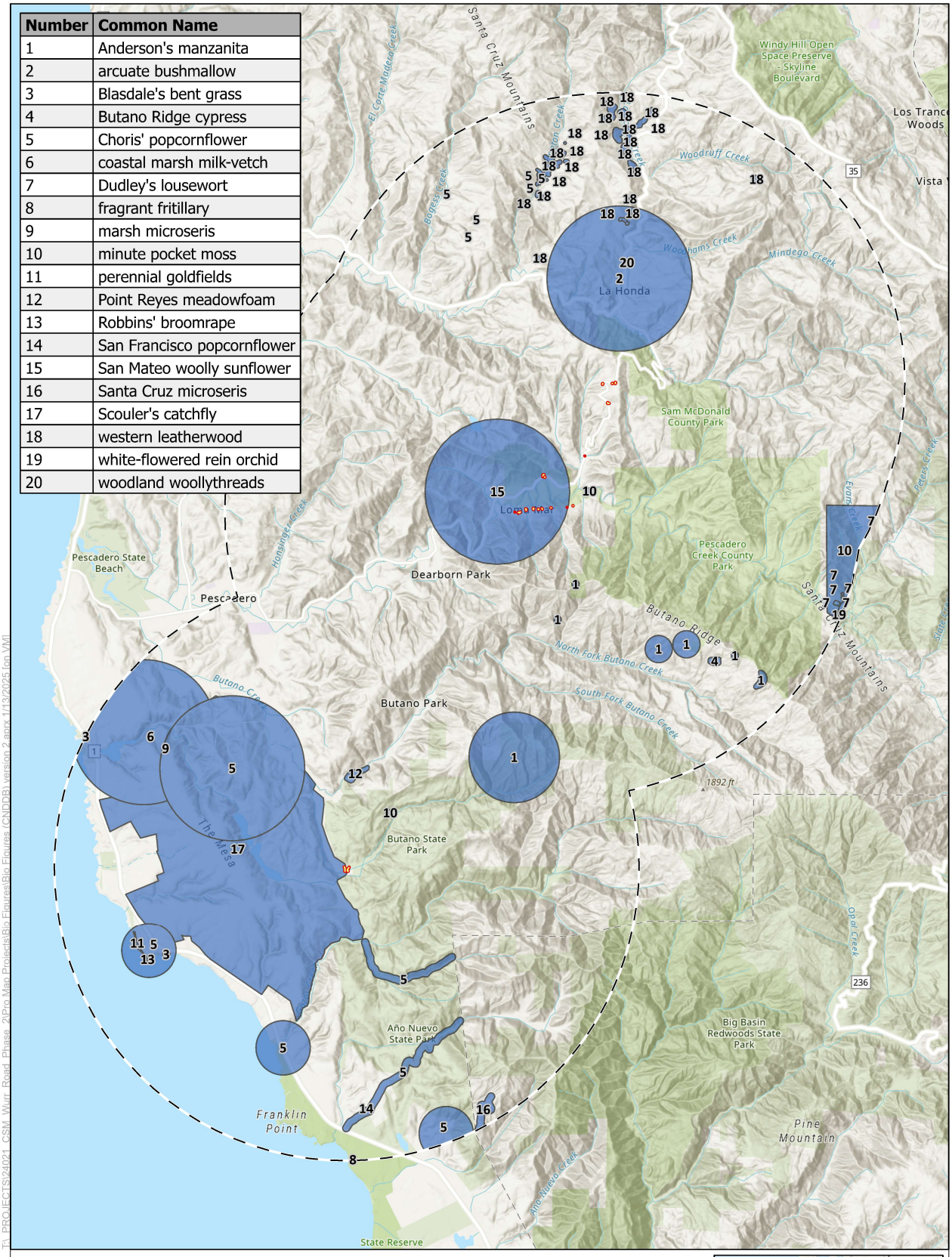
- U.S. Fish and Wildlife Service (USFWS), Information for Planning and Conservation (IPaC) list of federally endangered and threatened species (USFWS 2025a);
- USFWS's Critical Habitat Portal (USFWS 2025b);
- National Marine Fisheries Service (NMFS) California Species List (NMFS 2025);
- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) queries for the USGS 7.5-minute quadrangles encompassing and surrounding the study area: Half Moon Bay, Woodside, Palo Alto, San Gregorio, La Honda, Mindego Hill, Pigeon Point, Franklin Point, Big Basin (CDFW 2025);
- California Native Plant Society (CNPS), CNPS Rare Plant Inventory, queries for the USGS 7.5-minute quadrangles encompassing and surrounding the study area: Half Moon Bay, Woodside, Palo Alto, San Gregorio, La Honda, Mindego Hill, Pigeon Point, Franklin Point, Big Basin (CNPS 2025);
- National Wetland Inventory (NWI) results (USFWS 2025c);
- eBird records for the study area (Cornell Lab of Ornithology 2024); and
- Aerial photography (Google Earth 2025).

Photographs of each site are provided in **Appendix A**. Results of the IPaC, CNDDB, and CNPS database queries are provided in **Appendix B**. Maps of CNDDB occurrence records within 5 miles of the work sites for special-status plant (**Figure 3**) and special-status wildlife (**Figure 4**) were created based on the data review.

3.1.2 Field Survey

Montrose Environmental (Montrose) biologists Brian Piontek, Jessica Gonzalez, Susannah Kiteck, and Alex Kellogg conducted a biological reconnaissance survey on May 31, 2024 and July 22, 2025. The survey effort consisted of a visual assessment of site conditions at each of the 12 proposed work locations. Maps of baseline biological resources including a regional aerial photographic overview of the study area and detailed aerial photography were used in the survey.

The survey was conducted in the field on-foot. Natural and anthropogenic features, land cover types, and the presences of common and special-status species were noted. Visual aids, such as binoculars, were used to better assess wildlife species when appropriate.


Number | Common Name
1 | Anderson's manzanita
2 | arcuate bushmallow
3 | Blasdale's bent grass
4 | Butano Ridge cypress
5 | Choris' popcornflower
6 | coastal marsh milk-vetch
7 | Dudley's lousewort
8 | fragrant fritillary
9 | marsh microseris
10 | minute pocket moss
11 | perennial goldfields
12 | Point Reyes meadowfoam
13 | Robbins' broomrape
14 | San Francisco popcornflower
15 | San Mateo woolly sunflower
16 | Santa Cruz microseris
17 | Scouler's catchfly
18 | western leatherwood
19 | white-flowered rein orchid
20 | woodland woollythreads
La Honda
Dearborn Park
Pescadero
Pescadero State Beach
Butano Park
Butano State Park
Pescadero Creek County Park
Sam McDonald County Park
Windy Hill Open Space Preserve - Skyline Boulevard
Big Basin Redwoods State Park
Año Nuevo State Park
Franklin Point
Pine Mountain
Butano Ridge
The Mesa
Santa Cruz Mountains
Woodruff Creek
Mindego Creek
Butano Creek
North Fork Butano Creek
South Fork Butano Creek
Honsinger Creek
Peters Creek
Evans Creek
Opal Creek
Año Nuevo Creek
1892 ft
Project Areas
5-Mile Buffer
CNDDB Occurences
N
0 1 2 Miles
Figure 3
Special-Status Plant Species
within 5 Mile Radius
of Project Area
Wurr Road
Culvert Repair
Detail Location
MONTROSE ENVIRONMENTAL
Data Source: CNDDB June 2024, CDFW

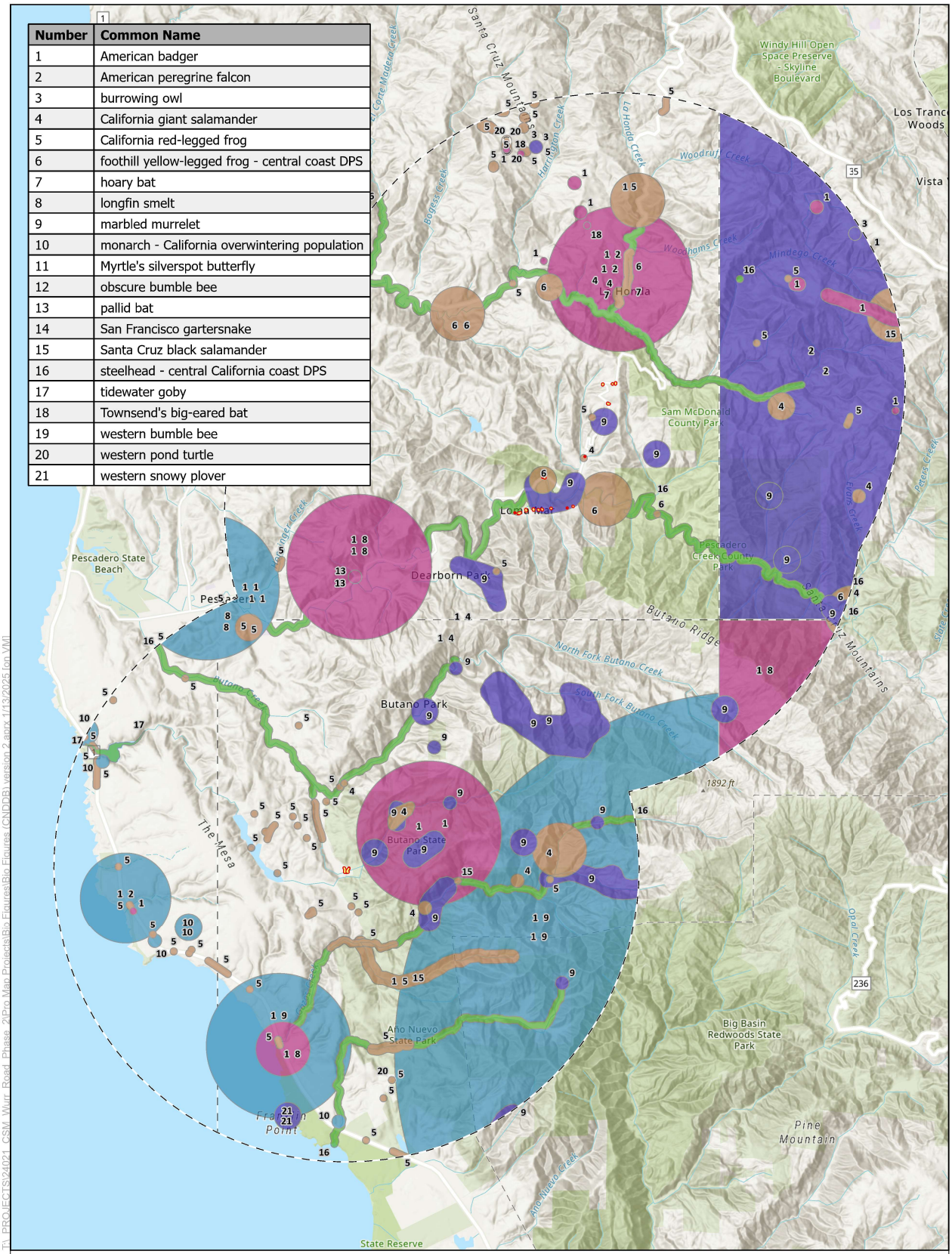


Figure 4
Special-Status Animal Species within 5 Mile Radius of Project Area

Wurr Road Culvert Repair

MONTROSE ENVIRONMENTAL

3.2 Land Cover Types

This section describes land cover present within the study area. Vegetation in the study area was surveyed during the delineation field surveys, and vegetation categories are provided below. Vegetation descriptions are based on the following resources: Holland's system of classification (Holland 1986), the California Manual of Vegetation (Sawyer et al. 2009), and CALVEG Zone 6 descriptions (U.S. Forest Service 2014). Botanical nomenclature follows the second edition of the Jepson Manual (Baldwin et al. 2012), except where synonyms are used from the National Wetland Plant List (USACE 2022). A list of plants observed in the study area is included in **Appendix D**.

3.2.1 Aquatic Habitats

Aquatic habitat includes areas that are permanently or persistently inundated. Aquatic habitats that occur in the study area are described below.

Riverine

Riverine habitat in the study area includes streams and intermittent drainages. Streams and drainages on steep slopes convey water in narrow channels at fast flow rates, typically have rocky bottoms, and can be episodic with higher flows responding to more intensive precipitation events. These channels are typically situated at higher elevations in the Santa Cruz Mountains. Streams and drainages on more gradual slopes tend to exhibit wider channels with slower moving water, have fine substrate bottoms, and generally convey longer to continuous, perennial flows. Perennial and intermittent streams may support a variety of aquatic species depending on hydrological conditions and habitat structure, including California, rough-skinned and hybridized newts (*Taricha* spp.), California giant salamander (*Dicamptodon ensatus*), California red-legged frog (*Rana draytonii*), Pacific chorus frog (*Pseudacris regilla*), and garter snake (*Thamnophis* spp.). Perennial waters may also support northwestern pond turtle (*Actinemys marmorata*) and a variety of fish species.

Downstream receiving waterbodies, Pescadero Creek and/or Butano Creek, support Central California Coast Steelhead (*Oncorhynchus mykiss)* and Coho Salmon (*Oncorhynchus kisutch*). Bloomquist Creek and Peterson Creek are not identified as steelhead bearing streams (CEMAR 2008) and are not accessible to anadromous fish migration due to steep channels with large drops over bedrock and large woody debris jams observed downstream of the Project sites along Wurr Road. Fish passage to upstream reaches of Little Butano Creek is currently impeded by several barriers – two drop structures immediately upstream of the Cloverdale Road box culvert (likely a partial barrier), which will be addressed by this project, and a bedrock chute (full barrier and current limit to anadromy) located downstream between the Cloverdale Road box culvert and confluence with Butano Creek. The San Mateo Resource Conservation District (RCD) is currently (Summer 2025) implementing the Little Butano Fish Passage and Enhancement Project to remove the bedrock chute, which will allow upstream movement of steelhead and Coho salmon in Little Butano Creek to Cloverdale Road prior to the planned start of the Project.

Riverine habitat within the study area is considered sensitive habitat and may be subject to regulatory authorization from federal and state resource agencies.

3.2.2 Terrestrial Habitats

Terrestrial habitats include upland areas, such as riparian woodland, redwood forest, mixed conifer-hardwood forest, upland chapparal, and grassland areas. Developed areas are also classified as terrestrial habitat. Terrestrial habitats in the study area are described below.

Riparian Woodland

Riparian woodland is a tree-dominated community, with typical species including white alder (*Alnus rhombifolia*), Pacific willow (*Salix lasiandra*), bigleaf maple (*Acer macrophyllum*), California bay laurel (*Umbellularia californic*a), Coast live oak (*Quercus agrifolia*), Oregon ash (*Fraxinus latifolia*), and American dogwood (*Cornus sericea*). The understory is variable in composition, including a shrub or vine layer that includes California blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), spreading gooseberry (*Ribes divaricatum*), western thimbleberry (*Rubus parviflorus*), red elderberry (*Sambucus racemosa var. racemosa*), and young willows. Other understory species present include native species such as great horse tail (*Equisetum telmateia*), California mugwort (*Artemisia douglasiana*), field horsetail (*Equisetum arvense*), California bee plant (*Scrophularia californica*), stinging nettle (*Urtica dioica*), and western dock (*Rumex occidentalis*). Non-native species present include poison hemlock (*Conium maculatum*), and grasses such as Harding grass (*Phalaris aquatica*), Italian ryegrass (*Festuca perennis*), slender oat (*Avena barbata*).

Riparian woodlands typically support a diverse assemblage of wildlife. Typical bird species include California western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), California towhee (*Melozone crissalis*), downy woodpecker (*Picoides pubescens*), American robin (*Turdus migratorius*), black phoebe (*Sayornis nigricans*), acorn woodpecker (*Melanerpes formicivorus*), Steller's jay (*Cyanocitta stelleri*), oak titmouse (*Baeolophus inornatus*), Bewick's wren (*Thyromanes bewickii*), ruby-crowned kinglet (*Corthylio calendula*), bushtit (*Psaltriparus minimus*), and dark-eyed junco (*Junco hyemalis*). An adult, red-shouldered hawk (*Buteo lineatus*) was observed during the field survey and other raptors, such as red-tailed hawk (*B. jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and great horned owl (*Bubo virginianus*) may also occur. Amphibians and reptiles such as California slender salamander (*Batrachoseps attenuatus*), arboreal salamander (*Aneides lugubris*), Southern alligator lizard (*Elgaria multicarinata*), Pacific gopher snake *(Pituophis catenifer*), ring-necked snake (*Diadophis punctatus*), and Pacific chorus frogs may be found in this land cover. Small mammals common to riparian woodlands include dusky-footed woodrat (*Neotoma fuscipes*) and western gray squirrel (*Sciurus griseus*). A woodrat nest was observed along Little Butano Creek (Site 190) during the July 2025 survey. Bats may also use trees within this riparian habitat for foraging and roosting as several dead snags with cavities and exfoliating bark were observed in the direct the vicinity of the study area.

Riparian woodland is present along the Little Butano Creek (Site 190) and tributaries to Pescadero Creek. Riparian woodland is considered sensitive by CDFW.

Redwood Forest

Redwood forest is a composite habitat name for a variety of conifer species that grow in the coastal influence zone. Redwood forest habitats are largely restricted to areas of coastal influence with relatively stable temperatures and summer coastal fog. The tree composition includes redwood (*Sequoia sempervirens*) as the dominant or co-dominant species with a mixture of other conifer species, including Douglas fir (*Pseudotsuga menziesii*), and mixed with coastal oak woodland. San Mateo County is located near the southern end of the distribution of the redwood community, and therefore the associates can also include California bay and Oregon ash. The understory contains species such as sword fern (*Polystichum californicum*), thimbleberry, wood sorrel (*Oxalis corniculata*), tanoak (*Notholithocarpus densiflorus*), and bee plant.

Redwood Forest support a variety of bird species including American robin, Steller's jay, orange-crowned warbler (*Leiothlypis celata*), dark-eyed junco*,* brown creeper (*Certhia americana*), American crow, and common raven (*Corvus corax*). Old growth redwood forest is habitat for the marbled murrelet (*Brachyramphus marmoratus*). Amphibians found in this habitat include California slender salamander, arboreal salamander, rough-skinned and California newts, ensatina (*Ensatina eschscholtzii*), and California giant salamander. Mammals common to redwood forest areas include dusky-footed woodrat, western gray squirrel, brush rabbit (*Sylvilagus bachmani*), bobcat (*Lynx rufus*), raccoon (*Procyon lotor*), mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*). Bats may also use trees within this habitat for foraging and roosting as several dead snags with cavities and exfoliating bark were observed in the direct the vicinity of the study area.

In the study area, this habitat occurs at the Pescadero Creek Road (Site 94 and Site 102) and the Wurr Road areas (site 263 through 268, 270 and 270.1). Redwood forest is considered a sensitive habitat by CDFW.

Mixed Conifer-Hardwood Forest

This habitat type contains both hardwoods and conifers in a closed canopy forest setting. Characteristically, this habitat contains a mixture of small stands, either pure conifer stands or small pure broadleaf tree stands. Common trees are Douglas fir, tanoak, Pacific madrone (*Arbutus menziesii*), coast live oak, big leaf maple, and redwood. This habitat represents a transition between conifer forests and montane hardwood. It may also occur as a transition zone between other habitats, including chaparral and other open woodlands. Mixed conifer-hardwood forest occurs in the outer coast range in inland portions of the range, often at redwood forest margins. Mixed conifer-hardwood also supports a diverse assemblage of wildlife that is also found within the redwood forest study area.

In the study area, this habitat occurs along many of the Wurr Road and Pescadero Creek Road sites.

Upland Chapparal

Upland chapparal communities are characterized by woody shrub-dominated landscapes, with few to no trees. Common dominant species associated with this land cover type within the study area include coyote brush and poison oak. Upland chapparal habitat is present along the Pescadero Creek Road sites (119 and 128.1). Non-native grasses and herbaceous species are often prevalent in this community, such as ripgut brome (*Bromus diandrus*), rattlesnake brome (*Bromus briziformus*), hairy vetch (*Vicia villosa*), Italian thistle (*Carduus pychocephalus*), bristly oxtongue (*Helminthotheca echioides*), and Italian ryegrass.

Ruderal & Developed

Ruderal vegetation is characterized by non-native forbs and grasses in a disturbed habitat typically along the edges of developed/landscaped cover or areas with frequent disturbance. Dominant ruderal species include Harding grass, rattlesnake brome, Italian thistle, Italian ryegrass, ripgut brome, soft chess, foxtail barley (*Hordeum jubatum*), and other opportunistic weedy species. Ruderal cover in the study area was observed along Wurr Road, Pescadero Creek Road, and Cloverdale Road.

Developed/landscaped land cover is found throughout the study area. This land cover includes roads, structures, paved surfaces, landscaped vegetation, and other anthropogenic features. Vegetation in these areas, if present at all, is usually sparse, dominated by opportunistic weedy herbaceous species found in the neighboring ruderal community.

3.3 Special-Status Species

For the purpose of this report, special-status plant and wildlife species refer to those species that meet one or more of the following criteria:

- Species that are listed as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] Section 17.12 for listed plants, 50 CFR Section 17.11 for listed animals);
- Species that are candidates for possible future listing as threatened or endangered under ESA (76 Federal Register [FR] Section 66370);
- Species that are listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (Fish and Game Code Section 1900 et seq.);
- California Rare Plant Rank (CRPR) List 1 and 2 species; and
- Animals fully protected in California (Fish and Game Code Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]) or species designated as “Species of Special Concern” by CDFW.

A full list of all special-status species reviewed along with habitat descriptions and an assessment of their potential to occur in the Project area is included in **Appendix C**. Maps of CNDDB occurrence records within

5 miles of the Project areas for special-status plants (Figure 3) and special-status wildlife (Figure 4), were created based on the literature review.

Special-status species with the potential to occur in the vicinity of the study area were evaluated for their potential to occur in the Project areas and summarized in **Table 2** below.

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Plants			
Arctostaphylos andersonii Anderson's manzanita	- / - / 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 95-765 m. Blooms in November through May.	**Not expected.** Suitable habitat is present in the vicinity of the Study area but the nearest known occurrence is near Butano Ridge Road in Pescadero Creek County Park approximately 2.15 miles east of the Project area (CNDDB 2025). This species was not observed in the Project area during reconnaissance surveys.
Dirca occidentalis western leatherwood	- / - / 1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 25-425 meters. Blooms January through April.	**Possible.** Suitable habitat is present in the along several Wurr Road and Pescadero Creek Road sites. Several CNDDB occurrences are present north of La Honda Road approximately 1.94 miles northwest from Site 128.1 (CNDDB 2025).
Eriophyllum latilobum San Mateo woolly sunflower	FE / SE / 1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest, ultramafic. Often on roadcuts; found on and off of serpentine. 30-610 m. Blooms May through June.	**None.** Suitable habitat of cismontane woodland is present in the Study areas of Wurr Road, and Pescadero Creek Road. However, one CNDDB occurrence in La Honda from 1988 is considered possibly extirpated and species is presumed extirpated within La Honda Quadrat (CNDDB 2025 and CNPS 2025).
Fissidens pauperculus minute pocket moss	- / - / 1B.2	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10-1,024 m.	**Possible.** Suitable habitat is present in the study area. Two CNNDB occurrences are present near Old Haul Road near Memorial County Park and another along the Little Butano Creek Trail within Butano State Park (CNDDB 2025).
Malacothamnus arcuatus arcuate bushmallow	- / - / 1B.2	Chaparral. Gravelly alluvium. 1-735 m. Blooms April through June.	**Possible.** Suitable chaparral habitat is present along Pescadero Creek Road (Site 128.1). One CNDDB occurrence is present near La Honda approximately 0.45 miles northwest from Site 128.1 (CNDDB 2025).
Monolopia gracilens woodland woollythreads	- / - / 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on	**Possible.** Suitable habitat of chaparral and cismontane woodland is present along Wurr Road and Pescadero Creek Road. One CNDDB occurrence is near La Honda 0.45 miles northwest from Project area of Pescadero Creek Road (Site 102 and 128.1) (CNDDB 2025).

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
		serpentine after burns but may have only weak affinity to serpentine. 100-1,200 meters.	
Piperia candida white-flowered rein orchid	- / - / 1B.2	North Coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 20-1615 m. Blooms May through September.	**Possible.** Suitable habitat is present in along the Wurr Road and Pescadero Creek Road sites. Nearest CNDDB occurrence is present Portola State Park approximately 0.9 miles southeast from Wurr Road.
Amphibians			
Aneides niger Santa Cruz black salamander	- / SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	**Possible.** Suitable habitat is present along Cloverdale Road and Wurr Road and Pescadero Creek Road woodlands. The nearest CNDDB occurrence from 2002 is within Gazos Creek in Butano State Park 1.5 miles east of the Cloverdale Road site, with a historical occurrence from 1950 on Old Woman's Creek less than 1 mile south from Cloverdale Road.
Dicamptodon ensatus California giant salamander	- / SSC	Aquatic, meadow & seep, north coast coniferous forest, riparian forest. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**Present.** Larvae was observed in the scour pool downstream of Site 268 in Peterson Creek during reconnaissance surveys. The nearest CNDDB occurrence overlaps with Project area location 102 on Pescadero Creek Road (CNDDB 2025).
Rana boylii foothill yellow-legged frog - central coast DPS	FT/ SE	Aquatic, riparian forest, riparian scrub, riparian woodland, south coast flowing waters. Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Possible.** Suitable aquatic habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. The nearest CNDDB occurrence from 1960 overlaps Site 94 (CNDDB 2025). Other known occurrences are within Pescadero Creek Park from 1960 and 1999 (CNDDB 2025).
Rana draytonii California red-legged frog	FT / SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval	**Possible.** The Project area is within designated Critical Habitat for this species. Suitable riparian habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. Forty-two CNDDB occurrence records are known from within five miles of the Cloverdale Road location (CNDDB 2025). Four-

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name Common Name	Listing status* (Federal/ State/CNPS)	Habitat Association	Potential to Occur in the Study Area
		development. Must have access to estivation habitat.	teen occurrence records are known within five miles of the Wurr Road and Pescadero Creek Road sites, with one record as close as 0.5 miles northeast of Site 102 (CNDDB 2025).
Reptiles			
Actinemys marmorata western pond turtle	PT/ SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 feet elevation above mean sea level (amsl). Needs basking sites and suitable adjacent upland (sandy banks or grassy open fields) habitat for egg-laying.	**Not expected.** This species is known to inhabitant Pescadero-Butano Marsh approximately 3.8 miles northwest of the Cloverdale Road site (Site 190) (CNDDB 2025). Marginal aquatic habitat is present upstream and downstream of the Cloverdale Road culvert, but the concrete bed, banks, and box culvert prevent this species from persisting within the Project area. Suitable habitat is absent at the Wurr Road and Pescadero Creek Road sites.
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE/SE, FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Possible.** This species is documented in the Pescadero-Butano watershed within five miles of the study area (CNDDB 2025). Suitable riverine habitat is present in Little Butano Creek. Marginal aquatic habitat is present at Bloomquist Creek and Peterson Creek but these sites generally lacked dense vegetative cover and/or suitable pools.
Fish			
Oncorhynchus kisutch coho salmon - central California coast ESU	FE / SE	Open ocean, estuaries, and rivers. Federal listing includes populations between Punta Gorda and San Lorenzo River. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Present.** Coho salmon are known to occur in Pescadero Creek and the creek is designated Critical Habitat for this species. However, no work occurs on Pescadero Creek, and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish. Coho also occur in Butano Creek. Currently a bedrock chute on Little Butano Creek is a total fish barrier downstream of the Cloverdale Road site (Site 190) which impedes anadromous fish from upstream movement. However, the San Mateo RCD is currently (Summer 2025) implementing a

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
			project to remove the bedrock chute, which will allow upstream movement of Coho salmon in Little Butano Creek to Cloverdale Road prior to the planned start of the Project.
Oncorhynchus mykiss irideus steelhead - central California coast DPS	FT /SCC	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	**Present.** Steelhead are known to occur in Pescadero Creek and lower reaches of Little Butano Creek and the creek is designated Critical Habitat for this species (Spence et al. 2008, CEMAR 2008). However, no work occurs on Pescadero Creek and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Steelhead also occur in Butano Creek but total fish barriers on Little Butano Creek downstream of the Cloverdale Road site currently impede anadromous fish from upstream movement. The RCD is currently (Summer 2025) implementing a project to remove the bedrock chute, which will allow upstream movement of steelhead in Little Butano Creek to Cloverdale Road prior to the planned start of the Project.Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish.
Birds			
Brachyramphus marmoratus marbled murrelet	FT / SE	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. In San Mateo County, the marbled murrelet is restricted to old-growth redwood forests, where it breeds, and to coastal waters, where it forages up to six miles inland, often in Douglas-fir (SAS 2001, Cornell Lab of Ornithology 2024).	**Present.** In Memorial County Park, known marbled murrelet (MAMU) occupied sites have been at documented at the Huckelberry Flat and occupied behavior has been confirmed at Homestead Flat, Sequoia Flat at Memorial County Park. Designated Critical Habitat for this species overlaps within San Mateo County in Memorial Park, is present within Site 94 and is adjacent to the Project sites along Wurr Road (Sites 102, 263, 265, 265.1, 266, 268, and 270). Based on proximity to 2010 CNDDB occurrence at Memorial County Park (CNDDB#38) it is assumed MAMU has the potential to occur at Project sites at 94, 102 263, 265, 265.1, 266, 268, 270, and 270.1 (occurrence

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
			overlaps Wurr Road and Pescadero creek Road). At Site 263 a 2010 occurrence is located approximately 144 meters from the project site (CNDDB 2025). The presence of potential nesting trees within 300 feet (ft) of Project sites with large diameter tree with large (≥4") horizontal branches (platform location with moss and access and good canopy cover, complex understory, good access points for landing) are present in sites 94, 263, 265, 270, 270.1. No suitable nesting trees were observed within 300 ft at Sites 94, 102, 265.1, 266, or 268. With known occupied sites, confirmed occupied behavior, CNDDB occurrences and presence of potential nesting trees (within 300ft of Project site) within the vicinity of the Project area is it possible (assumed) that suitable habitat is located within ¼ mile of Sites 94, 102, 263, 265, 265.1, 268, 270, 270.1 and that MAMU has the potential to occur within these Study areas.
Asio otus long-eared owl	-/ SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Not expected.** A breeding pair was documented near the Stevens Creek headwaters approximately 5 miles east of Pescadero Creek Road, Site 128.1 in 1986/1987 (CNDDB 2025). The open space area adjacent to Site 128.1 provides suitable foraging habitat but lacks suitable nesting habitat.
Mammals			
Antrozous pallidus Pallid bat	- / SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Possible.** Suitable foraging habitat is present within the study area, such as in larger trees in riparian areas. One CNDDB occurrence is 2.3 miles west of Wurr Road (CNDDB 2025).
Corynorhinus townsendii Townsend's big-eared bat	- / SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Not expected.** One CNDDB occurrence within 1.3 miles west of Wurr Road (CNDDB 2025). Suitable foraging habitat is present within the study area. Typical roost sites includes caves, tunnels, old mines, barns, and abandoned buildings which are not present within the Project area. Old-growth trees with large basal hollows may have

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
			formerly been important roost type; however, no old-growth trees are located in the work areas.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	- / SSC	Forest habitats of moderate canopy and moderate to dense understory. Constructs nests of shredded grass, leaves and other material.	**Present.** No CNDDB occurrences were within 5 miles of the study area (CNDDB 2025). However, suitable habitat is present where forest, woodland, and chaparral habitats occur. One woodrat nest was observed along Little Butano Creek downstream of Cloverdale Road (site 190) during July 2025 surveys.
Taxidea taxus American badger	-/ SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Possible.** This species is known to occur in the Santa Cruz Mountains east of La Honda to Skyline Boulevard, with multiple CNDDB occurrence records within a 3.0 mile radius of Pescadero Creek Road (Site 128.1) and one historical record from 1978 was reported in Butano State Park near the Cloverdale Road site (Site 190) (CNDDB 2025). Suitable habitat is present in the open grassland and chaparral areas adjacent to these sites.

Source: California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database.

"Potential to Occur" Categories Definitions

Present = Species was detected during surveys and/or occurrence records document the species on site within the last 50 years.

Possible = Occurrence record known within 5 miles of the study area and suitable habitat is present.

Not expected = Occurrence record known within 5 miles of the study area but only marginal habitat exists and/or the site lacks primary habitat elements required to support that species.

None = The study area is outside of species' range, record is possibly or presumed extirpated, or no marginal habitat present.

* List of Abbreviations for Species Status:	California Rare Plant Rank:
FE = Federal endangered	1A = Plants presumed extinct in California and rare/extinct elsewhere
FT = Federal threatened	1B.1 = Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
FC = Federal Candidate	1B.2 = Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
SC = State Candidate	1B.3 = Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California
SE = State Endangered (California)	2B.2 = Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
ST = State Threatened (California)	
SR = State Rare (California)	
SCC = Species of Special Concern	

Table 2. Special Status Species with the Potential to Occur in the Project Area

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
FP= Fully Protected			

3.4 Critical Habitat

All Project sites are within designated Critical Habitat for California red-legged frog (SNM-2) (75 FR 12816-12959).

Critical Habitat for Marbled Murrelet overlaps San Mateo County Memorial Park and is present at Site 94 at Pescadero Creek Road and is adjacent to the Project sites along Wurr Road (Sites 2 102, 263, 265, 265.1, 266, 268, and 270). Critical habitat occurs within Butano State Park, however it does not overlap into in the Project site of Cloverdale Road (81 FR 51348-51370).

Critical habitat for *Oncorhynchus kisutch* pop. 4 coho salmon - Central California Coast ESU encompasses accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and the San Lorenzo River (inclusive) in California, including two streams entering San Francisco Bay: Arroyo Corte Madera Del Presidio and Corte Madera Creek (NOAA et al. 2004). Critical habitat for *Oncorhynchus mykiss irideus* pop. 8 steelhead - Central California Coast DPS encompasses accessible reaches of all rivers between the Russian River and Aptos Creek in California, including drainages of San Francisco and San Pablo Bays eastward to Chipps Island (NOAA 2014). Pescadero Creek and Butano Creek are designated as Critical Habitat for *Oncorhynchus mykiss irideus* pop. 8 steelhead - Central California Coast DPS and coho salmon - Central California Coast ESU (USFWS 2024b). However, designated Critical Habitat for these species is currently not present at the Project sites. While Little Butano Creek at Cloverdale Road is currently inaccessible to anadromous fish due to a downstream migration barrier, this fish barrier will be removed by the San Mateo Resource Conservation District's Little Butano Creek Fish Passage and Habitat Enhancement ("Chute") Project. The downstream project is anticipated to be completed by Fall 2025 which would allow upstream access to the Cloverdale Road site before the Project begins. Therefore, steelhead and Coho salmon may be present in Little Butano Creek at Cloverdale Road (Site 190) once the downstream fish barrier is removed.

Bloomquist and Peterson Creek at Wurr Road are deemed non-fish bearing stream reaches due to steep slopes and bedrock drop offs (CAlFish 2025).

4 Potentially Jurisdictional Waters and Wetlands

Perennial and intermittent tributaries to Pescadero Creek are anticipated to be subject to U.S. Army Corps of Engineers (USACE) jurisdiction as a water of the U.S. and Regional Water Quality Control Board (RWQCB) jurisdiction as a water of the state. These include Bloomquist Creek, Peterson Creek, Little Butano Creek, and unnamed drainages tributary to Pescadero Creek. Project activities affecting jurisdictional waters and wetlands require a Clean Water Act (CWA) Section 404 Permit from USACE and a CWA Section 401 Water Quality Certification from RWQCB depending on the nature of the specific impact within jurisdictional areas. A separate aquatic resources (wetland) delineation shall be prepared independent from this report.

CDFW regulates activities that may: divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or deposit or dispose of material into any river, stream, or lake within streambanks and other waters of the state under California Fish and Game Code Section 1600. Additionally, CDFW regulates the removal of riparian habitat associated with such waters of the state. Project activities affecting waters of the state and associate riparian habitat require a Lake or Streambed Alteration Agreement from CDFW.

5 Avoidance and Minimization Measures

The Project will implement applicable best management practices (BMPs) from the County's Routine Maintenance Program (RMP). These BMPs have been vetted by USACE, USFWS, NMFS, RWQCB, and CDFW during RMP development and program authorization. The BMPs include general maintenance practices and biological resources and habitat protection measures that would be implemented during Project construction. The complete list of BMPs are described and provided in **Appendix E.** While all the BMPs reduce the potential for direct and indirect impacts on biological resources, the following list includes BMPs more specific to avoid and minimize impacts on special-status species:

GEN-1: Staging and Access.

- Staging, access, and parking areas will be located outside of sensitive habitats to the extent feasible.
- Staging areas will be located 30 feet from the top of bank (or as far as feasibly possible) or on the outboard side of levees.
- Vegetation removal shall be limited to the minimum amount necessary to provide access.

GEN-2: Minimize Area of Disturbance and Site Maintenance.

- Areas of disturbance will be limited to the smallest footprint necessary and a single access pathway, where feasible. For maintenance activities near waterways or other sensitive habitat, the designated work area shall be clearly identified in the field using highly visible material, and work will not be conducted outside this area.
- Keep excavated soil and materials on the site where they will not collect into the street or get transported to storm drains or nearby water bodies by rainfall or runoff in order to avoid deleterious effects to fish, wildlife, and beneficial uses.
- Transfer excavated materials to dump trucks on the site, not in the street.

GEN-16: Timing of Work.

- In general, routine maintenance and construction activities that take place in sensitive habitat and/or in channels below ordinary high water will be conducted during the dry season (June 15 through October 31[1]). Maintenance activities that are in upland areas and that would not affect streams may occur during low rainfall years at times when there is no predicted rainfall (chance of precipitation in less than 30 percent chance of rain). Activities that are subject to permit requirements will be conducted during the period authorized by the permits.

GEN-21: Domestic Animals.

- No animals (e.g., dogs or cats) can be brought to the project site to avoid harassment, killing or injuring of wildlife.

[1]Construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

BIO- 1: Environmental Awareness Training.

- Prior to commencing maintenance activities in a given year, all participating maintenance personnel will attend a worker environmental awareness training program. The training will include a brief review of special-status species, sensitive habitats, and other sensitive resources that may exist in the project area, including field identification, habitat requirements, and the legal status and protection of each relevant species, as well as locations of sensitive biological resources. The training will include materials concerning the following topics: sensitive resources, resource avoidance, permit conditions, and possible consequences for violations of State or Federal environmental laws. The training will cover the maintenance activity's conservation measures, environmental permits, and regulatory compliance requirements, as well as the roles and authority of the monitors and biologist(s). It will include printed material and an oral training session by a qualified biologist.

BIO-2: Minimize Injury or Mortality of Fish and Amphibian Species during Dewatering.

- Prior to dewatering a construction site, all reasonable efforts shall be made to capture and relocate native fish and amphibian species if necessary to avoid direct mortality and minimize take. Streams that support a sensitive species (e.g., steelhead, California red-legged frog) will require a relocation effort led by a qualified biologist. The following measures are consistent with those defined as reasonable and prudent by NMFS for projects concerning several central California Evolutionarily Significant Units for coho salmon and steelhead trout.
- Fish relocation activities will be performed only by qualified fisheries biologists that have experience with fish capture and handling.
- Perform relocation activities during morning periods when air temperatures are coolest.
- Periodically measure air and water temperatures. Cease activities when water temperatures exceed temperatures allowed by CDFW and NMFS.
- Capture methods may include fish landing nets, dip nets, buckets and by hand.
- Exclude fish from re-entering work area by blocking the stream channel above and below the work area with fine meshed net or screens. Mesh will be no greater than 1/8 inch (3.1mm). The bottom edge of net or screen will be completely secured to the channel bed to prevent fish from re-entering work area. Exclusion screening will be placed in areas of low water velocity to minimize impingement of fish. Screens will be checked periodically and cleaned of debris to permit free flow of water.
- Prior to capturing fish, the qualified biologist will determine the most appropriate release location(s). Captured aquatic life shall be released immediately in the closest suitable body of water adjacent to the work site, taking into consideration the following when selecting release site(s):
    A. Similar water temperature as capture location
    B. Ample habitat for captured fish

C. Low likelihood of fish re-entering work site or becoming impinged on exclusion net or screen.

D. Avoid areas with large concentrations of potential predators in immediate vicinity.

- Minimize handling of salmonids. However, when handling is necessary, always wet hands or nets prior to touching fish.
- Temporarily hold fish in cool, shaded, aerated water in a container with a lid or in a live car (i.e., a net enclosure that can be placed in a pond to temporarily hold the fish).
- If fish are held in a container, provide aeration with a battery-powered external bubbler. Protect fish from jostling and noise and do not remove fish from this container until time of release.
- Place a thermometer in holding containers and, if necessary, periodically conduct partial water changes to maintain a stable water temperature. If water temperature reaches or exceeds those allowed by CDFW and NMFS, fish should be released, and rescue operations ceased.
- Avoid overcrowding in containers. Have at least two containers and segregate young-of-year fish from larger age classes to avoid predation. Place larger amphibians, such as Pacific giant salamanders, in container with larger fish.
- If fish are abundant, periodically cease capture, and release fish at predetermined locations.
- Visually identify species and estimate year-classes of fish at time of release.
- Count and record the number of fish captured. Avoid anesthetizing or measuring fish.
- Submit reports of fish relocation activities to CDFW and NMFS in a timely fashion.
- If feasible, plan on performing initial fish relocation efforts several days prior to the start of construction. This provides the fisheries biologist an opportunity to return to the work area and perform additional passes immediately prior to construction. In many instances, additional fish will be captured that eluded the previous day's efforts. The biological monitor or qualified biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops.
- If mortality during relocation exceeds the amount authorized by the applicable permits or, if no amount is specified, 5 percent, stop efforts and immediately contact the appropriate agencies (CDFW and NMFS).

BIO-3: California Red-legged Frog Protection Measures.

- If suitable habitat for California red-legged frog is determined to exist in or around the work area where maintenance activities are planned to occur, the County will implement applicable protection measures as follows:
- No more than twenty-four (24) hours prior to the date of initial ground disturbance or mowing, a pre-activity survey for the California red-legged frog will be conducted by a qualified biologist at the work site. The survey will consist of walking the work area limits to ascertain the possible

presence of the species. The qualified biologist will investigate all potential areas that could be used by the California red-legged frog for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as those of California ground squirrels (Spermophilus beecheyi) or gophers (Thomomys bottae). If any adults, subadults, juveniles, tadpoles, or eggs are found, the qualified biologist will contact the USFWS to determine if moving any of the individuals is appropriate. If the USFWS approves moving animals, the biologist and USFWS will identify a suitable relocation site, and the County will ensure the qualified biologist is given sufficient time to move the animals from the work site before ground disturbance is initiated. Only qualified biologists will capture, handle, and monitor the California red-legged frog.

- To minimize harassment, injury, death, and harm to individual California red-legged frogs, one of the following two measures will be implemented.

    1. An approved, qualified biologist(s) will be on-site during all activities that may result in take of the California red- legged frog, as determined by the biologist taking into account all information gathered during the desktop audit of the site as well as the preconstruction survey. Qualified biologists must be approved by the USFWS.

        or

    2. Prior to pre-activity surveys, personnel will enclose the work area with an exclusion fence with a minimum height above grade of 42 inches. The bottom of the fence will either be buried a minimum of six inches below ground or otherwise secured in a manner approved by the USFWS and will remain in place during all maintenance activities in order to prevent California red-legged frogs from entering the work area. Escape ramps, funnels, or other features that allow animals to exit the work area, but which will prohibit the entry of such animals, will be provided in the exclusion fencing. A qualified biologist will conduct a pre-activity survey of the fence installation area immediately prior to (i.e., the day of) the commencement of installation and will be on-hand to monitor fence installation. The exclusion fencing will be inspected daily by maintenance personnel and maintained for the duration of maintenance implementation.

- The qualified biologist(s) will be given the authority to freely communicate verbally, by telephone, electronic mail, or in writing at any time with maintenance personnel, any other person(s) at the work area, otherwise associated with the maintenance work, the USFWS, the CDFW, or their designated agents. The qualified biologist will have oversight over implementation of all the conservation measures in this programmatic biological opinion, and will have the authority and responsibility to stop work activities if they determine any of the associated requirements are not being fulfilled. If the qualified biologist(s) exercises this authority, the USFWS will be notified by telephone and electronic mail within twenty-four (24) hours. The USFWS contact is the Coast Bay Foothills Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at telephone (916) 414-6600.

- The County will minimize adverse impacts to the California red-legged frog by limiting, to the maximum extent possible, the number of access routes, ground disturbance area, equipment staging, storage, parking, and stockpile areas. Prior to initiating maintenance work that involve ground-disturbing activities, equipment staging areas, site access routes, sediment removal and transportation equipment and personnel parking areas, debris storage areas, and any other areas that may be disturbed will be identified, surveyed by the qualified biologist, and clearly identified with fencing. The fencing will be inspected by the qualified biologist and maintained daily until the last day that equipment is at the site.
- To the extent practicable, ground-disturbing activities will be avoided from October through April because that is the time period when California red-legged frogs are most likely to be moving through upland areas. When ground- disturbing activities must take place between November 1 and March 31, the County will ensure that daily monitoring by the qualified biologist is completed for the California red-legged frog.
- If egg masses are present and work cannot be postponed until after hatching, a buffer of vegetation at least 10 feet in diameter shall be left around any egg masses found. Staff will keep a record of any sites where egg masses are found and will conduct vegetation removal at these sites between June 15 and October 31[2] . Staff shall avoid entering the channel to avoid dislodging egg masses. Activities shall be performed from the banks.
- To minimize harassment, injury, death, and harm in the form of temporary habitat disturbances, all maintenance- related vehicle traffic will be restricted to established roads, sediment removal and access areas, equipment staging, storage, parking, and stockpile areas. These areas will be included in pre-activity surveys and, to the maximum extent possible, established in locations disturbed by previous activities to prevent further adverse impacts. Maintenance related vehicles will observe a 20-mile per hour speed limit within work areas, except on County roads, and State and Federal highways. Off-road traffic outside of designated and fenced work areas will be prohibited.
- When a California red-legged frog is encountered in the work area, all activities which have the potential to result in the harassment, injury, or death of the individual will be immediately halted. The qualified biologist will then assess the situation in order to select a course of action that will avoid or minimize adverse impacts to the animal. To the maximum extent possible, contact with the frog will be avoided and the individual will be allowed to move out of the potentially hazardous situation to a secure location on its own volition. This procedure applies to situations where a California red-legged frog is encountered while it is moving to another location. It does not apply to animals that are uncovered or otherwise exposed or in areas where there is not sufficient adjacent habitat to support the species should the individual move away from the hazardous location.

[2] Construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

- California red-legged frogs that are in danger will be relocated and released by the qualified biologist outside the work area within the same riparian area or watershed. If relocation of the individual outside the work area is not feasible (i.e., there are too many individuals observed per day), the biologist will relocate the animals to a USFWS preapproved location. Prior to the initial ground disturbance, the County will obtain approval of the relocation protocol from the USFWS in the event that a California red-legged frog is encountered and needs to be moved away from the work site. Under no circumstances will a California red-legged frog be released on a site unless the written permission of the landowner has been obtained by the County. The qualified biologist will limit the duration of the handling and captivity of the California red-legged frog to the minimum amount of time necessary to complete the task. If the animal must be held in captivity, it will be kept in a cool, dark, moist, aerated environment, such as a clean and disinfected bucket or plastic container with a damp sponge.
- The County will immediately notify the USFWS once the California red-legged frog and the site is secure. The USFWS contact for this situation is the Coast Bay Foothills Division Chief of the Endangered Species Program by email and at telephone (916) 414-6600.
- A litter control program will be instituted at each activity site. All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. The trash containers will be removed from the site at the end of each working day.
- The County will comply with all herbicide application requirements mandated by the USEPA and stipulated injunctions pertaining to California red-legged frog. For example, herbicides will be limited for controlling state-designated invasive species and noxious weeds, will not be used within 15 feet of aquatic breeding critical habitat or non-breeding aquatic critical habitat areas or within 15 feet of aquatic features within non-critical habitat sections subject to the 2006 Court-ordered injunction; precipitation is not occurring or forecast to occur within 24 hours; herbicide is limited to localized spot treatment using hand-held devices; and herbicide will be applied by a certified applicator or person working under the direct supervision of a certified applicator.
- For on-site storage of pipes, conduits and other materials that could provide shelter for California red-legged frogs, materials will be securely capped prior to storage or an open-top trailer will be used to elevate the materials above ground. This is intended to reduce the potential for animals to climb into the conduits and other materials.
- To the maximum extent practicable, no maintenance activities will occur during rain events or within 24-hours following a rain event. Prior to maintenance activities resuming, a qualified biologist will inspect the work area and all equipment/materials for the presence of California red-legged frogs. The animals will be allowed to move away from the work site of their own volition or moved by the qualified biologist.
- To the maximum extent practicable, night-time construction activities will be minimized or avoided by the County. Because dusk and dawn are often the times when the California red-

legged frog most actively moving and foraging, to the maximum extent practicable, earthmoving and other project activities will cease no less than 30 minutes before sunset and will not begin again prior to 30 minutes after sunrise. Except when necessary for driver or pedestrian safety, to the maximum extent practicable, artificial lighting at a work site will be prohibited during the hours of darkness.

- Plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form will not be used at the project site because California red-legged frogs can become entangled and trapped in them. Any such material found on site will be immediately removed by the qualified biologist, maintenance personnel, or County contractors. Materials utilizing fixed weaves (strands cannot move), polypropylene, polymer or other synthetic materials will not be used.
- Trenches or pits one (1) foot or deeper that are going to be left unfilled for more than forty-eight (48) hours will be securely covered with boards or other material to prevent the California red-legged frog from falling into them. If this is not possible, the County will ensure wooden ramps or other structures of suitable surface that provide adequate footing for the California red-legged frog are placed in the trench or pit to allow for their unaided escape. Auger holes or fence post holes that are greater than 0.10 inch in diameter will be immediately filled or securely covered so they do not become pitfall traps for the California red-legged frog. The qualified biologist will inspect the trenches, pits, or holes prior to their being filled to ensure there are no California red-legged frogs in them. The trench, pit, or hole also will be examined by the qualified biologist each workday morning at least one hour prior to initiation of work and in the late afternoon no more than one hour after work has ceased to ascertain whether any individuals have become trapped. If the escape ramps fail to allow the animal to escape, the qualified biologist will remove and transport it to a safe location, or contact the USFWS for guidance.

BIO-5: San Francisco Garter Snake Protection Measures.

In areas within one mile of a documented occurrence of the San Francisco garter snake, onsite habitat shall be evaluated by a qualified biologist or biological monitor for the potential to support this species. If suitable habitat for San Francisco garter snake is determined to exist in or around the work area where ground disturbing activities or mowing are planned to occur, the following measures will be followed:

- To the extent feasible, maintenance activities should be conducted from April through October during the dry season when these semi-aquatic species are less likely to be found in a work area.
- Prior to implementation of maintenance work, the County will submit to the USFWS and CDFW for its review and approval the qualifications of proposed wildlife biologist(s) who will perform pre-activity surveys and on-site monitoring.
- To avoid harassment, injury, death, and harm to individual San Francisco garter snakes, immediately prior to (i.e., the day of) the initiation of maintenance activities that have potential for take of the San Francisco garter snake, a USFWS and CDFW-approved biologist will conduct daytime surveys throughout the project site. The approved biologist will be present during initial

ground-disturbing activities (i.e., clearing and grubbing) within 250 ft of the work area to monitor for individual garter snakes. The biologist will also be present during any other maintenance activities that could potentially result in take, as determined by the biologist taking into account all information gathered during the desktop audit of the site as well as the preconstruction survey. If a San Francisco garter snake is observed within the maintenance work area, either during the pre-activity survey or at any time, activities that could potentially harm the individual will cease and the USFWS and CDFW will be contacted immediately. Work will not re-commence without written approval from CDFW. The on-site biologist will be the contact for any employee or contractor who might inadvertently kill or injure a garter snake or anyone who finds a dead, injured, or entrapped San Francisco garter snake. The on-site biologist shall possess a working cellular telephone whose number shall be provided to the USFWS and CDFW.

- For vegetation removal on berms or other sites with suitable San Francisco garter snake habitat, vegetation shall be cut down to 3 inches by hand tools (weedwhacker, etc.). Once the ground is visible, a visual survey for San Francisco garter snakes shall be conducted. If no sensitive species are found in the area, removal of vegetation may continue by mowing or mechanized equipment very slowly with a biological monitor walking in front of the equipment to observe.
- Maintenance-related vehicles will observe a 20 mile per hour speed limit while in the work area.
- San Francisco garter snakes may be attracted to structures that provide cavities such as pipes; therefore, all pipes, culverts, or similar structures that are stored at the site for one or more overnight periods will be either securely capped prior to storage or thoroughly inspected by the on-site biologist and/or the maintenance foreman/manager before the pipe is buried, capped, or otherwise used or moved. If a San Francisco garter snake is discovered inside a pipe, the biologist (or a member of the maintenance crew, if the biologist is not on-site) will watch the individual until it has moved out of the maintenance work area.
- A litter control program will be instituted at each activity site. All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. The trash containers will be removed from the site at the end of each working day.

BIO- 6: Measures to Protect the Foothill Yellow-legged Frog, California Giant Salamander, Santa Cruz Black Salamander, and Western Pont Turtle.

In areas within one mile of documented foothill yellow-legged frog, California giant salamander, Santa Cruz black salamander, or western pond turtle occurrences, or where suitable habitat for one or more of these species is determined to exist in or around the work area where ground disturbing activities or mowing are planned to occur, the County will implement applicable protection measures as follows:

- The qualified biologist will conduct a special-status species survey on each morning of and within 48 hours prior to the scheduled work commencing.
    1. If no foothill yellow-legged frog, California giant Salamander, Santa Cruz black salamander, or western pond turtle is found, the work may proceed.

2. If eggs or larvae of the foothill yellow-legged frog, California giant salamander, Santa Cruz black salamander, are found, the qualified biologist will establish a buffer around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed, or the Permittee shall contact CDFW to develop site appropriate avoidance and minimization measures.
3. If an active western pond turtle nest is detected within the activity area, a 10-foot buffer zone around the nest will be established and maintained during the breeding and nesting season (April 1 – August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist.
4. If adult or non-larval juvenile foothill yellow-legged frogs, California giant salamanders, Santa Cruz black salamanders, or western pond turtles are found, one of the following two procedures will be implemented:
    a. If, in the opinion of the qualified biologist, capture and removal of the individual to a safe place outside of the work area is less likely to result in adverse effects than leaving the individual in place and rescheduling the work (e.g., if the species could potentially hide and be missed during a follow-up survey), the individual will be captured and relocated by a qualified biologist to suitable habitat at least 100 meters away and work may proceed.
    b. If, in the opinion of the qualified biologist, the individual is likely to leave the work area on its own, and work can be feasibly rescheduled, a buffer will be established around the location of the individual(s) and work may proceed outside of the buffer zone. No work will occur within the buffer zone until the turtle has left the work area. Work within the buffer zone will be rescheduled if necessary.

BIO-7: Check for Wildlife in Pipes/Construction Materials.

For maintenance activities that involve pipes or culverts, the County will visually check all sections of pipe for the presence of wildlife sheltering within them prior to moving any pipe or culvert sections that have been stored on the site overnight, or the pipes will have the ends capped while stored on site so as to prevent wildlife from entering. After attachment of the pipe/culvert sections to one another, the exposed end(s) of the pipe/culvert will be capped at the end of each day during construction to prevent wildlife from entering and being trapped within the pipeline/culvert.

BIO-8: Minimize Impacts on Dusky-footed Woodrat Nest.

If suitable habitat for San Francisco dusky-footed woodrat is determined to exist in the work area, the following measure will be followed:

- No more than two weeks prior to the beginning of ground disturbance or other routine maintenance activities that could disturb woodrat nests, a qualified biologist will survey the work areas scheduled for maintenance. If any dusky- footed woodrat nests are found, the nests shall be flagged and construction fencing or flagging that will not impede the movement of the

San Francisco dusty-footed woodrat shall be placed around the nest to create a 10-foot buffer (where feasible). If the nest is located adjacent to a road or trail, the nest shall be clearly flagged so equipment/truck drivers accessing sites can see the nest. If a dusky-footed woodrat nest is identified in a work area, the following measure will be implemented by the County.

- The County will avoid physical disturbance of the nest if feasible. Ideally, a minimum 10-foot buffer should be maintained between maintenance construction activities and each nest to avoid disturbance. In some situations, a smaller buffer may be allowed if in the opinion of a qualified biologist removing the nest would be a greater impact than that anticipated as a result of maintenance activities.
- If a dusky-footed woodrat nest cannot be avoided and the nest is located in urban or bayside areas where woodrat populations are small and isolated from larger populations, the County will consult with CDFW regarding the appropriate measures to minimize impacts.
- If a dusky-footed woodrat nest cannot be avoided and the nest is located in more rural or natural areas and/or where woodrat populations are large and have connectivity to large populations, one of the following two relocation measures will be implemented by the County:
- If the woodrat nest site and the proposed relocation area are connected by suitable dispersal habitat for the woodrat, as determined by a qualified biologist, the following relocation methodology will be used: Prior to the beginning of construction activities, a qualified biologist will disturb the woodrat nest to the degree that all woodrats leave the nest and seek refuge outside of the maintenance activity area. Relocations efforts will avoid the nesting season (February-July) to the maximum extent feasible. Disturbance of the woodrat nest will be initiated no earlier than one hour before dusk to minimize the exposure of woodrats to diurnal predators. Subsequently, the biologist will dismantle and relocate the nest material by hand. All material from dismantled nests will be placed in a pile, preferably against a log or tree trunk, in suitable habitat located at least 20 feet from, but otherwise as close as possible to, the original nest locations, to provide material for woodrats to construct new nests. During the deconstruction process, the biologist will attempt to assess if there are juveniles in the nest. If immobile juveniles are observed, the deconstruction process will be discontinued until a time when the biologist believes the juveniles will be fully mobile. A 10-foot-wide no-disturbance buffer will be established around the nest until the juveniles are mobile. The nest may be dismantled once the biologist has determined that adverse impacts on the juveniles would not occur. All disturbances to woodrat nests will be documented in a construction monitoring report and submitted to CDFW.
- If a qualified biologist determines that the woodrat relocation area is separated from the nest site by major impediments, or a complete barrier, to woodrat movement, trapping for woodrats will be conducted prior to relocation of nest material. Prior to the start of nest relocation activities, artificial pine box shelters will be placed at each of the sites selected for relocation of nest materials. The dimensions of the artificial shelters will be approximately 8” long x 8” wide x 6” high. Each shelter will include two interior chambers connected by an opening. At the

relocation sites, the artificial pine box shelters will provide basement structures for the relocated woodrat nest materials, allowing woodrats to enter, use, and modify the relocated nests.

- A qualified biologist will set two traps around each of the woodrat nests to be relocated. Traps will be set within one hour prior to sunset, and baited with a mixture of peanut butter, oats, and apples. Traps will also be equipped with cotton bedding and covered with cardboard. The traps will be checked the following morning, within one- and-a-half hours of sunrise. If a woodrat is captured it will be placed in a quiet area while its nest material is relocated; the animal will then be released at the relocated nest. If no woodrats are captured after the first night, the biologist will set the traps for one additional evening to increase the probability of capturing the animal and ensuring a safe relocation. If no woodrats are captured at a given house after two nights, it will be assumed that the house is not currently occupied.
- Trapping will only be conducted outside the breeding season, which for woodrats is from February through the end of July. If a litter of young is found or suspected while dismantling a nest for relocation, the nest material will be replaced, any trapped woodrats will be returned to the nest, and the nest will be left alone for 2 to 3 weeks, after which time the nest would be rechecked to verify that the young are capable of independent survival, as determined by the lead woodrat biologist, before proceeding with nest dismantling.

BIO-9: Measures to Protect Nesting Migratory Bird.

- To the extent possible, conduct vegetation removal activities prior to nesting bird season (February 1 through August 31).
- For maintenance activities or tree removal that are scheduled to occur between February 1 and August 31, a qualified biologist will survey the work area and a minimum of 300 feet surrounding the work area for raptor nests and 100 feet for nests of non-raptors. This survey will occur no more than three days prior to starting work. If a lapse in maintenance-related work of 7 days or longer occurs, another focused survey will be conducted before maintenance work can be reinitiated.
- If nesting birds are found, a no-work buffer will be established around the nest and maintained until the young have fledged. A qualified biologist will identify an appropriate buffer based on a site-specific evaluation. Typical appropriate buffers are 300 feet for raptors, herons, and egrets (though larger for bald and golden eagles, as discussed in BIO-15); 100 feet for non-raptors nesting on trees, shrubs and structures, and 25 feet for ground-nesting non-raptors.
- The boundary of each buffer zone will be marked with fencing, flagging, or other easily identifiable marking if work will occur immediately outside the buffer zone.
- Install physical barriers to nesting where appropriate (e.g., install netting over entryways to cavities, bridge ledges, culverts) and check regularly for any trapped birds. Work will not commence within the buffer until fledglings are fully mobile and no longer reliant upon the nest or parental care for survival.

- No trees or shrubs shall be disturbed that contain active bird nests until all eggs have hatched, and young have fully fledged (are no longer being fed by the adults and have completely left the nest site). To avoid potential impacts to tree or shrub-nesting birds, any project-specific trimming or pruning of trees or shrubs shall be conducted during the time period of September 1 to February 14 unless a preconstruction nesting bird survey has been conducted by a qualified biologist. No habitat removal or modification shall occur within the Ecologically Sensitive Area fenced nest zone even if the nest continues to be active beyond the typical nesting season for the species, until the young have fully fledged and will no longer be adversely affected by the project.
- Within areas subject to CDFW regulation under Section 1600 of the Fish and Game Code, nesting bird protection measures required as conditions of the Streambed Alteration Agreement will be implemented.

BIO-10: Marbled Murrelet Protection Measures.

- During marbled murrelet breeding/nesting season (March 24 to August 15), if suitable marbled murrelet nesting trees are present within 300 feet of the project area or if a marbled murrelet nest is detected, Permittee shall consult with CDFW before proceeding. If habitat trees are present within ¼- mile of the project site but are greater than 300 feet from the work area, Permittee may proceed with the following conditions:
- Work within the ¼-mile buffer shall be confined to the period of August 15 to October 31[3] .
- If activities cannot be performed during this window and would thus occur during the marbled murrelet breeding season (March 25 to August 15), seasonal disturbance minimization buffers as listed the USFWS document, Estimation of the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (2006) shall be followed. Permittee shall measure ambient noise and estimate construction activity noise to calculate seasonal buffer widths using that reference.
- Alternatively, if protocol-level surveys are conducted and do not indicate that the habitat is occupied by marbled murrelet, seasonal and distance work restrictions may be lifted with written approval from CDFW. Protocol level survey procedures and information can be found at:
- http://www.pacificseabirdgroup.org/publications/PSG_TechPub2_MAMU_ISP.pdf

BIO-14: Measures to Protect Bat Colonies.

- If high-quality habitat for roosting bats (i.e., large trees with cavities of sufficient size to support roosting bats, or buildings providing suitable roost sites, as determined by a qualified bat biologist) is present within 100 feet of a maintenance site, a qualified bat biologist will conduct a survey to look for evidence of bat use within two weeks prior to the onset of work activities. If evidence of bat occupancy is observed, or if high-quality roost sites are present in areas where

[3] Allowable construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

evidence of bat use might not be detectable (such as a tree cavity), an evening survey and/or nocturnal acoustic survey may be necessary to determine if a bat colony is present and to identify the specific location of the bat colony.

- If no active maternity colony or non-breeding bat roost is located, project work can continue as planned.
- If an active maternity colony or non-breeding bat roost is located, the project work will be redesigned to avoid disturbance of the roosts, if feasible.
- If an active maternity colony is located, and the project cannot be redesigned to avoid removal or disturbance of the occupied tree or structure, disturbance will not take place during the maternity season (March 15 – July 31), and a disturbance-free buffer zone (determined by a qualified bat biologist) will be observed during this period.

If an active non-breeding bat roost is located, and the project cannot be redesigned to avoid removal or disturbance of the occupied tree or structure, the individuals will be safely evicted between August 1 and October 15 or between February 15 and March 15 (as determined by a Memorandum of Understanding with CDFW). Bats may be evicted through exclusion after notifying CDFW. Trees with roosts that need to be removed will first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.

BIO-16: Avoid Special Status Plant Species.

For projects located in areas where special-status plants have been identified as potentially occurring, a qualified biologist will assess habitat suitability for the potential occurrence of special-status plant species within the work area. If determined to be warranted, a qualified botanist will conduct appropriately timed surveys for the focal plant species in accordance with CDFW's special-status plant survey methodology. If a special-status species is observed in or near the project site, the County will follow the measures below as well as any additional measures that might be contained in the forthcoming Biological Opinion issued by the USFWS for the Maintenance Program.

- If discovered, the population size and occupied area of special-status plant populations identified during the field survey, and with potential to be impacted, will be estimated. A "population" will be defined as the group of individuals of a species present within a 0.10-mile radius. In addition, the population will be photographed and flagged to maximize avoidance, as well as to estimate the percentage of the population affected. If feasible, the project shall be redesigned or modified to avoid direct and indirect impacts on special-status plant species.
- Special-status plants to be avoided will be protected from disturbance by installing environmentally sensitive area fencing (orange construction barrier fencing or a suitable alternative). Protective fencing will be installed under the direction of a qualified biologist as necessary to protect the plant and its habitat; where feasible, the environmentally sensitive area fencing will be installed at least 50 feet from the edge of the population. The location of the fencing will be shown on the maintenance design drawings and marked in the field with stakes and/or flagging. The design specifications will contain clear language that prohibits

maintenance-relate activities, vehicle operation, material and equipment storage, and other surface disturbing activities within the fenced environmentally sensitive area. For non-ground disturbing vegetation management activities conducted using only hand-held equipment, the non-disturbance buffer may be reduced to a minimum of 3 feet and flagging of the population may be used in place of environmentally sensitive fencing.

BIO-21: General Wildlife Protection Measures.

If any wildlife is encountered during project activities, said wildlife shall be allowed to leave the area unharmed and on their own volition, except in cases where relocation by a qualified biologist is permitted by conditions below.

BIO-24: Pathogen Control.

- In order to minimize the spread of plant and animal pathogens, all equipment (including personal gear such as boots) will be cleaned of soil, seeds, and plant material prior to arriving on a maintenance site. All organic matter will be removed from nets, traps, boots, vehicle tires and all other surfaces that have come into contact with water or potentially contaminated sediments.
- Equipment, including maintenance equipment and field gear used to capture and relocate special-status species such as frogs, will be disinfected after exiting one aquatic habitat and before entering the next aquatic habitat, unless the waters are hydrologically connected to one another. Cleaning equipment in the immediate vicinity of aquatic habitats will be avoided (e.g., clean in an area at least 100 feet from aquatic features).
- Boots, nets, gloves, and any other equipment used to handle amphibians or aquatic organisms will be scrubbed with a bleach solution (0.5 to 1.0 cup per 1.0 gallon of water), Quat-128™ (1:60), or a 3 to 6 percent sodium hypochlorite solution and thoroughly rinsed clean with water between maintenance sites. Care will be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.
- When working at sites with known or suspected disease problems, disposable gloves will be worn and changed between handling each animal. Gloves will be wetted with water from the site or distilled water prior to handling any amphibians. Gloves will be removed by turning inside out with hands cleaned using a hand cleaner and water rinse to minimize cross-contamination.

Use of the following BMPs from the RMP has proven successful at avoiding and minimizing impacts on sensitive biological resources and special-status species. No additional measures are proposed to reduce impacts to special-status species.

6 Summary and Conclusions

This report summarizes sensitive biological resources with potential to occur within the study area.

The study area provides suitable habitat for six (6) special-status plant species and fourteen (14) special-status wildlife species. These species have some potential to occur within the Project area. Birds protected under the Migratory Bird Treaty Act (MBTA) and Fish and Game Code are likely to nest within or adjacent to the study area.

Injury or mortality of individual wildlife may occur during Project construction, and there would be temporary construction-related adverse effects on sensitive habitats. However, potential for temporary construction-related adverse effects on sensitive species and habitats would be reduced by implementation of County RMP BMPs. These BMPs were designed to avoid and minimize impacts on sensitive biological resources, including the special-status plant and wildlife species that may be found in the Project area and identified in Table 2 of this report. The County is familiar and experienced with implementing these BMPs for maintenance projects with activities similar to those proposed under this Project, such as culvert repair, replacement, rock inlet protection and outfall energy dissipation, and sediment removal. Implementation of these BMPs has proven to be effective at avoiding and minimizing take of special-status species.

Project sites that have been identified to contain suitable habitat for MAMU and which present a potential for this species to occur within the Project areas include Sites 94, 102, 263, 265, 265.1, 268, 270, 270.1. Additionally, a survey completed in July 2025 found that potential MAMU nesting trees are present within 300 feet sites 94, 263, 265, 270, 270.1. Due to the potential for nesting habitat within one-quarter mile of the project sites, construction at these sites would be restricted to between August 15 to October 31 (BMP BIO-10) to avoid the marbled murrelet breeding/nesting season (March 24 to August 15). Therefore would be no impact to breeding marbled murrelet.

Following Project completion, habitat conditions for fish (anadromous salmonid species), amphibians and other aquatic species would improve by lowering the risk of a catastrophic failures at undersized and damaged culverts, and reducing channel erosion at culvert outfalls, thus reducing downstream sedimentation of fine material in waterways and downstream receiving waterbodies, i.e., Pescadero Creek and Butano Creek. In addition, riparian habitat would be expanded and enhanced at Little Butano Creek at the Cloverdale Road site (Site 190) by removing concrete bed and banks and replanting with native riparian species. Removing instream drop structures would allow for more effective fish movement through the Project reach and in combination with other planned fish barrier removal projects downstream, the Project would expand potential spawning habitat for listed anadromous salmonid species on Little Butano Creek. Overall, the Project would have beneficial effects on special-status species in the Pescadero-Butano Watershed.

The Project would not significantly modify habitat nor reduce habitat value at the Project sites. Potential adverse effects on Critical Habitat for California red-legged frog, pop. 8 steelhead - Central California Coast

DPS and pop. 4 coho salmon - Central California Coast ESU, and marbled murrelet would be minimized by implementing County RMP BMPs. The Project would not result in the persistent loss of or measurable changes to the quality of Critical Habitat for those species. The overall effects of the Project on designed Critical Habitat would be beneficial for anadromous salmonid species such as coho and steelhead, California red-legged frog and discountable for marbled murrelet.

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Appendix A

Site Photographs

Appendix A. Site Photographs

Site 94, unnamed drainage at Pescadero Creek Road			
Photo No.	1	**Photo No.**	2
Date	February 2024	**Date**	May 2024
Road Side	South; Upstream	**Road Side**	North; Downstream
			
Culvert inlet on unnamed drainage.		Culvert outlet area.	

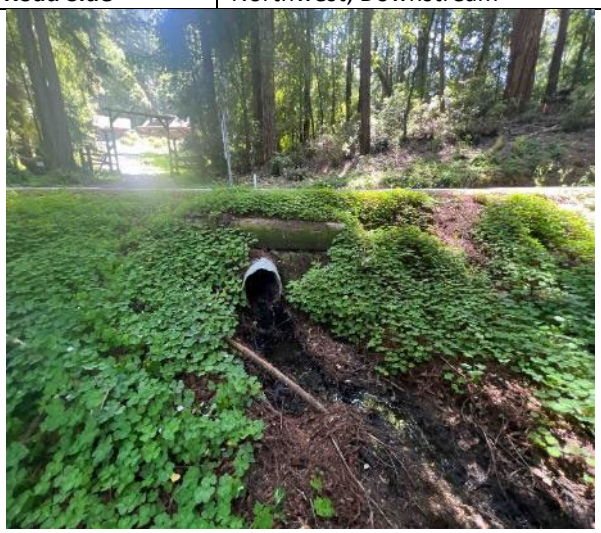
Site 102, unnamed drainage at Pescadero Creek Road			
Photo No.	3	**Photo No.**	4
Date	May 2024	**Date**	February 2024
Road Side	South; Upstream	**Road Side**	South; Downstream
			
Culvert inlet area that goes underneath roadway.		Drainage ditch on opposite (downstream) side of road.	

Appendix A. Site Photographs

Site 119, unnamed drainage at Pescadero Creek Road			
Photo No.	5	**Photo No.**	6
Date	February 2024	**Date**	February 2024
Road Side	West; Downstream	**Road Side**	West; Downstream
			
Culvert inlet area.		Culvert outlet area.	
Site 128.1 at Pescadero Creek Road			
Photo No.	7	**Photo No.**	8
Date	May 2024	**Date**	May 2024
Road Side	North; inlet area	**Road Sid**	South; outlet area
			
Proposed new culvert inlet area (roadside ditch).		Proposed outfall area.	

Appendix A. Site Photographs

Site 263, Bloomquist Creek at Wurr Road			
Photo No	9	**Photo No.**	10
Date	May 2024	**Date**	May 2024
Road Side	North; Upstream	**Road Side**	South; Downstream
			
Culvert inlet area (yellow) on Bloomquist Creek.		Culvert outfall on Bloomquist Creek.	

Site 265, unnamed drainage at Wurr Road			
Photo No.	11	**Photo No.**	12
Date	May 2024	**Date**	May 2024
Road Side	Northwest; Upstream	**Road Side**	Northwest; Downstream
			
Culvert inlet of an unnamed drainage passing under Wurr Road		Culvert outfall of unnamed drainage.	

Appendix A. Site Photographs

Site 265.1 at Wurr Road			
Photo No.	13	**Photo No.**	14
Date	May 2024	**Date**	May 2024
Road Side	Southwest; inlet area	**Road Side**	Northwest; outlet area
			
Proposed culvert inlet area along Wurr Road.		Proposed culvert outfall area along Wurr Road.	

Site 266, unnamed drainage at Wurr Road			
Photo No.	15	**Photo No.**	16
Date	May 2024	**Date**	May 2024
Road Side	Southeast; Upstream	**Road Side**	West; Downstream
			
Culvert inlet area (unnamed drainage) approaching Wurr Road.		Culvert outfall area.	

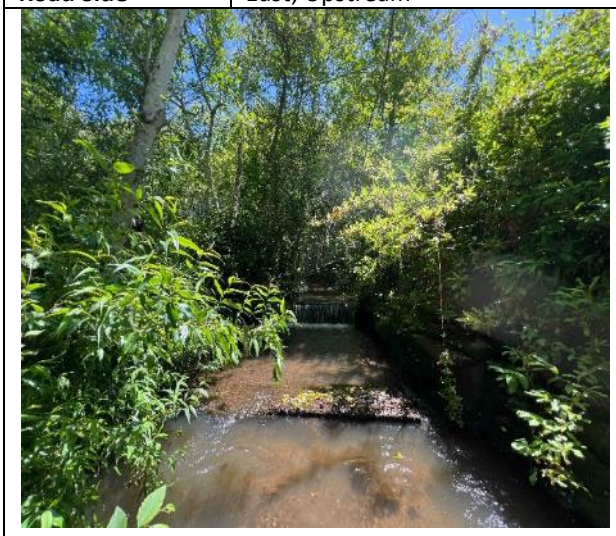
Appendix A. Site Photographs

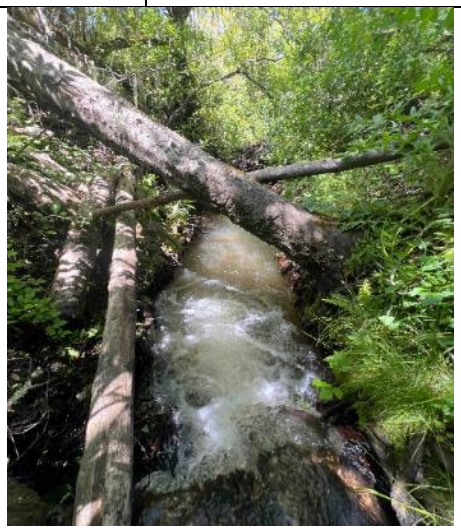
Site 268, Peterson Creek at Wurr Road			
Photo No.	17	**Photo No.**	18
Date	May 2024	**Date**	May 2024
Road Side	Southeast; Downstream	**Road Side**	Southwest; Downstream
			
Culvert inlet indicated with yellow circle (Peterson Creek).		Culvert outlet area (Peterson Creek).	
Site 270 at Wurr Road			
Photo No.	19	**Photo No.**	20
Date	December 2024	**Date**	December 2024
Road Side	West; inlet area	**Road Side**	North; outlet area
			
Culvert inlet area and inboard drainage ditch parallel to Wurr Road.		Culvert outlet area. The culvert discharge has formed a channel that dissipates downstream of the trees (yellow arrow).	

Appendix A. Site Photographs

Site 270.1 at Wurr Road			
Photo No.	21	**Photo No.**	22
Date	December 2024	**Date**	December 2024
Road Side	South; inlet area	**Road Side**	North; outlet area
			
Proposed culvert inlet area (yellow) parallel to Wurr Road.		Proposed culvert outfall area on the downslope side of Wurr Road.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	23	**Photo No.**	24
Date	May 2024	**Date**	June 2024
Road Side	East; Upstream	**Road Side**	East; Upstream
			
Little Butano Creek looking upstream from the upstream extent of the project. Stream depth was approximately 6-8 inches at the time of the site visit.		Upstream of the culvert crossing looking at the concrete streambed, concrete drop structure, and sacked concrete banks with by overhanging vegetation.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	25	**Photo No.**	26
Date	May 2024	**Date**	May 2024
Road Side	East; Upstream	**Road Side**	West; Upstream
			
Standing at the culvert upstream face looking upstream. The streambed is concrete with sacked concrete on both banks.		The left culvert opening facing downstream. The culvert had a relatively thin layer of sediment along the bottom with sediment plugging much of the right culvert (not shown, photo right).	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	27	**Photo No.**	28
Date	June 2024	**Date**	May 2024
Road Side	Northeast; Downstream	**Road Side**	West; Downstream
			
The culvert outfall area with significant sediment accumulated in the right culvert (yellow circle) and on the concrete apron.		Downstream view of Little Butano Creek from the edge of the concrete apron. The cascade has created a drop between the apron and the streambed below.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	29	**Photo No.**	30
Date	July 2025	**Date**	July 2025
Road Side	East; Upstream	**Road Side**	Northwest; Downstream
			
Upstream view of Little Butano Creek from the edge of the concrete apron.		Downstream view of Little Butano Creek downstream of the concrete apron.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	31	**Photo No.**	32
Date	July 2025	**Date**	July 2025
Road Side	East -southeast; Upstream	**Road Side**	Northeast; Upstream
			
Upstream view of Little Butano Creek downstream of the concrete apron.		Upstream view from the edge of the Project area (bridge crossing).	

Appendix B

USFWS, CNDDB, and CNPS Species List

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.

NOT FOR CONSULTATION

Location

San Mateo County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

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 species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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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. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NOT FOR CONSULTATION

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

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sternula antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle Chelonia mydas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened
San Francisco Garter Snake Thamnophis sirtalis tetrataenia Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956	Endangered

NOT FOR CONSULTATION

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
Foothill Yellow-legged Frog Rana boylii There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5133	Threatened

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered

NOT FOR CONSULTATION

San Mateo Woolly Sunflower Eriophyllum latilobum Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7791	Endangered

Conifers and Cycads

NAME	STATUS
Santa Cruz Cypress Cupressus abramsiana Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1678	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
California Red-legged Frog Rana draytonii https://ecos.fws.gov/ecp/species/2891#crithab	Final
Marbled Murrelet Brachyramphus marmoratus https://ecos.fws.gov/ecp/species/4467#crithab	Final

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON

NOT FOR CONSULTATION

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.	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos 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	Breeds Jan 1 to Aug 31

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. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps 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.

NOT FOR CONSULTATION

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

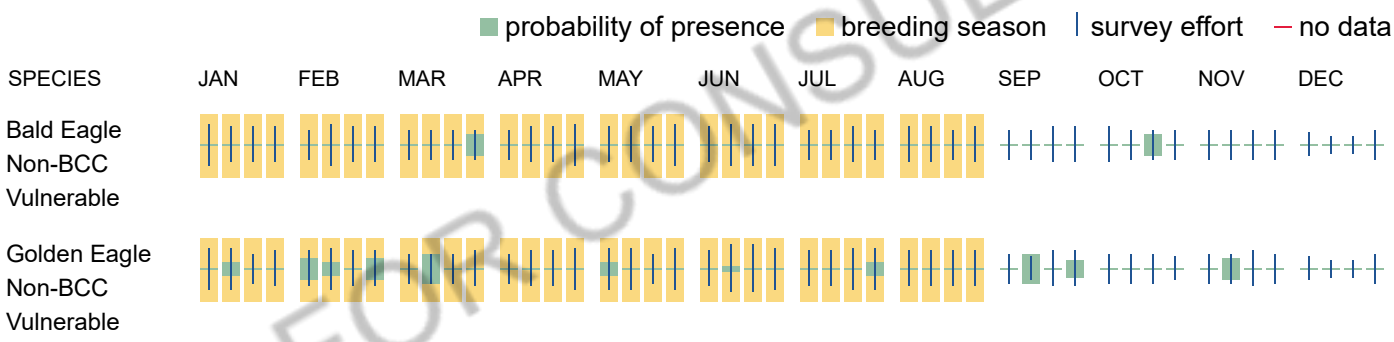
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. 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. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



NOT FOR CONSULTATION

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests

might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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.

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 ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON

NOT FOR CONSULTATION

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 Hydrobates 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.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow Passerculus sandwichensis beldingi 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/8	Breeds Apr 1 to Aug 15
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

NOT FOR CONSULTATION

Brandt's Cormorant Urile penicillatus — Breeds Apr 15 to Sep 15

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

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31

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

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

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

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

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

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

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/2084

Elegant Tern Thalasseus elegans — Breeds Apr 5 to Aug 5

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/8561

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

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

Heermann's Gull Larus heermanni — Breeds Mar 15 to Aug 31

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

NOT FOR CONSULTATION

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

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/8350

Nuttall's Woodpecker Dryobates nuttallii — Breeds Apr 1 to Jul 20

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

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Red Knot Calidris canutus roselaari — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8880

NOT FOR CONSULTATION

Santa Barbara Song Sparrow Melospiza melodia graminea 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/5513	Breeds Mar 1 to Sep 5
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull Larus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 21 to Aug 25
Western Screech-owl Megascops kennicottii cardonensis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jun 30
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

NOT FOR CONSULTATION

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. Please make sure you read "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps 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.

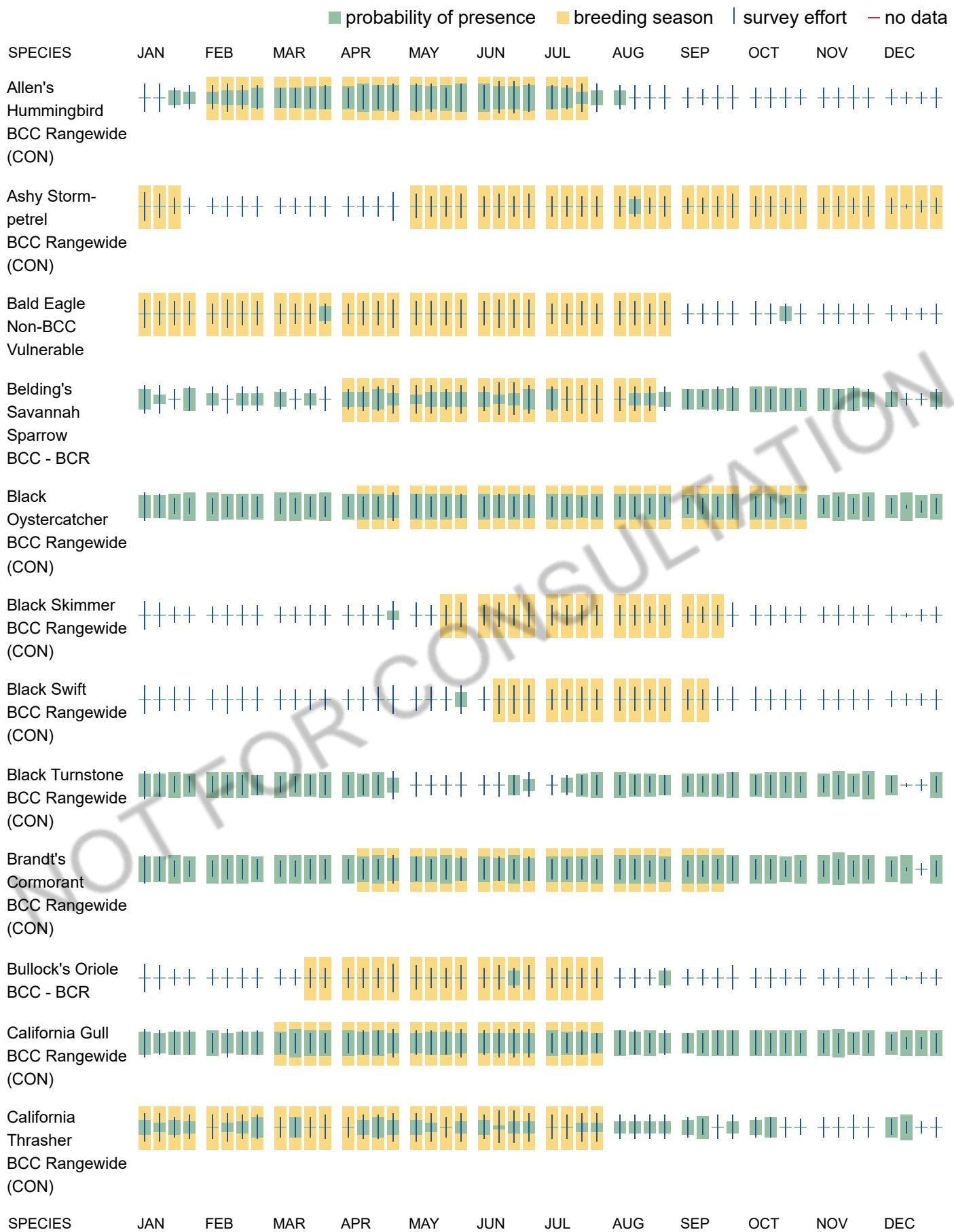
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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

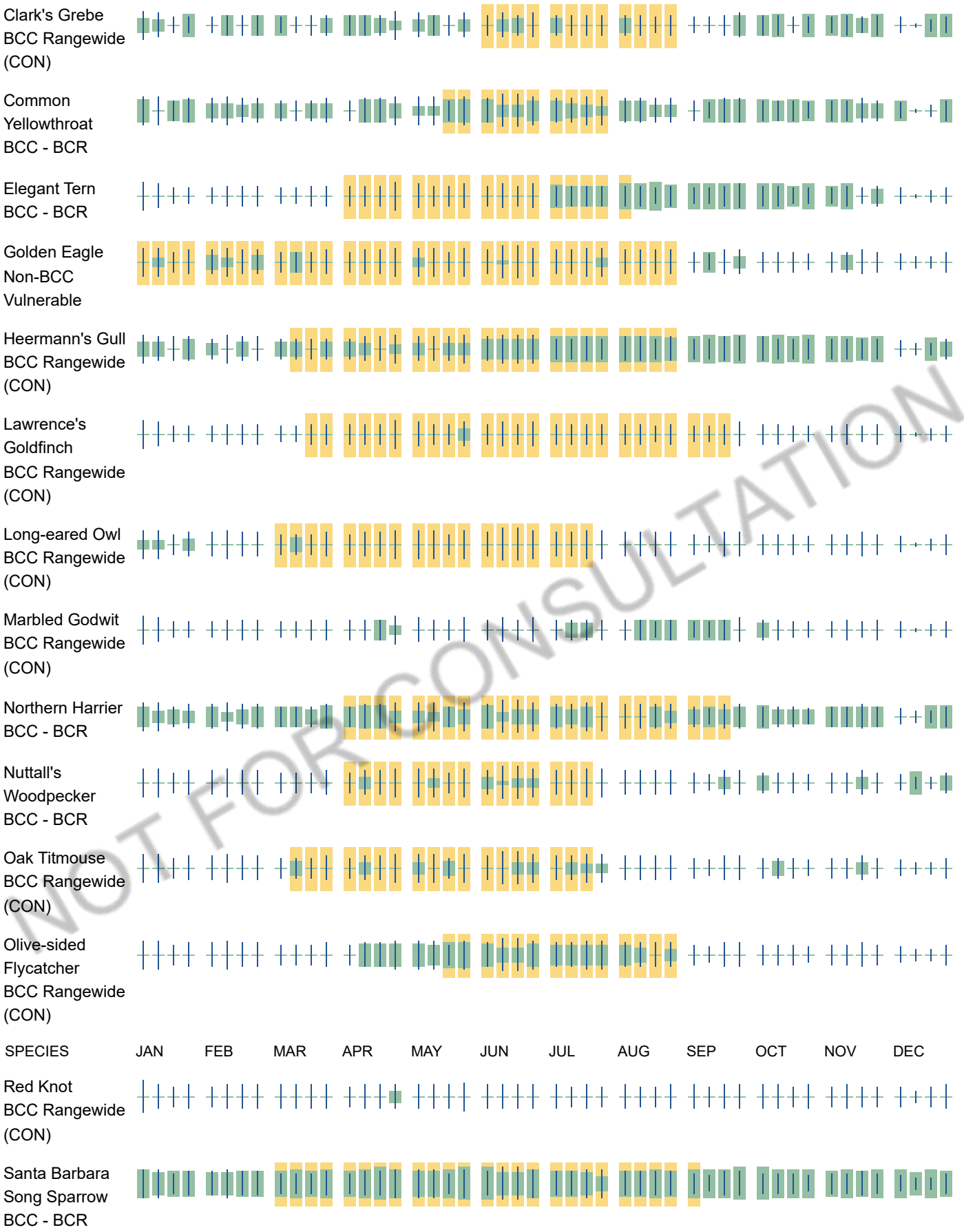
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION



NOT FOR CONSULTATION



NOT FOR CONSULTATION



NOT FOR CONSULTATION

Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures 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 list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

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 10km grid cell(s) with which your

project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection 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, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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 to 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, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present 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 Bald and Golden Eagle Protection 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).

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Although it is important 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 BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

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.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

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.

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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.

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 ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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.

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For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
- PFOC

RIVERINE
- R4SBC
- R3UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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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 tuberficid 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.

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Half Moon Bay (3712244) OR Woodside (3712243) OR Palo Alto (3712242) OR San Gregorio (3712234) OR La Honda (3712233) OR Mindego Hill (3712232) OR Pigeon Point (3712224) OR Franklin Point (3712223) OR Big Basin (3712222))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acanthomintha duttonii San Mateo thorn-mint	PDLAM01040	Endangered	Endangered	G1	S1	1B.1
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	SSC
Actinemys marmorata northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Agrostis blasdalei Blasdale's bent grass	PMPOA04060	None	None	G2G3	S2	1B.2
Allium peninsulare var. franciscanum Franciscan onion	PMLIL021R1	None	None	G4G5T2	S2	1B.2
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Aneides niger Santa Cruz black salamander	AAAAD01070	None	None	G3	S3	SSC
Anomobryum julaceum slender silver moss	NBMUS80010	None	None	G5	S2	4.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aphyllon robbinsii Robbins' broomrape	PDORO040Q0	None	None	G1	S1	1B.1
Arctostaphylos andersonii Anderson's manzanita	PDERI04030	None	None	G2	S2	1B.2
Arctostaphylos glutinosa Schreiber's manzanita	PDERI040G0	None	None	G1	S1	1B.2
Arctostaphylos ohloneana Ohlone manzanita	PDERI042Y0	None	None	G1	S1	1B.1
Arctostaphylos regismontana Kings Mountain manzanita	PDERI041C0	None	None	G2	S2	1B.2
Arctostaphylos silvicola Bonny Doon manzanita	PDERI041F0	None	None	G1	S1	1B.2
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	PDFAB0F7B2	None	None	G2T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Athene cunicularia burrowing owl	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Brachyramphus marmoratus marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
Calicina minor Edgewood blind harvestman	ILARA13020	None	None	G1	S1	
Calyptridium parryi var. hesseae Santa Cruz Mountains pussypaws	PDPOR09052	None	None	G3G4T2	S2	1B.1
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S3	SSC
Chorizanthe pungens var. hartwegiana Ben Lomond spineflower	PDPGN040M1	Endangered	None	G2T1	S1	1B.1
Cirsium andrewsii Franciscan thistle	PDAST2E050	None	None	G3	S3	1B.2
Cirsium fontinale var. fontinale fountain thistle	PDAST2E161	Endangered	Endangered	G2T1	S1	1B.1
Cirsium praeteriens lost thistle	PDAST2E2B0	None	None	GX	SX	1A
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Collinsia corymbosa round-headed collinsia	PDSCR0H060	None	None	G1	S1	1B.2
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S3	SSC
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Proposed Threatened	None	G4T1T2Q	S2	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G2G3	S2S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Dipodomys heermanni goldmani Salinas kangaroo rat	AMAFD03065	None	None	G4T2T3	S2S3	
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
Eriophyllum latilobum San Mateo woolly sunflower	PDAST3N060	Endangered	Endangered	G1	S1	1B.1
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Erysimum ammophilum sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Eumetopias jubatus Steller sea lion	AMAJC03010	Delisted	None	G3	S2	
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G4G5T1	S3	
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Fissidens pauperculus minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Grimmia torenii Toren's grimmia	NBMUS32330	None	None	G2	S2	1B.3
Grimmia vaginulata vaginulate grimmia	NBMUS32340	None	None	G3	S1	1B.1
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hesperevax sparsiflora var. brevifolia short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
Hesperocyparis abramsiana var. abramsiana Santa Cruz cypress	PGCUP04081	Threatened	Endangered	G1T1	S1	1B.2
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	PGCUP04082	Threatened	Endangered	G1T1	S1	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Horkelia cuneata var. sericea	PDROS0W043	None	None	G4T1?	S1?	1B.1
Kellogg's horkelia						
Hydrochara rickseckeri	IICOL5V010	None	None	G2?	S2?	
Ricksecker's water scavenger beetle						
Lasiurus cinereus	AMACC05032	None	None	G3G4	S4	
hoary bat						
Lasthenia californica ssp. macrantha	PDAST5L0C5	None	None	G3T2	S2	1B.2
perennial goldfields						
Laterallus jamaicensis coturniculus	ABNME03041	None	Threatened	G3T1	S2	FP
California black rail						
Legenere limosa	PDCAM0C010	None	None	G2	S2	1B.1
legenere						
Leptosiphon rosaceus	PDPLM09180	None	None	G1	S1	1B.1
rose leptosiphon						
Lessingia arachnoidea	PDAST5S0C0	None	None	G2	S2	1B.2
Crystal Springs lessingia						
Limnanthes douglasii ssp. sulphurea	PDLIM02038	None	Endangered	G4T1	S1	1B.2
Point Reyes meadowfoam						
Linderiella occidentalis	ICBRA06010	None	None	G2G3	S2S3	
California linderiella						
Malacothamnus arcuatus var. arcuatus	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
arcuate bushmallow						
Margaritifera falcata	IMBIV27020	None	None	G3G4	S1S2	
western pearlshell						
Melospiza melodia pusillula	ABPBXA301S	None	None	G5T2T3	S2	SSC
Alameda song sparrow						
Microcina edgewoodensis	ILARA47010	None	None	G1	S1	
Edgewood Park micro-blind harvestman						
Microseris paludosa	PDAST6E0D0	None	None	G2	S2	1B.2
marsh microseris						
Monolopia gracilens	PDAST6G010	None	None	G3	S3	1B.2
woodland woollythreads						
Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	
Monterey Pine Forest						
N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	CARA2633CA	None	None	GNR	SNR	
N. Central Coast Calif. Roach/Stickleback/Steelhead Stream						
Neotoma fuscipes annectens	AMAFF08082	None	None	G5T2T3	S2S3	SSC
San Francisco dusky-footed woodrat						
North Central Coast Drainage Sacramento Sucker/Roach River	CARA2623CA	None	None	GNR	SNR	
North Central Coast Drainage Sacramento Sucker/Roach River						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
North Central Coast Short-Run Coho Stream North Central Coast Short-Run Coho Stream	CARA2632CA	None	None	GNR	SNR	
North Central Coast Steelhead/Sculpin Stream North Central Coast Steelhead/Sculpin Stream	CARA2637CA	None	None	GNR	SNR	
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Northern Interior Cypress Forest Northern Interior Cypress Forest	CTT83220CA	None	None	G2	S2.2	
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G5T2Q	S2	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T3Q	S3	SSC
Orthotrichum kellmanii Kellman's bristle moss	NBMUS56190	None	None	G1	S1	1B.2
Pedicularis dudleyi Dudley's lousewort	PDSCR1K180	None	Rare	G2	S2	1B.2
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	PDSCR1L5B1	None	None	G4T2	S2	1B.2
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
Pinus radiata Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1
Piperia candida white-flowered rein orchid	PMORC1X050	None	None	G3?	S3	1B.2
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plagiobothrys diffusus San Francisco popcornflower	PDBOR0V080	None	Endangered	G1Q	S1	1B.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Threatened	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S3	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Sacramento-San Joaquin Coastal Lagoon Sacramento-San Joaquin Coastal Lagoon	CALA1360CA	None	None	GNR	SNR	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	1B.2
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Silene scouleri ssp. scouleri Scouler's catchfly	PDCAR0U1MC	None	None	G5T4T5	S2S3	2B.2
Silene verecunda ssp. verecunda San Francisco campion	PDCAR0U213	None	None	G5T1	S1	1B.2
Sorex vagrans halicoetes salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
Sorex vagrans paludivagus Monterey vagrant shrew	AMABA01072	None	None	G5T1	S2	
Speyeria adiaste adiaste unsilvered fritillary	IILEPJ6143	None	None	G1G2T1	S1S2	
Speyeria zerene myrtleae Myrtle's silverspot butterfly	IILEPJ608C	Endangered	None	G5T1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	None	Threatened	G5	S1	
Spirinchus thaleichthys pop. 2 longfin smelt - San Francisco Bay-Delta DPS	AFCHB03040	Endangered	Threatened	G5TNRQ	S1	
Stebbinsoseris decipiens Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Taricha rivularis red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis sirtalis tetrataenia San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium buckwestiorum Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
Usnea longissima Methuselah's beard lichen	NLLEC5P420	None	None	G5	S4	4.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Needlegrass Grassland						
Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
Valley Oak Woodland						

Record Count: 125

CNPS Rare Plant Inventory

Search Results

58 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [1A:1B:2A:2B] , Fed List is one of [FE:FT:FC:FD:None] and State List is one of [CE:CT:CR:CC:CD:None] , Quad is one of [3712244:3712243:3712242:3712234:3712233:3712232:3712224:3712223:3712222]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © 2011 Aaron Schusteff
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2G3	S2	1B.2	Yes	1974-01-01	 © 2001 Doreen L. Smith
Allium peninsulare var. *franciscanum*	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G4G5T2	S2	1B.2	Yes	2001-01-01	 © 2019 Aaron Arthur
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Yes	1974-01-01	 © 2011 Neal Kramer
Aphyllon robbinsii	Robbins' broomrape	Orobanchaceae	annual herb (achlorophyllous)	Apr-Jul	None	None	G1	S1	1B.1	Yes	2023-03-28	 © 2017 Dylan Neubauer

Arctostaphylos andersonii	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2018 Jason Matthias Mills
Arctostaphylos glutinosa	Schreiber's manzanita	Ericaceae	perennial evergreen shrub	Mar-Apr(Nov)	None	None	G1	S1	1B.2	Yes	1974-01-01	 © 2011 Neal Kramer
Arctostaphylos ohloneana	Ohlone manzanita	Ericaceae	evergreen shrub	Feb-Mar	None	None	G1	S1	1B.1	Yes	2009-04-02	 Neal Kramer
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	None	None	G2	S2	1B.2	Yes	1994-01-01	No Photo Available
Arctostaphylos silvicola	Bonny Doon manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2	Yes	1974-01-01	No Photo Available
Astragalus pycnostachyus var. *pycnostachyus*	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr-May)Jun-Oct	None	None	G2T2	S2	1B.2	Yes	2001-01-01	 Neal Kramer
Calyptridium parryi var. *hesseae*	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	None	None	G3G4T2	S2	1B.1	Yes	1984-01-01	No Photo Available
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Asteraceae	annual herb	(Apr)May-Oct(Nov)	None	None	G3T2	S2	1B.1	Yes	1994-01-01	No Photo Available
Chorizanthe pungens var. *hartwegiana*	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Yes	1994-01-01	No Photo Available
Cirsium andrewsii	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	None	None	G3	S3	1B.2	Yes	1974-01-01	No Photo Available
Cirsium fontinale var. *fontinale*	fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	FE	CE	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
Cirsium praeteriens	lost thistle	Asteraceae	perennial herb	Jun-Jul	None	None	GX	SX	1A	Yes	2001-01-01	No Photo Available

Collinsia corymbosa	round-headed collinsia	Plantaginaceae	annual herb	Apr-Jun	None	None	G1	S1	1B.2	Yes	1994-01-01	 ©2007 Steve Matson
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2017 Steve Matson
Eriophyllum latilobum	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 Neal Kramer
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	Apiaceae	annual/perennial herb	(Jun)Jul(Aug)	None	None	G5T1	S1	1B.1	Yes	1984-01-01	No Photo Available
Eryngium jepsonii	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	2016-09-13	No Photo Available
Erysimum ammophilum	sand-loving wallflower	Brassicaceae	perennial herb	Feb-Jun(Jul-Aug)	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2		2001-01-01	 ©2021 Scot Loring
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2004 Carol W. Witham
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		None	None	G2	S2	1B.3	Yes	2014-05-14	 ©2021 Scot Loring
Grimmia vaginulata	vaginulate grimmia	Grimmiaceae	moss		None	None	G3	S1	1B.1		2014-05-14	No Photo Available
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2		1994-01-01	 © 2006 Doreen L. Smith

Hesperocyparis abramsiana var. *abramsiana*	Santa Cruz cypress	Cupressaceae	perennial evergreen tree		FT	CE	G1T1	S1	1B.2	Yes	1974-01-01	 © 2012 Neal Kramer
Hesperocyparis abramsiana var. *butanoensis*	Butano Ridge cypress	Cupressaceae	perennial evergreen tree	Oct	FT	CE	G1T1	S1	1B.2	Yes	2011-12-19	 © 2011 Joey Malone
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1	Yes	1974-01-01	 © 2009 Neal Kramer
Horkelia cuneata var. *sericea*	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G4T1?	S1?	1B.1	Yes	1988-01-01	 © 2018 Neal Kramer
Lasthenia californica ssp. *macrantha*	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	Yes	2001-01-01	 © 2013 John Doyen
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Yes	1974-01-01	 ©2000 John Game
Leptosiphon rosaceus	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G1	S1	1B.1	Yes	2001-01-01	 © 2013 Aaron Schusteff
Lessingia arachnoidea	Crystal Springs lessingia	Asteraceae	annual herb	Jul-Oct	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2008 Neal Kramer
Limnanthes douglasii ssp. *sulphurea*	Point Reyes meadowfoam	Limnanthaceae	annual herb	Mar-May	None	CE	G4T1	S1	1B.2	Yes	1974-01-01	 © 2016 Aaron Arthur

Malacothamnus arcuatus var. *arcuatus*	arcuate bushmallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	G2Q	S2	1B.2	Yes	1974-01-01	 © 2017 Keir Morse
Microseris paludosa	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
Monolopia gracilens	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2	Yes	2010-04-06	 © 2016 Richard Spellenberg
Orthotrichum kellmanii	Kellman's bristle moss	Orthotrichaceae	moss	Jan-Feb	None	None	G1	S1	1B.2	Yes	2007-08-16	No Photo Available
Pedicularis dudleyi	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	None	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Penstemon rattanii var. *kleei*	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	(Mar)May-Jun	None	None	G4T2	S2	1B.2	Yes	1984-01-01	No Photo Available
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Pinus radiata	Monterey pine	Pinaceae	perennial evergreen tree		None	None	G1	S1	1B.1		1974-01-01	 © 2008 Neal Kramer
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2		1994-01-01	 ©2016 Barry Rice
Plagiobothrys chorisianus var. *chorisianus*	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2	Yes	1984-01-01	No Photo Available
Plagiobothrys diffusus	San Francisco popcornflower	Boraginaceae	annual herb	Mar-Jun	None	CE	G1Q	S1	1B.1	Yes	1974-01-01	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook

Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	1B.2		1994-01-01	 Neal Kramer
Silene scouleri ssp. *scouleri*	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	None	None	G5T4T5	S2S3	2B.2		2017-12-13	 ©2015 Vernon Smith
Silene verecunda ssp. *verecunda*	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jul(Aug)	None	None	G5T1	S1	1B.2	Yes	1980-01-01	No Photo Available
Stebbinsoseris decipiens	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Stuckenia filiformis ssp. *alpina*	northern slender pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	None	None	G5T5	S2S3	2B.2		1994-01-01	 Dana York (2016)
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	No Photo Available
Trifolium polyodon	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1	Yes	1974-01-01	No Photo Available

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Appendix C

Special-status Species Potential to Occur List

Appendix C. Species Table

The potential for each species to occur in the Project Area was assessed using the criteria outlined below.

None: the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.

Not Expected: suitable habitat or key habitat elements might be present but might be of poor quality or isolated from the nearest extant occurrences, and/or the species is not known to occur in the area.

Possible: presence of suitable habitat or key habitat elements that potentially support the species.

Present: the species was either observed directly or its presence was confirmed by field investigations or in previous studies in the area

Appendix C. Species Table

Table 1. Special-status Plant Species

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Acanthomintha duttonii San Mateo thorn-mint	FE / SE / 1B.1	Chaparral, valley and foothill grassland. Uncommon serpentinite vertisol clays; in relatively open areas. 50-185 m. Blooms April through June.	**None**. Not known to occur within coastal portions of San Mateo County.
Agrostis blasdalei Blasdale's bent grass	- / - / 1B.2	Coastal bluff scrub, coastal dunes, and coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 m. Blooms in May through July.	**None.** Suitable habitat is not present in the Study areas.
Allium peninsulare var. franciscanum Franciscan onion	- / - / 1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5-320 m. Blooms in May through June.	**None.** Suitable habitat is not present in the Study areas
Amsinckia lunaris bent-flowered fiddleneck	- / - / 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m. Blooms in March through June.	**None**. Suitable cismontane woodland habitat is present in the Study areas of Wurr Road, Pescadero Creek Road and Cloverdale. However, this species is not known to occur within coastal or bayside portions of San Mateo County and no known CNDDB occurrences are mapped within Project area (CNDDB 2025).
Aphyllon robbinsii Robbins' broomrape	- / - / 1B.1	Coastal bluff scrub. Rocky or sandy soil on bluffs, cliffs, landslides, or shell mounds; possibly on sand dunes. Its only confirmed host is *Eriophyllum staechadifolium.* 0-100 m. Blooms in April through July.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos andersonii Anderson's manzanita	- / - / 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 95-765 m. Blooms in November through May.	**Not expected.** Suitable habitat is present in the vicinity of the Study area, but the nearest known occurrence is near Butano Ridge Road in Pescadero Creek County Park approximately 2.15 miles east of the Project area (CNDDB 2025). This species was not observed in the Project area during reconnaissance surveys.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Arctostaphylos glutinosa Schreiber's manzanita	- / - / 1B.2	Chaparral, closed-cone coniferous forest. Mudstone or diatomaceous shale outcrops; often with *Pinus attenuata*. 170-680 m. Blooms March through April.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos ohloneana Ohlone manzanita	- / - / 1B.1	Coastal scrub, lower montane coniferous forests. Monterey shale. 455-520 m. Blooms February through March.	**None.** Suitable habitat is not present in the Study areas.
Arctostaphylos regismontana Kings Mountain manzanita	- / - / 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Granitic or sandstone outcrops. 240-705 m. Blooms December through April.	**None.** Suitable habitat containing granitic or sandstone outcrops is not present in the Project areas.
Arctostaphylos silvicola Bonny Doon manzanita	- / - / 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Only known from Zayante (inland marine) sands in Santa Cruz County. 150-520 m. Blooms January through March.	**None.** Suitable habitat is not present in the Study areas and Zayante sands is restricted to occur within Santa Cruz County.
Arenaria paludicola Marsh sandwort	FE/SE	Marshes and swamps. Grow up through dense mats of *Typha, Juncus, Scirpus,* etc. in freshwater marsh. 10-170m. Blooms May to August.	**None.** Suitable habitat is not present in the Study areas.
Astragalus agnicidus Humboldt County milk-vetch	- / SE / 1B.1	Broadleafed upland forest, north Coast coniferous forest. Disturbed areas, openings, and roadsides (sometimes). 120-800 m. Blooms April through September.	**None.** Suitable broadleafed upland habitat is present in the Study areas. However, no known occurrences are present within 5 miles of the Project area (CNDDB 2025).
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	- / - / 1B.2	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m. Blooms June through October.	**None.** Suitable habitat is not present in the Study areas.
Calyptridium parryi var. hesseae Santa Cruz Mountains pussypaws	- / - / 1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 300-1535 m. Blooms May through August.	**None.** Suitable habitat is present in the Study areas. However, this species is restricted to Santa Cruz County.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	- / - / 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 meters. Blooms May through November.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Chorizanthe pungens var. hartwegiana Ben Lomond spineflower	FE / - / 1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 105-475 m. Blooms April through July.	**None.** Suitable habitat is not present in the Study areas and is species is restricted to Santa Cruz County.
Cirsium andrewsii Franciscan thistle	- / - / 1B.2	Coastal bluff scrub, broadleafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0-295 m. Blooms March through July.	**None.** Suitable habitat is not present in the Study areas.
Cirsium fontinale var. fontinale fountain thistle	FE / SE / 1B.1	Valley and foothill grassland, chaparral, cismontane woodland, meadows and seeps. Serpentine seeps and grassland. 45-185 m. Blooms May through October.	**None.** Suitable habitat of chappal is present in the Study areas. However, the nearest known location is within Ano Nuevo and this species is possibly extirpated (CNDDB 2025).
Cirsium praeteriens lost thistle	- / - / 1A	Little information exists on this plant; it was collected from the Palo Alto area at the turn of the 20th Century. Although not seen since 1901, this Cirsium is thought to be quite distinct from other Cirsiums acc. to D. Keil. 0-100 m. Blooms June through July.	**None.** Suitable habitat is not present in the Study areas and species is restricted to Palo Alto, Ca.
Collinsia corymbose round-headed collinsia	- / - / 1B.2	Coastal dunes. 0-30 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Collinsia multicolor San Francisco collinsia	- / - / 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 10-275 m. Blooms March through May.	**None.** Suitable habitat is not present in the Study areas.
Dirca occidentalis western leatherwood	- / - / 1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 25-425 meters. Blooms January through April.	**Possible.** Suitable habitat is present in the along several Wurr Road and Pescadero Creek Road sites. Several CNDDB occurrences are present north of La Honda Road approximately 1.94 miles northwest from Site 128.1 (CNDDB 2025).

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Eriophyllum latilobum San Mateo woolly sunflower	FE / SE / 1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest, ultramafic. Often on roadcuts; found on and off of serpentine. 30-610 m. Blooms May through June.	**None.** Suitable habitat of cismontane woodland is present in the Study areas of Wurr Road, and Pescadero Creek Road. However, one CNDDB occurrence in La Honda from 1988 is considered possibly extirpated and species is presumed extirpated within La Honda Quadrat (CNDDB 2025 and CNPS 2025).
Eryngium aristulatum var. hooveri Hoover's button-celery	- / - / 1B.1	Vernal pools, wetland. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 1-50 m. Blooms July.	**None.** Suitable habitat is not present in the Study areas.
Eryngium jepsonii Jepson's coyote-thistle	- / - / 1B.2	Vernal pools, valley and foothill grassland. Clay. 3-300 meters. Blooms April through August.	**None.** Suitable habitat is not present in the Study areas.
Erysimum ammophilum sand-loving wallflower	- / - / 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 3-320 m. Blooms February through June.	**None.** Suitable habitat is not present in the Study areas.
Fissidens pauperculus minute pocket moss	- / - / 1B.2	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10-1,024 m.	**Possible.** Suitable habitat is present in the study area. One CNNDB occurrence is present near Old Haul Road near Memorial County Park and another along the Little Butano Creek Trail within Butano State Park (CNDDB 2025).
Fritillaria liliacea fragrant fritillary	- / - / 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-385 m. Blooms February through April.	**Not expected.** Cismontane woodland occurs within the area. However, only one historical occurrence from 1931 was observed in Pilarcitos Lake in Montara Mountain. No other CNDDB occurrences are not known to occur within the Santa Cruz Mountain area of San Mateo County and in the vicinity of the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Grimmia torenii Toren's grimmia	- / - / 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Boulder and rock walls. 325 - 1160 m.	**Not expected.** Suitable habitat of cismontane woodland is present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Grimmia vaginulata vaginulate grimmia	- / - / 1B.1	Chaparral (openings), boulder and rock walls. 685 - 685 m	**None.** Suitable habitat is not present in the Study areas.
Hesperevax sparsiflora var. brevifolia short-leaved evax	- / - / 1B.2	Coastal bluff scrub, coastal dunes. Sandy bluffs and flats. 0-200m.	**None.** Suitable habitat is not present in the Study areas.
Hesperocyparis abramsiana var. abramsiana Santa Cruz cypress	FT / SE / 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. Sometimes on granitic and sandstone. 280-800 m.	**None.** Suitable habitat is not present in the Study areas.
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	FT / SE / 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. On sandstone. 400-490 m. Blooms in October.	**None.** Suitable habitat is not present in the Study areas.
Hesperolinon congestum Marin western flax	FT / ST / 1B.1	Chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. 60-400 m. Blooms April through June.	**None.** Suitable habitat with serpentine is not present in the Study areas.
Horkelia cuneata var. *sericea* Kellogg's horkelia	- / - / 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 5-215 m. Blooms April through September.	**None.** Suitable habitat is not present in the Study areas.
Lasthenia californica ssp. macrantha perennial goldfields	- / - / 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m. Blooms January through November.	**None.** Suitable habitat is not present in the Study areas.
Legenere limosa legenere	- / - / 1B.1	Vernal pools. In beds of vernal pools. 1-1005 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Leptosiphon rosaceus rose leptosiphon	- / - / 1B.1	Coastal bluff scrub. 10-140 m. Blooms April through July.	**None.** Suitable habitat is not present in the Study areas.
Lessingia arachnoidea Crystal Springs lessingia	- / - / 1B.2	Coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine; sometimes on roadsides. 90-200 m. Blooms July through October.	**None.** Suitable habitat with serpentine is no present in the Study areas.
Limnanthes douglasii ssp. sulphurea Point Reyes meadowfoam	- / SE / 1B.2	Marshes and swamps (freshwater), vernal pools, coastal prairie, meadows and seeps. Vernally wet depressions in open rolling, coastal prairies and meadows; typically in dark clay soil. 10-125 m. Blooms March through May.	**None.** Suitable habitat is not present in the Study areas.
Lupinus constancei Lassics lupine	FE / - / 1B.1	Lower montane coniferous forest (serpentinite). 1500-2000 m. Blooms July.	**None.** Suitable habitat is not present in the Study areas.
Malacothamnus arcuatus arcuate bushmallow	- / - / 1B.2	Chaparral. Gravelly alluvium. 1-735 m. Blooms April through June.	**Possible.** Suitable chaparral habitat is present along Pescadero Creek Road (Site 128.1). One CNDDB occurrence is present near La Honda approximately 0.45 miles northwest from Site 128.1 (CNDDB 2025).
Microseris paludosa marsh microseris	- / - / 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Monolopia gracilens woodland woollythreads	- / - / 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 100-1,200 meters. Blooms February through July.	**Possible.** Suitable habitat of chaparral and cismontane woodland is present along Wurr Road and Pescadero Creek Road. One CNDDB occurrence is near La Honda 0.45 miles northwest from Project area of Pescadero Creek Road (Site 102 and 128.1) (CNDDB 2025).
Orthotrichum kellmanii Kellman's bristle moss	- / - / 1B.2	Chaparral, cismontane woodland. Carbonate and sandstone. 343-685 m. Blooms January through February.	**None.** Suitable habitat of chaparral and cismontane woodland is present in the Study area of Pescadero Road, but carbonate and sandstone are not present.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Pedicularis dudleyi Dudley's lousewort	- / - / 1B.2	Chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 60-330 m. Blooms April through June.	**None.** Suitable habitat is present in the Study areas of Wurr Road, Pescadero Road and Pescadero Creek Road. However, known occurrences are confined to Portola State Park approximately 3.8 miles southeast from the Project areas and study areas do not contain deep shady woods of older coast redwood forests (CNDDB 2025).
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	- / - / 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 455-915 m. Blooms May through June.	**Not expected**. Suitable habitat is present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Pentachaeta bellidiflora white-rayed pentachaeta	FE / SE / 1B.1	Valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35-610 m. Blooms March through May.	**Possible.** Suitable habitat is present in along the Wurr Road and Pescadero Creek Road sites. Nearest CNDDB occurrence is present Portola State Park approximately 0.9 miles southeast from Wurr Road.
Pinus radiata Monterey pine	- / - / 1B.1	Closed-cone coniferous forest, cismontane woodland. 25-185 m.	**None.** Only native stands of Monterey pine are considered special-status. In San Mateo County, native stands are limited to areas around Año Nuevo State Park
Piperia candida white-flowered rein orchid	- / - / 1B.2	North Coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 20-1615 m. Blooms May through September.	**Possible.** Suitable habitat is present in the Study areas of Wurr Road and Pescadero Road. Nearest CNDDB occurrence is present Portola State Parks approximately 3.9 miles southeast from Project areas of Wurr Road.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	- / - / 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 5-160 m. Blooms March through June.	**None.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, the Study areas are outside of known elevation range for this species.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Plagiobothrys diffusus San Francisco popcornflower	- / SE / 1B.1	Valley and foothill grassland, coastal prairie. Historically from grassy slopes with marine influence. 45-360 meters. Blooms March through June.	**None.** Suitable habitat is not present in the Study areas.
Sagittaria sanfordii Sanford's arrowhead	- / - / 1B.2	Marshes and swamps (shallow freshwater). In standing or slow-moving freshwater ponds, marshes, and ditches. 0-650 m. Blooms May through October.	**Not expected.** Suitable aquatic habitat present in the Study areas. However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Senecio aphanactis chaparral ragwort	- / - / 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m. Blooms January through May.	**Not expected.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Silene scouleri ssp. scouleri Scouler's catchfly	- / - / 2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 5-315 m. Blooms June through September.	**None.** Suitable habitat is not present in the Study areas.
Silene verecunda ssp. verecunda San Francisco campion	- / - / 1B.2	Coastal bluff scrub, chaparral, coastal prairie coastal scrub, valley and foothill grassland. Often on mudstone or shale; one site on serpentine. 30-645 m. Blooms March through August.	**Not expected.** Suitable chaparral habitat is present in the Study areas of Pescadero Road (Location 128-1, 128, and 126). However, there have been no documented occurrences within 5 miles from the Project areas (CNDDB 2025).
Stebbinsoseris decipiens Santa Cruz microseris	- / - / 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coasta l scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m. Blooms April though May.	**None.** Suitable habitat is not present in the Study areas.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State/CNPS)**	**Habitat Association**	**Potential to Occur in the Study Area**
Stuckenia filiformis ssp. *alpina* northern slender pondweed	- / - / 2B.1	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 5-2325 m. Blooms May through July.	**Not expected.** Suitable habitat of drainage channels is present in the Study areas of Wurr Road, Pescadero Creek Road, and Pescadero Road. However, no known occurrences are present within 5 miles of the Project areas (CNDDB 2025). There is one historic CNDDB occurrence approximately four miles south of Little Butano Creek (Site 190) (CNDDB 2025). However, suitable marsh and swamp habitat is not present in Little Butano Creek (Site 190).
Trifolium amoenum two-fork clover	- / - / 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-300 meters. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.
Trifolium buckwestiorum Santa Cruz Clover	- / - / 1B.1	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-805 m. Blooms April through October.	**None.** Suitable habitat of cismontane woodland is present in the Study areas of Wurr Road, and Pescadero Creek Road. However, moist grassland with gravely margins is not present and no known occurrences are present within 5 miles of the Project areas (CNDDB 2025).
Trifolium polyodon Pacific Grove clover	- / SR / 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m. Blooms April through June.	**None.** Suitable habitat is not present in the Study areas.

* List of Abbreviations for Species Status follow below: FE = Federal endangered FT = Federal threatened FC = Federal Candidate SC = State Candidate SE = State Endangered (California) ST = State Threatened (California) SR = State Rare (California) SCC = Species of Special Concern FP= Fully Protected Source: California Department of Fish and Wildlife (CDFW). 2025 California Natural Diversity Database.	CA Rare Plant Rank 1A = Plants presumed extinct in California and rare/extinct elsewhere 1B.1 = Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California 1B.2 = Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California 1B.3 = Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California 2B.2 = Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

Table 2. Special-status Animal Species

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Invertebrates			
Bombus crotchii Crotch bumble bee	- / SCE	Coastal areas east to the Sierra-Cascade crest and south into Mexico. Food plant include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum*.	**None.** The Project areas are within the historic range of this species; however not within its current range (CDFW 2023). No CNDDB records occur within 5 miles of the Project areas (CNDDB 2025).
Bombus occidentalis Western bumble bee	- / SCE	Open grasslands, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings. Food plant include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum*. Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease. Western bumble bee populations in California are currently largely restricted to high elevation sites in the Sierra Nevada and a few records on the northern California coast (Xerces Society et al. 2018).	**None.** The Project areas are within the historic range of this species; however, it is not within the mapped current range (CDFW 2023). No CNDDB records occur within 5 miles of the Project areas of Wurr Road, Pescadero Creek Road or Pescadero Road (CNDDB 2025). Nearest CNDDB occurrences are present within mouth of Gazos Creek from 1972 approximately 1.56 miles southwest and within Redwood State Park from 1961 approximately 2 miles east of the Project area of Cloverdale (CNDDB 2025).
Danaus plexippus monarch - California overwintering population (pop. 1)	FC / -	Dense Eucalyptus, Monterey pine, and live oak groves along Coastal California that provide shelter from prevailing winds. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Closed-cone coniferous forest.	**Not expected.** No overwintering sites are present in the Project areas. Six CNDDB occurrences occur along the coast within 5 miles of the Project area of Cloverdale. Additionally, all 6 occurrences are documented overwintering sites by Xerces Society (2023).
Euphydryas editha bayensis Bay checkerspot butterfly	FT / -	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**None.** The current range of this species is restricted to Santa Clara County (USFWS 2009), and species has been reintroduced to Edgewood County Park and San Bruno Mountain. Current range of species is outside of Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Speyeria zerene myrtleae Myrtle's silverspot butterfly	FE / -	Coastal dunes. Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County.	**None.** The current range of this species is restricted to Point Reyes (USFWS 2009).
Amphibians			
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	FT / ST	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**None.** Suitable habitat is not present in the Study areas.
Aneides niger Santa Cruz black salamander	- / SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	**Possible.** Suitable habitat is present along Cloverdale Road and Wurr Road and Pescadero Creek Road woodlands. The nearest CNDDB occurrence from 2002 is within Gazos Creek in Butano State Park 1.5 miles east of the Cloverdale Road site, with a historical occurrence from 1950 on Old Woman's Creek less than 1 mile south from Cloverdale Road.
Dicamptodon ensatus California giant salamander	- / SSC	Aquatic, meadow & seep, north coast coniferous forest, riparian forest. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**Present.** Larvae was observed in the scour pool downstream of Site 268 in Peterson Creek during reconnaissance surveys. The nearest CNDDB occurrence overlaps with Project area location 102 on Pescadero Creek Road (CNDDB 2025).

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	FT / SE	Aquatic, riparian forest, riparian scrub, riparian woodland, south coast flowing waters. San Francisco Peninsula and Diablo Range south of San Francisco Bay Estuary, and south through the Santa Cruz and Gabilan Mountains east of the Salinas River in the southern inner Coast Ranges. Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Possible.** Suitable aquatic habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. The nearest CNDDB occurrence from 1960 overlaps Site 94 (CNDDB 2025). Other known occurrences are within Pescadero Creek Park from 1960 and 1999 (CNDDB 2025).
Rana draytonii California red-legged frog	FT / SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Possible.** The Project area is within designated Critical Habitat for this species. Suitable riparian habitat is present along Peterson, Bloomquist, and Little Butano creeks, and at Site 94 at Pescadero Creek Road. Forty-two CNDDB occurrence records are known from within five miles of the Cloverdale Road location (CNDDB 2025). Fourteen occurrence records are known within five miles of the Wurr Road and Pescadero Creek Road sites, with one record as close as 0.5 miles northeast of Site 102 (CNDDB 2025).
Taricha rivularis red-bellied newt	- / SSC	Broadleaved upland forest, north coast coniferous forest, redwood, riparian forest, and riparian woodland. Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	**None.** The current range of this species is restricted to Humboldt County south to Sonoma County, and Isolated population in Santa Clara County.
Reptiles			
Chelonia mydas	FT / -	Marine. Completely herbivorous; needs adequate supply of seagrasses and algae.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status*** **(Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
green sea turtle			
Actinemys marmorata Northwestern pond turtle	PT / SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Not expected.** This species is known to inhabit Pescadero-Butano Marsh approximately 3.8 miles northwest of the Cloverdale Road site (Site 190) (CNDDB 2025). Marginal aquatic habitat is present upstream and downstream of the Cloverdale Road culvert, but the concrete bed, banks, and box culvert prevent this species from persisting within the Project area. Suitable habitat is absent at the Wurr Road and Pescadero Creek Road sites.
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE / SE/ FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Possible.** This species is documented in the Pescadero-Butano watershed within five miles of the study area (CNDDB 2025). Suitable riverine habitat is present in Little Butano Creek. Marginal aquatic habitat is present at Bloomquist Creek and Peterson Creek, but these sites generally lacked dense vegetative cover and/or suitable pools.
Fish			
Acipenser medirostris pop. 1 green sturgeon - southern DPS	- / SSC	The green sturgeon ranges from Mexico to at least Alaska in marine waters and is observed in bays and estuaries up and down the west coast of North America. Green sturgeon are believed to spawn in the Rogue River, Klamath River Basin, and the Sacramento River, and rarely occur in the Umpqua River. Green sturgeon appear to occasionally occupy the Eel River, and may also be using the Trinity River.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Eucyclogobius newberryi tidewater goby	FE / SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, requires fairly still but not stagnant water and high oxygen levels.	**None.** Suitable habitat is not present in the Study area.
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	FE / SE	Open ocean, estuaries, and rivers. Federal listing includes populations between Punta Gorda and San Lorenzo River. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Present.** Coho salmon are known to occur in Pescadero Creek and the creek is designated Critical Habitat for this species. However, no work occurs on Pescadero Creek, and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish. Coho also occur in Butano Creek. Currently a bedrock chute on Little Butano Creek is a total fish barrier downstream of the Cloverdale Road site (Site 190) which impedes anadromous fish from upstream movement. However, the San Mateo RCD is currently (Summer 2025) implementing a project to remove the bedrock chute, which will allow upstream movement of Coho salmon in Little Butano Creek to Cloverdale Road prior to the planned start of the Project.

Scientific Name Common Name	Listing status* (Federal/ State)	Habitat Association	Potential to Occur in the Study Area
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	FT / SCC	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	**Present.** Steelhead are known to occur in Pescadero Creek and lower reaches of Little Butano Creek and the creek is designated Critical Habitat for this species (Spence et al. 2008, CEMAR 2008). However, no work occurs on Pescadero Creek and Project sites located on tributaries to Pescadero Creek contain total barriers that prevent upstream fish migration. Steelhead also occur in Butano Creek but total fish barriers on Little Butano Creek downstream of the Cloverdale Road site currently impede anadromous fish from upstream movement. The RCD is currently (Summer 2025) implementing a project to remove the bedrock chute, which will allow upstream movement of steelhead in Little Butano Creek to Cloverdale Road prior to the planned start of the Project. Bloomquist Creek and Peterson Creek at Wurr Road do not support anadromous fish due to steep channels with several bedrock drops. Other unnamed drainages in the Project area lack suitable hydrology and habitat to support anadromous fish.
Spirinchus thaleichthys longfin smelt	- / ST	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt but can be found in completely freshwater to almost pure seawater. Inhabits coast estuaries north of the Russian River (primarily) and south of Pillar Point, Half Moon Bay.	**None.** Suitable habitat is not present in the Study area.
Spirinchus thaleichthys pop. 2 Longfin smelt – San Francisco Bay-Delta DPS	FE/ST	Found in the Gulf of Farallones from Russian River to Pillar Point, Half Moon Bay, and salt and freshwater habitats upstream of the Golden Gate including the San Francisco Bay, Sacramento - San Joaquin River Delta, and their tributaries where found.	**None.** The Study area is not within the known range of this species (CDFW 2024).

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Birds			
Aquila chrysaetos golden eagle	- / FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**None.** Suitable habitat is not present in the Study area.
Asio otus long-eared owl	- / SSC	Cismontane woodland, great basin scrub, riparian forest, riparian woodland, upper montane coniferous forest. Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	**Not expected.** A breeding pair was documented near the Stevens Creek headwaters approximately 5 miles east of Pescadero Creek Road, Site 128.1 in 1986/1987 (CNDDB 2025). The open space area adjacent to Site 128.1 provides suitable foraging habitat but lacks suitable nesting habitat.
Athene cunicularia burrowing owl	- / SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**None.** Suitable habitat is not present in the Study area.
Brachyramphus marmoratus marbled murrelet	FT / SE	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	**Present.** In Memorial County Park, known Marbled murrelet (MAMU) occupied sites have been at documented at the Huckelberry Flat and occupied behavior has been confirmed at Homestead Flat, Sequoia Flat at Memorial County Park. Designated Critical Habitat for this species overlaps within San Mateo County in Memorial Park, is present within Site 94 and Site 102 and is adjacent to the Project sites along Wurr Road (Sites 263, 265, 265.1, 266, 268, and 270). Based on proximity to 2010 CNDDB occurrence at Memorial County Park (CNDDB#38) it is assumed MAMU has the potential to occur at Project sites at 265, 265.1, 266, 268, and 270 (occurrence overlaps Wurr Road and Pescadero creek Road) and Site 263 is approximately 144 meters from 2010 occurrence

Scientific Name Common Name	Listing status* (Federal/ State)	Habitat Association	Potential to Occur in the Study Area
			(CNDDB 2025). The presence of potential nesting trees within 300 feet (ft) of Project sites with large diameter tree with large (≥4") horizontal branches (platform location with moss and access and good canopy cover, complex understory, good access points for landing) are present in sites 94, 263, 265, 270, 270.1. No suitable nesting trees were observed within 300 ft at Sites 102, 265.1, and 266. With known occupied sites, confirmed occupied behavior, CNDDB occurrences and presence of potential nesting trees (within 300ft of Project site) within the vicinity of the Project area is it possible (assumed) that Sites 94, 263, 265, 268, 270, 270.1 contain suitable habitat for marbled murrelet and the species has the potential to occur within these Study areas.
Charadrius alexandrinus nivosus western snowy plover	FT / SSC	Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**None.** Suitable habitat is not present in the Study area.
Coturnicops noveboracensis yellow rail	- / SSC	Shallow brackish and freshwater marshes, wet meadows, and occasionally rice fields. Summer resident in eastern Sierra Nevada in Mono County.	**None.** Suitable habitat is not present in the Study area.
Cypseloides niger black swift	- / SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	**None.** Suitable habitat is not present in the Study area.
Elanus leucurus white-tailed kite	- / FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Falco peregrinus anatum American peregrine falcon	FD / SD	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**None.** Suitable nesting habitat is absent from the study area.
Geothlypis trichas sinuosa saltmarsh common yellowthroat	- / SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**None.** Suitable habitat is not present in the Study area.
Gymnogyps californianus California condor	FE/SE	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. forages up to 100 miles from roost/nest.	**None.** Suitable habitat is not present in the Study area.
Haliaeetus leucocephalus bald eagle	FD / SE, FP	Lower montane coniferous forest, old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**Absent as Breeder.** Suitable habitat is present in the Study area. However, no CNDDB records occur within 5 miles of the Project areas (CNDDB 2025).
Laterallus jamaicensis coturniculus California black rail	- / ST	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None.** Suitable habitat is not present in the Study area.
Melospiza melodia pusillula Alameda song sparrow	- / SSC	Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits *Salicornia* marshes; nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*.	**None.** Suitable habitat is not present in the Study area.
Rallus obsoletus California Ridgway's rail	FE / SE, FP	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Riparia riparia bank swallow	- / ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None.** Suitable habitat is not present in the Study area.
Sternula antillarum browni California least tern	FE / SE, FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**None.** Suitable habitat is not present in the Study area.
Mammals			
Antrozous pallidus pallid bat	- / SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Possible.** Suitable foraging habitat is present within the study area, such as in larger trees in riparian areas. One CNDDB occurrence is 2.3 miles west of Wurr Road (CNDDB 2025).
Corynorhinus townsendii Townsend's big-eared bat	- / SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Not expected.** One CNDDB occurrence within 1.3 miles west of Wurr Road (CNDDB 2025). Suitable foraging habitat is present within the study area. Roosting habitat is limited to very large cavities in redwood trees as typical roost sites, such as old mines, caves, barns, and abandoned buildings, are not within the Project area.
Eumetopias jubatus Steller sea lion	FD / SSC	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	**None.** Suitable habitat is not present in the Study area.

Scientific Name **Common Name**	**Listing status* (Federal/ State)**	**Habitat Association**	**Potential to Occur in the Study Area**
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	- / SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**Present.** No CNDDB occurrences were within 5 miles of the Study area (CNDDB 2025). However, suitable habitat is present where forest, woodland, and chaparral habitats occur. In addition, one woodrat nest was observed along Little Butano Creek downstream of Cloverdale Road (Site 190) during the July 2025 survey.
Reithrodontomys raviventris Salt marsh harvest mouse	FE / SE, FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**None.** Suitable habitat is not present in the Study area.
Sorex vagrans halicoetes salt marsh wandering shrew	- / SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6-8 ft above sea level where abundant driftwood is scattered among *Salicornia*.	**None.** Suitable habitat is not present in the Study area.
Taxidea taxus American badger	- / SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Possible.** This species is known to occur in the Santa Cruz Mountains east of La Honda to Skyline Boulevard, with multiple CNDDB occurrence records within a 3.0 mile radius of Pescadero Creek Road (Site 128.1) and one historical record from 1978 was reported in Butano State Park near the Cloverdale Road site (Site 190) (CNDDB 2025). Suitable habitat is present in the open grassland and chaparral areas adjacent to these sites.

* List of Abbreviations for Federal and State Species Status follow below: FE = Federal endangered PE = Proposed endangered FT = Federal threatened PT = Federal proposed threatened FC = Federal proposed candidate	SE = State endangered ST = State threatened SCE = State candidate endangered SSC = Species of special concern (CDFW) FP = Fully protected (CDFW)

Source: California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database.

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Appendix D

Plant Species Observed

Appendix D. Plant Species List

Scientific Name	Common Name	Native
Alnus rhombifolia	White Alder	Yes
Anthoxanthum occidentale	California sweet grass	Yes
Athyrium cyclosorum	Western lady fern	Yes
Avena barbata	Slender oat	No
Baccharis pilularis	Coyote Brush	Yes
Bromus briziformus	Rattlesnake brome	No
Bromus diandrus	Rip-gut brome	No
Carduus tenuiflorus	Italian thistle	No
Carex sp.	Carex sp.	
Cirsium brevistylum	Indian thistle	Yes
Cirsium vulgare	Bull thistle	No*
Conioselinum pacificum	Hemlock parsley	Yes
Conium maculatum	poison hemlock	No
Cornus sericea	American dogwood	Yes
Cynara cardunculus spp. cardunculus	Artichoke	No
Dryopteris arguta	Coastal wood fern	Yes
Ehrharta erecta	Panic veldtgrass	No*
Epipactis helleborine	Broad-leaved helleborine	No
Equisetum arvense	Field Horsetail	Yes
Equisetum telmateia	Giant Horsetail	Yes
Erigeron annum	Annual fleabane	No
Festuca perennis	Italian ryegrass	No
Galium aparine	Common Bedstraw	Yes
Galium triflorum	Sweet-scented bedstraw	Yes
Helminthotheca echioides	Bristly Ox-Tongue	No
Hordeum murinum	Foxtail barley	No
Juncus effuses	Common bog rush	Yes
Lactuca virosa	Bitter lettuce	No
Lonicera involucrata	Twinberry	Yes
Marah fabacea	California man-root	Yes
Nasturtium officinale	Water cress	Yes
Oenanthe sarmentosa	Water parsley	Yes
Oxalis oregana	Redwood Sorrel	Yes
Petasites frigidus var. *palmatus*	Western Sweet Coltsfoot	Yes
Phalaris aquatica	Harding grass	No
Polystichum munitum	Western sword fern	Yes
Pseudotsuga menziesii	Douglas Fir	Yes
Quercus agrifolia	Coast live oak	Yes
Ribes divaricatum	Spreading gooseberry	Yes
Rubus parviflorus	Western thimble-berry	Yes
Rubus ursinus	California Blackberry	Yes

Scientific Name	Common Name	Native
Rumex occidentalis	Western Dock	Yes
Salix lasiandra	Pacific willow	Yes
Sambucus racemosa var. *racemosa*	Red Elderberry	Yes
Scrophularia californica	California bee plant	Yes
Stachys bullata	California hedgenettle	Yes
Tellima grandiflora	Fringe cups	Yes
Toxicodendron diversilobum	Poison Oak	Yes
Urtica dioica	Stinging nettle	Yes
Veronica americana	American Brooklime	Yes
Vicia villosa	Hairy vetch	No

Appendix E

County of San Mateo, Routine Maintenance Program,
Best Management Practices

RMP Best Management Practices

BMP Number	BMP Title	BMP Description
GEN-1	Staging and Access	▪ Staging, access, and parking areas will be located outside of sensitive habitats to the extent feasible. ▪ Staging areas will be located 30 feet from the top of bank (or as far as feasibly possible) or on the outboard side of levees. ▪ Vegetation removal shall be limited to the minimum amount necessary to provide access.
GEN-2	Minimize the Area of Disturbance and Site Maintenance	▪ Areas of disturbance will be limited to the smallest footprint necessary and a single access pathway, where feasible. For maintenance activities near waterways or other sensitive habitat, the designated work area shall be clearly identified in the field using highly visible material, and work will not be conducted outside this area. ▪ Keep excavated soil and materials on the site where they will not collect into the street or get transported to storm drains or nearby water bodies by rainfall or runoff in order to avoid deleterious effects to fish, wildlife, and beneficial uses. ▪ Transfer excavated materials to dump trucks on the site, not in the street.
GEN-3	Construction Entrances and Perimeter	▪ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site. ▪ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking. ▪ When in-channel work is required, where available use existing ingress or egress points or perform work from the top of the stream banks.
GEN-4	Salvage/Reuse of Plant and Woody Material	▪ Large wood or weed-free topsoil displaced by project activities may be stockpiled for use during site restoration. Native vegetation displaced by project activities will be stockpiled if it would be useful during site restoration. ▪ Stockpiled material shall not be placed over riparian or wetland vegetation. Stockpiled material shall not be placed in areas where it could enter the stream, riparian or wetland areas. ▪ To the extent feasible, all other woody material that is not re-usable should be disposed at a composting facility.
GEN-5	Non-Hazardous Materials	▪ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.

BMP Number	BMP Title	BMP Description
GEN-6	Hazardous Materials Storage/Disposal	▪ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations. ▪ Store hazardous materials and wastes in watertight containers, store in appropriate secondary containment, and cover them at the end of every workday or during wet weather or when rain is forecast. ▪ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours. ▪ Arrange for appropriate disposal of all hazardous wastes. ▪ Keep spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times. ▪ Inspect vehicles and equipment frequently for and repair leaks promptly. On-site monitor should insect beneath all vehicles that have been parked more than 15 minutes before they leave the work area. Use drip pans to catch leaks until repairs are made. ▪ Clean up spills or leaks immediately and dispose of cleanup materials properly. ▪ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags). ▪ Sweep up spilled dry materials immediately. Do not try to wash them away with water or bury them. If water must be used, the Contractor shall collect the water and spilled fluids and dispose of it as hazardous waste. ▪ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil. Small spills (less than 18 inches in diameter) including small quantities of oil, gasoline, paint or other materials should be controlled by the first responder (maintenance staff) and do not necessarily require an emergency response team. Medium spills (greater than 18 inches but less than 6 feet in diameter) are typically controlled by the first responder (maintenance staff) but police or fire department HAZMAT teams may be called based on conditions. Report significant spills (larger than 6 feet in diameter and any "running" spill) immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill, contact the San Mateo County Environmental Health Services Division, or other emergency office (e.g., local fire or police department) as warranted, immediately and document the spill using the spill documentation form . Alternatively, 1) dial 911, the local emergency response number, 2) the National Response Center at (800) 424-8802; or 2) call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours). As appropriate, contact other agencies including California

BMP Number	BMP Title	BMP Description
		Occupational Safety and Health Administration or the Regional Water Quality Control Board. All chemical spills shall be reported as soon as possible to the emergency site contact.
GEN-7	Spill Prevention and Control	▪ Keep spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times. ▪ Inspect vehicles and equipment frequently for and repair leaks promptly. On-site monitor should insect beneath all vehicles that have been parked more than 15 minutes before they leave the work area. Use drip pans to catch leaks until repairs are made. ▪ Clean up spills or leaks immediately and dispose of cleanup materials properly. ▪ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags). ▪ Sweep up spilled dry materials immediately. Do not try to wash them away with water or bury them. If water must be used, the Contractor shall collect the water and spilled fluids and dispose of it as hazardous waste. ▪ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil. ▪ Small spills (less than 18 inches in diameter) including small quantities of oil, gasoline, paint or other materials should be controlled by the first responder (maintenance staff) and do not necessarily require an emergency response team. Medium spills (greater than 18 inches but less than 6 feet in diameter) are typically controlled by the first responder (maintenance staff) but police or fire department HAZMAT teams may be called based on conditions. Report significant spills (larger than 6 feet in diameter and any "running" spill) immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill, contact the San Mateo County Environmental Health Services Division, or other emergency office (e.g., local fire or police department) as warranted, immediately and document the spill using the spill documentation form . Alternatively, 1) dial 911, the local emergency response number, 2) the National Response Center at (800) 424-8802; or 2) call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours). As appropriate, contact other agencies including California Occupational Safety and Health Administration or the Regional Water Quality Control Board. All chemical spills shall be reported as soon as possible to the emergency site contact.
GEN-8	Waste Management	▪ Cover waste disposal containers securely at the end of every workday and during wet weather. ▪ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site. ▪ Ensure that portable toilets have a secondary containment plan (e.g., a containment pan).

BMP Number	BMP Title	BMP Description
		▪ Clean or replace portable toilets and inspect them frequently for leaks and spills. ▪ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.) ▪ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.
GEN-9	Vehicle Maintenance and Parking	▪ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage. ▪ Perform major maintenance, repair jobs, and vehicle and equipment washing off site. ▪ Conduct vehicle and equipment cleaning at contractor or County corporation yards and ensure that rinse water does not run into gutters, streets, storm drains, or surface waters. ▪ If refueling or vehicle maintenance must be done on-site, work in a bermed area (e.g., sandbags, gravel bags, compost socks, or other barrier material) at least 150 feet away from creek channels, away from storm drains and over a drip pan big enough to collect fluids. ▪ Refuel vehicles at least 150 feet away from the active stream channel. ▪ Keep an ample supply of spill clean-up materials near fueling, vehicle maintenance and hazardous materials/hazardous waste storage areas. Inventory clean-up materials monthly and restock as needed. ▪ Post proper fueling and spill clean-up instructions at fueling areas. Never leave the area while equipment is being filled. ▪ Recycle or dispose of fluids as hazardous waste. ▪ Do not clean vehicle or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc. ▪ Perform vehicle and mobile equipment steam cleaning, pressure washing or degreasing only over a containment designed to collect any generated wash water. Collect wash water and discharge to sewer via an oil water separator. ▪ Do not pour wash water down storm drains or sewers connected to septic systems.
GEN-10	Equipment Maintenance & Fueling	▪ A separate area should be designated for equipment maintenance and fueling, away from any slopes, watercourses, or drainage facilities. ▪ Equipment should not be stored in areas that will potentially drain to watercourses or drainage facilities. If equipment must be stored in areas with the potential to generate runoff, drip pans, berms, gravel bags, or absorbent booms should be employed to contain any leaks or spills. ▪ Equipment should be inspected daily for leaks or damage and promptly repaired.

BMP Number	BMP Title	BMP Description
		▪ Fueling and maintenance of vehicles should take place at least 65 feet away from waterways. ▪ In the event of a spill, follow procedures outlined in BMP GEN-7.
GEN-11	Paving and Asphalt Work	▪ Avoid paving and seal coating in wet weather or when rain is in the forecast, to prevent materials that have not cured from contacting stormwater runoff. ▪ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal or fog seal; and when saw cutting asphalt or concrete. ▪ Collect and recycle or appropriate dispose of excess abrasive gravel or sand. Do not sweep this material into gutters. ▪ Do not use water to wash down fresh asphalt concrete pavement. ▪ Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system. ▪ Shovel, absorb or vacuum saw-cut slurry and dispose of all waste as soon as work is complete in one location or at the end of the workday. ▪ If sawcut slurry enters a catch basin, clean it up immediately.
GEN-12	Concrete, Grout and Mortar Application	▪ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff and wind. ▪ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage. ▪ When washing exposed aggregate, prevent wash water from entering storm drains. Block any inlets and vacuum gutters, hose wash water onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.
GEN-13	Exclude Concrete from Channel	▪ For maintenance activities that involve concrete pouring, the County shall ensure that poured concrete be excluded from the wetted channel for a period of 30 days after it is poured. During that time, the poured concrete shall be kept moist, and runoff from the concrete shall not be allowed to enter a stream. Containment structures should be installed to control the placement of wet concrete and to prevent it from entering the channel outside of those structures. ▪ Commercial sealants may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If sealant is used, water shall be excluded from the site until the sealant is dry.

BMP Number	BMP Title	BMP Description
		▪ No dry concrete shall be placed on the banks or in a location where it could be carried into the channel by wind or runoff.
GEN-14	Concrete Washout Facilities	▪ Concrete washout facilities should be established for maintenance activities that require on-site preparation and use of Portland cement concrete, asphalt concrete or cement mortar, establish concrete washout facilities. These facilities capture wash water, concrete and aggregate flushed from concrete mixers, chutes, etc. Concrete washouts may be contained settling basins dug into the ground, raised and contained structures, trailers, etc. They are also applicable for projects that require equipment washouts. ▪ An appropriate area for the washout must be identified at least 50 feet away from watercourses and storm drains in case of accidental breaching. The storage capacity of the basin must be sized correctly for the job. <u>Construction Guidelines:</u> ▪ The location of the concrete washout should be clearly labeled and all employees should be educated about proper concrete disposal. ▪ Avoid mixing excess amounts of fresh concrete or cement mortar on-site. ▪ Wash out concrete mixers only in designated washout areas where the water will flow into temporary sealed basins or onto stockpiles of aggregate base or sand. Use as little water as possible to reduce hardening and evaporation time of waste products. ▪ Construct a basin large enough to contain all liquid and waste concrete materials generated during washout procedures. A minimum basin size is 9 feet x 9 feet and 2 feet deep. Plastic liner materials shall be a minimum of 60-mil polyethylene sheeting free of holes and defects. ▪ Recycle washout by pumping back into mixers for reuse when possible. ▪ BMP Maintenance: ▪ The concrete washout should be checked frequently to ensure proper use and effectiveness. ▪ At 75 percent capacity, the washout must be cleaned or new facilities must be constructed and ready for use. ▪ BMP Removal: ▪ The hardened concrete and materials related to the washout must be broken up, removed, and disposed of in accordance to local regulations. ▪ Area disturbed by the concrete washout must be repaired.

BMP Number	BMP Title	BMP Description
GEN-16	Timing of Work	▪ In general, routine maintenance and construction activities that take place in sensitive habitat and/or in channels below ordinary high water will be conducted during the dry season (June 15 through October 31[1]). Maintenance activities that are in upland areas and that would not affect streams may occur during low rainfall years at times when there is no predicted rainfall (chance of precipitation in less than 30 percent chance of rain). Activities that are subject to permit requirements will be conducted during the period authorized by the permits.
GEN-17	Maintain Traffic Flow	▪ To the extent feasible, work shall be staged and conducted in a manner that maintains two-way traffic flow on roadways in the vicinity of the work site. ▪ Heavy equipment and haul traffic shall be prohibited in residential areas to the greatest extent feasible. When no other route to and from the site is available, heavy equipment and haul traffic through residential areas shall be restricted to the hours of 8 a.m. to 5:30 p.m., Monday through Friday. ▪ If heavy equipment or hauling is required beyond the hours above, the County or their contractor would provide notice to adjacent property owners 48 hours in advance of such activities.
GEN-18	Traffic Control and Public Safety	▪ In the event that work activities require the temporary closure of any traffic lanes, the County shall implement measures to guide traffic (such as signage and flaggers), safeguard construction workers, provide safe passage of vehicles, and minimize traffic impacts through the duration of work activities. The County also shall notify local emergency service providers regarding any planned lane closures. ▪ For any other work within or near the roadway that could pose a hazard to the public, the County shall install/implement appropriate measures, such as fences, barriers, flagging, guards, and/or signs, to give adequate warning and provide protection from the potentially dangerous condition. ▪ For work activities along or near roadways with sidewalks and bike lanes, the County shall implement measures to ensure the safe passage of pedestrians and bicyclists around the work site. ▪ Where work is proposed at a recreational park or trail, warning signs will be posted several feet beyond the limits of work. Signs will also be posted if trails will be temporarily closed. ▪ Public transit access and routes will be maintained in the vicinity of the work site. If public transit will be affected by temporary road closures and require detours, affected transit authorities will be consulted and kept informed of project activities.

[1]Construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

BMP Number	BMP Title	BMP Description
GEN-19	Dust Management Controls	The County will implement the Bay Area Air Quality Management District (BAAQMD) Basic Dust Control Measures. Current measures stipulated by the BAAQMD Guidelines include the following: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
GEN-20	Firearms	▪ No firearms (except for federal, State, or local law enforcement officers and security personnel) will be permitted at the project site to avoid harassment, killing or injuring of wildlife.
GEN-21	Domestic Animals	▪ No animals (e.g., dogs or cats) can be brought to the project site to avoid harassment, killing or injuring of wildlife.
GEN-22	Site Stabilization	Earthwork will be completed as quickly as possible, and where practical, site restoration will occur immediately following maintenance. If site restoration involves planting, such activities may commence in late fall or early winter during the onset of rainy season. Bare soil surfaces resulting from maintenance and/or construction activities shall be covered with suitable erosion controls (seed or plant vegetation, fabrics, hydroseeding, mulch, etc.): ▪ Within 12 hours of any break in work unless project activities will resume within 7 days. ▪ No later than 3 days following the disturbance during the rainy season (approximately October through April).

BMP Number	BMP Title	BMP Description
		▪ No later than 7 days following the disturbance during the dry season (approximately May through September). Every effort shall be made to immediately cover bare soil surfaces resulting from maintenance and/or construction activities prior to storms. Revegetation activities will include only local plant materials native to the San Francisco Peninsula region.
GEN-23	Fire Prevention	1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. During the high fire danger period (April 1–December 1), work crews will: ▪ Have appropriate fire suppression equipment available at the work site. ▪ Keep flammable materials, including flammable vegetation slash, at least 10 feet away from any equipment that could produce a spark, fire, or flame. ▪ Not use portable tools powered by gasoline-fueled internal combustion engines within 25 feet of any flammable materials unless a round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area).
GEN-26	Decontamination of Project Equipment and Vehicles	▪ Equipment, boots and waders used for in-water maintenance activities will be decontaminated prior to entering and exiting the maintenance site and/or between each use in different water bodies to avoid the introduction and transfer of organisms between water bodies. Methods to be employed may include: drying, using a hot water soak, or freezing, as appropriate to the type of gear or equipment. The County shall begin the decontamination process by thoroughly scrubbing equipment, paying close attention to small crevices such as boot laces, seams, net corners, etc., with a stiff-bristled brush to remove all organisms. To decontaminate by drying, the County shall allow equipment to dry thoroughly (i.e., until there is a complete absence of water), preferably in the sun, for a minimum of 48 hours. To decontaminate using a hot water soak, the County shall immerse equipment in 140°F or hotter water and soak for a minimum of 5 minutes. To decontaminate by freezing, the County shall place equipment in a freezer 32°F or colder for a minimum of 8 hours. Repeat decontamination is required only if the equipment/clothing is removed from the site, used within a different waterbody, and returned to the project site.
EC-3	Live Staking	▪ Live staking involves the insertion of live, vegetative cuttings into the ground in a manner that allows the cutting (stake) to take root and grow. This BMP is used to reduce the potential for soil to become water borne, to reduce water velocity and erosive forces, and to aid in habitat protection. Poles used in willow walls and through rip rap may be a structural application. Sprigs may be used in individual planting spots along a streambank.

BMP Number	BMP Title	BMP Description
EC-5	Wattles/Fascines	▪ Wattles and fascines are live branch cuttings, usually willows, bound together into long, tubular bundles used to stabilize slopes and stream banks. Both wattles and live fascines are true biotechnical practices. The live branches and live stakes provide the biological element while the stems, rope ties and wedge-shaped wooden stakes all combine to provide the structural elements. Fascines differ from wattles in that the branch cuttings all point in the same direction in fascines, where they may point in either direction in wattles. Wattles are typically aligned on contour, where fascines are angled slightly upslope and thus tend to produce more vigorous growth.
EC-6	Hand Seeding	▪ Hand seeding is broadcasting grass seed on disturbed or bare soil areas by hand or a hand seeding device. This BMP is used to reduce the potential for soil to become water or air borne, reduce erosion after vegetation establishment, provide for vegetative buffers and aid in habitat protection. Seeding with appropriate seed mixes also helps discourage colonization by non-native and invasive plant species.
EC-7	Hydroseeding	▪ Hydroseeding is broadcasting grass seed, tackifier, wood fiber mulch and water on disturbed areas using a hydroseeding machine. This BMP is used to reduce the potential for soil becoming water or air borne, to reduce erosion after vegetation is established, provide vegetative buffers and to aid in habitat protection. Seeding with appropriate seed mixes will also help discourage colonization by non-native and invasive plant species. Hydroseeding may be used after soil disturbance is completed at construction/maintenance sites and/or on bare slopes.
EC-8	Mulching	▪ Mulching is the application of rice or sterile straw, wood chips, leaf litter, redwood duff, or other suitable materials on the soil surface applied manually or by machine. This BMP is used to reduce the potential for soil becoming water or air borne, and to encourage vegetation establishment. This BMP is used to protect the soil surface and to protect newly seeded areas.
EC-09	Vegetative Buffer	▪ A vegetative buffer is a strip of vegetation adjacent to sensitive areas, ditches, pavement and water bodies. This BMP prevents soil from becoming water borne and may help restore shallow slope failures by trapping soil and debris.
EC-10	Erosion Control Blankets & Mats	▪ Erosion control blankets and mats are installed to protect the prepared soil surface of a steep slope. This BMP may be used at maintenance sites to provide stabilization/protection on steep slopes or stream banks. Erosion control blankets and mats are available in a variety of materials including jute, excelsior, blanket material, straw, wood fiber blanket, coconut fiber blanket, coconut fiber mesh, and straw coconut fiber blanket. Material selection should be based on the size of area, slope, surface conditions, revegetation plans, and channel velocity. Coir fabric/netting is a geo-textile product made from coconut

BMP Number	BMP Title	BMP Description
		fibers loosely woven into a fabric usually packaged in roll form. This fabric can be used to provide a reduction in water velocity/erosive forces and/or habitat protection and topsoil stabilization. Erosion control blankets and mats may be used in combination with seeding and/or vegetation.
EC-11	Surface Roughening	▪ Surface roughening is a technique for roughening a bare soil surface with furrows running across the slope, stair stepping, or tracking with construction equipment. Surface roughening is intended to aid the establishment of vegetative cover from seed, to reduce runoff velocity and increase infiltration, and to reduce erosion and provide for sediment trapping. This BMP is typically applied on slopes steeper than 3:1.
EC-13	Slope or Bank Stabilization	▪ Where biotechnical methods are unsuitable for stabilizing streambanks due to site specific conditions such as steep slopes or limited right-of-way width, hardened engineered solutions such as rock slope protection, solider pile walls, retaining walls, or slope soil nailing may be utilized along a failed portion of slope to provide a buttress against additional failure. To the extent feasible, this BMP should be combined with biotechnical solutions through installation of vegetated rock slope protection.
EC-14	Energy Dissipator	▪ An energy dissipator is a structure designed to control erosion at the outlet of a channel or conduit by reducing the velocity of flow and dissipating the energy. This BMP is recommended at the outlet of any new or replacement drainage culvert, which are points of high erosion potential. Energy dissipators are effective in absorbing the impact of flow and reducing the velocity to non-erosive levels.
SC-1	Gravel Bags	▪ Gravel bags can be used to keep water away from work areas and unstable slopes or for constructing cofferdams and clean water bypasses.
SC-2	Silt Fence	▪ A silt fence is a temporary sediment barrier consisting of fabric stretched across and attached to supporting posts and entrenched into soil. This BMP is generally used for perimeter protection (around construction/maintenance sites, stockpile areas). It may also be installed perpendicular to the flow direction to slow or stop water and to allow perimeter filtration, settling of soil particles, and to reduce water velocity.
SC-3	Straw Log, Straw Roll, Coir Log	▪ Straw rolls/logs or coir logs may be used for temporary soil stockpile protection; protection of storm drains, gutters, and drainage courses; temporary check dams; bank or slope stabilization; and streambank toe protection. Alternatives to straw rolls/logs and coir logs include compostable filter socks/berms comprised of natural fibers and other bio-based materials.

BMP Number	BMP Title	BMP Description
SC-7	Silt Curtain	▪ The County shall install silt curtains or other appropriate silt filtering devices around excavation sites to prevent heavily silted water from impacting areas around the work site. The silt curtain or silt filtering device shall be maintained throughout all phases of excavation.
DW-1	Channel Dewatering	▪ When in-water construction is unavoidable, streamflow shall be diverted around work areas by either installing cofferdams and/or clean water bypass systems. A cofferdam is a temporary structure built into a waterway to enclose a construction area and reduce sediment pollution from construction work in or adjacent to water. A clean water bypass is typically used for short-term diversion of small amounts of water over short distances to enable dewatering of a maintenance site. Depending on site conditions, these systems may be either gravity driven or require use of a pump to divert water around a construction area. ▪ No dewatering will be conducted at sites with recent document occurrences of coho salmon within the past 5 years.
CUL-4	Construction Monitoring	▪ The County will retain a qualified archaeologist to be present on-site during ground-disturbing activities within areas identified as highly sensitive for cultural areas in the Projects Cultural Resources Report. ▪ The qualified archaeologist will have the authority to stop work if cultural resources are discovered. ▪ If any cultural resources discovered during construction monitoring, BMP CUL-6 would be implemented as appropriate.
CUL-5	Conduct Pre-Maintenance Educational Training	▪ Prior to work beginning, and in concert with implementing BMP BIO-1, all crew personnel will participate in an educational training session conducted by a qualified cultural resources specialist. This training will include instruction on how to identify historic and prehistoric resources that may be encountered and will describe the appropriate protocol to be followed if resources are discovered during maintenance work.
CUL-6	Address Discovery of Cultural Remains or Historic or Paleontological Artifacts Appropriately	Unanticipated discoveries of cultural and paleontological resources may occur during maintenance construction activities. Examples of cultural remains are obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or significant areas of tool-making debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period artifacts may include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Paleontological artifacts are fossilized remains of plants and animals. Work will be restricted or stopped in areas where remains or artifacts are found until proper protocols are met.

BMP Number	BMP Title	BMP Description
		Protocol for Treatment of Prehistoric or Historic Cultural Resources: 1. Work at the location of the find will halt immediately within 50 feet of the find. A "no work" zone will be established utilizing appropriate flagging to delineate the boundary of this zone, which will measure at least 50 feet in all directions from the find. 2. The County will retain the services of a consulting archaeologist, who will visit the discovery site as soon as practicable and perform minor hand excavation to describe the archaeological or paleontological resources present and assess the amount of disturbance. 3. The consulting archaeologist will provide to the County and USACE, at a minimum, written and digitalphotographic documentation of all observed materials, utilizing the CRHR and NRHP guidelines for evaluating archaeological resources. Based on the assessment, the County and USACE will identify the CEQA and Section 106 cultural resources compliance procedures to be implemented. 4. If the consulting archaeologist determines that the find appears not to meet the CRHR or NRHP criteria of significance, and a USACE archaeologist concurs with the consulting archaeologist's conclusions, construction may continue while monitored by the consulting archaeologist. The authorized maintenance work will resume at the discovery site only after the County has retained a consulting archaeologist to monitor and the Maintenance Manager has received notification from USACE allowing work to continue. 5. If the find appears significant, avoidance of additional impacts is the preferred alternative. The consulting archaeologist will determine if adverse impacts to the resources can be avoided. 6. Where avoidance is not practical (e.g., maintenance activities cannot be deferred or must be completed to satisfy the Maintenance Program objective), the County will develop an action plan (also known as a data recovery plan) and submit it to USACE within 48 hours of determining that maintenance activities cannot be deferred. The action plan will be submitted by email to the appropriate archeological/cultural resources contact at the USACE. The action plan is equivalent to a data recovery plan. It will be prepared in accordance with the current professional standards and state guidelines for reporting the results of the work, and will describe the services of a Native American consultant and a proposal for curation of cultural materials recovered from a non-grave context. 7. The recovery effort will be documented in a report prepared by the consulting archaeologist in accordance with current archaeological standards. Any non-grave artifacts will be placed with an appropriate repository. 8. In the event of discovery of human remains (or if a find consists of bones suspected to be human), the field crew supervisor will take immediate steps to secure and protect such remains from vandalism during periods

BMP Number	BMP Title	BMP Description
		when work crews are absent.) 9. The maintenance crew supervisor will immediately notify the San Mateo County Coroner and provide any information that identifies the remains as Native American. If the remains are determined to be those of a prehistoric Native American or a Native American from the ethnographic period, the Coroner will contact NAHC within 24 hours of being notified about the remains. NAHC will designate and notify a Most Likely Descendant (MLD) within 24 hours. The MLD will have 24 hours to consult and provide recommendations for the treatment or disposition, with proper dignity, of the human remains and grave goods. 10. Preservation in situ is the preferred option for human remains. Human remains will be preserved in situ if continuation of the maintenance work, as determined by the consulting archaeologist and MLD, will not cause further damage to the remains. The remains and artifacts will be documented, the find location carefully backfilled (withy protective geo-fabric if desirable). 11. If human remains or cultural items are exposed during maintenance that cannot be protected from further damage, they will be exhumed by the consulting archaeologist at the discretion of the MLD and reburied, with the concurrence of the MLD, in a place mutually agreed upon by all parties. <u>Protocol for Treatment of Paleontological Resources:</u> 1. Work at the location of the find will halt immediately within 50 feet of the find. A "no work" zone will be established utilizing appropriate flagging to delineate the boundary of this zone, which will measure at least 50 feet in all directions from the find. 2. The County shall retain the services of a consulting paleontologist. The consulting paleontologist will meet the Society for Vertebrate Paleontology's criteria for a qualified professional paleontologist (Society of Vertebrate Paleontology 2010). 3. The consulting paleontologist shall visit the discovery site as soon as practicable and perform minor hand excavation to describe the paleontological resources present and assess the amount of disturbance. The consulting paleontologist will follow the Society for Vertebrate Paleontology's guidelines (2010) for treatment of the artifact. Treatment may include preparation and recovery of fossil materials for an appropriate museum or university collection, and may include preparation of a report describing the finds. The County will be responsible for ensuring that the consulting paleontologist's recommendations for treatment are implemented.
BIO-1	Environmental Awareness Training	▪ Prior to commencing maintenance activities in a given year, all participating maintenance personnel will attend a worker environmental awareness training program. The training will include a brief review of

BMP Number	BMP Title	BMP Description
		special-status species, sensitive habitats, and other sensitive resources that may exist in the project area, including field identification, habitat requirements, and the legal status and protection of each relevant species, as well as locations of sensitive biological resources. The training will include materials concerning the following topics: sensitive resources, resource avoidance, permit conditions, and possible consequences for violations of State or Federal environmental laws. The training will cover the maintenance activity's conservation measures, environmental permits, and regulatory compliance requirements, as well as the roles and authority of the monitors and biologist(s). It will include printed material and an oral training session by a qualified biologist.
BIO-2	Minimize Injury or Mortality of Fish and Amphibian Species during Dewatering	▪ Prior to dewatering a construction site, all reasonable efforts shall be made to capture and relocate native fish and amphibian species if necessary to avoid direct mortality and minimize take. Streams that support a sensitive species (e.g., steelhead, California red-legged frog) will require a relocation effort led by a qualified biologist. The following measures are consistent with those defined as reasonable and prudent by NMFS for projects concerning several central California Evolutionarily Significant Units for coho salmon and steelhead trout. ▪ Fish relocation activities will be performed only by qualified fisheries biologists that have experience with fish capture and handling. ▪ Perform relocation activities during morning periods when air temperatures are coolest. ▪ Periodically measure air and water temperatures. Cease activities when water temperatures exceed temperatures allowed by CDFW and NMFS. ▪ Capture methods may include fish landing nets, dip nets, buckets and by hand. ▪ Exclude fish from re-entering work area by blocking the stream channel above and below the work area with fine meshed net or screens. Mesh will be no greater than 1/8 inch (3.1mm). The bottom edge of net or screen will be completely secured to the channel bed to prevent fish from re-entering work area. Exclusion screening will be placed in areas of low water velocity to minimize impingement of fish. Screens will be checked periodically and cleaned of debris to permit free flow of water. ▪ Prior to capturing fish, the qualified biologist will determine the most appropriate release location(s). Captured aquatic life shall be released immediately in the closest suitable body of water adjacent to the work site, taking into consideration the following when selecting release site(s): A. Similar water temperature as capture location B. Ample habitat for captured fish

BMP Number	BMP Title	BMP Description
		C. Low likelihood of fish re-entering work site or becoming impinged on exclusion net or screen. D. Avoid areas with large concentrations of potential predators in immediate vicinity. ▪ Minimize handling of salmonids. However, when handling is necessary, always wet hands or nets prior to touching fish. ▪ Temporarily hold fish in cool, shaded, aerated water in a container with a lid or in a live car (i.e., a net enclosure that can be placed in a pond to temporarily hold the fish). ▪ If fish are held in a container, provide aeration with a battery-powered external bubbler. Protect fish from jostling and noise and do not remove fish from this container until time of release. ▪ Place a thermometer in holding containers and, if necessary, periodically conduct partial water changes to maintain a stable water temperature. If water temperature reaches or exceeds those allowed by CDFW and NMFS, fish should be released, and rescue operations ceased. ▪ Avoid overcrowding in containers. Have at least two containers and segregate young-of-year fish from larger age classes to avoid predation. Place larger amphibians, such as Pacific giant salamanders, in container with larger fish. ▪ If fish are abundant, periodically cease capture, and release fish at predetermined locations. ▪ Visually identify species and estimate year-classes of fish at time of release. ▪ Count and record the number of fish captured. Avoid anesthetizing or measuring fish. ▪ Submit reports of fish relocation activities to CDFW and NMFS in a timely fashion. ▪ If feasible, plan on performing initial fish relocation efforts several days prior to the start of construction. This provides the fisheries biologist an opportunity to return to the work area and perform additional passes immediately prior to construction. In many instances, additional fish will be captured that eluded the previous day's efforts. The biological monitor or qualified biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. ▪ If mortality during relocation exceeds the amount authorized by the applicable permits or, if no amount is specified, 5 percent, stop efforts and immediately contact the appropriate agencies (CDFW and NMFS).
BIO-3	California Red-legged Frog Protection Measures	▪ If suitable habitat for California red-legged frog is determined to exist in or around the work area where maintenance activities are planned to occur, the County will implement applicable protection measures as follows:

BMP Number	BMP Title	BMP Description
		▪ No more than twenty-four (24) hours prior to the date of initial ground disturbance or mowing, a pre-activity survey for the California red-legged frog will be conducted by a qualified biologist at the work site. The survey will consist of walking the work area limits to ascertain the possible presence of the species. The qualified biologist will investigate all potential areas that could be used by the California red-legged frog for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as those of California ground squirrels (Spermophilus beecheyi) or gophers (*Thomomys bottae*). If any adults, subadults, juveniles, tadpoles, or eggs are found, the qualified biologist will contact the USFWS to determine if moving any of the individuals is appropriate. If the USFWS approves moving animals, the biologist and USFWS will identify a suitable relocation site, and the County will ensure the qualified biologist is given sufficient time to move the animals from the work site before ground disturbance is initiated. Only qualified biologists will capture, handle, and monitor the California red-legged frog. ▪ To minimize harassment, injury, death, and harm to individual California red-legged frogs, one of the following two measures will be implemented. 1. An approved, qualified biologist(s) will be on-site during all activities that may result in take of the California red- legged frog, as determined by the biologist taking into account all information gathered during the desktop audit of the site as well as the preconstruction survey. Qualified biologists must be approved by the USFWS. or 2. Prior to pre-activity surveys, personnel will enclose the work area with an exclusion fence with a minimum height above grade of 42 inches. The bottom of the fence will either be buried a minimum of six inches below ground or otherwise secured in a manner approved by the USFWS and will remain in place during all maintenance activities in order to prevent California red-legged frogs from entering the work area. Escape ramps, funnels, or other features that allow animals to exit the work area, but which will prohibit the entry of such animals, will be provided in the exclusion fencing. A qualified biologist will conduct a pre-activity survey of the fence installation area immediately prior to (i.e., the day of) the commencement of installation and will be on-hand to monitor fence installation. The exclusion fencing will be inspected daily by maintenance personnel and maintained for the duration of maintenance implementation. ▪ The qualified biologist(s) will be given the authority to freely communicate verbally, by telephone, electronic mail, or in writing at any time with maintenance personnel, any other person(s) at the work

BMP Number	BMP Title	BMP Description
		area, otherwise associated with the maintenance work, the USFWS, the CDFW, or their designated agents. The qualified biologist will have oversight over implementation of all the conservation measures in this programmatic biological opinion, and will have the authority and responsibility to stop work activities if they determine any of the associated requirements are not being fulfilled. If the qualified biologist(s) exercises this authority, the USFWS will be notified by telephone and electronic mail within twenty-four (24) hours. The USFWS contact is the Coast Bay Foothills Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at telephone (916) 414-6600. ▪ The County will minimize adverse impacts to the California red-legged frog by limiting, to the maximum extent possible, the number of access routes, ground disturbance area, equipment staging, storage, parking, and stockpile areas. Prior to initiating maintenance work that involve ground-disturbing activities, equipment staging areas, site access routes, sediment removal and transportation equipment and personnel parking areas, debris storage areas, and any other areas that may be disturbed will be identified, surveyed by the qualified biologist, and clearly identified with fencing. The fencing will be inspected by the qualified biologist and maintained daily until the last day that equipment is at the site. ▪ To the extent practicable, ground-disturbing activities will be avoided from October through April because that is the time period when California red-legged frogs are most likely to be moving through upland areas. When ground- disturbing activities must take place between November 1 and March 31, the County will ensure that daily monitoring by the qualified biologist is completed for the California red-legged frog. ▪ If egg masses are present and work cannot be postponed until after hatching, a buffer of vegetation at least 10 feet in diameter shall be left around any egg masses found. Staff will keep a record of any sites where egg masses are found and will conduct vegetation removal at these sites between June 15 and October 31[2]. Staff shall avoid entering the channel to avoid dislodging egg masses. Activities shall be performed from the banks. ▪ To minimize harassment, injury, death, and harm in the form of temporary habitat disturbances, all maintenance- related vehicle traffic will be restricted to established roads, sediment removal and access areas, equipment staging, storage, parking, and stockpile areas. These areas will be included in pre-activity surveys and, to the maximum extent possible, established in locations disturbed by previous activities to prevent further adverse impacts. Maintenance related vehicles will observe a 20-mile per hour speed limit

[2]Construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

BMP Number	BMP Title	BMP Description
		within work areas, except on County roads, and State and Federal highways. Off-road traffic outside of designated and fenced work areas will be prohibited. ▪ When a California red-legged frog is encountered in the work area, all activities which have the potential to result in the harassment, injury, or death of the individual will be immediately halted. The qualified biologist will then assess the situation in order to select a course of action that will avoid or minimize adverse impacts to the animal. To the maximum extent possible, contact with the frog will be avoided and the individual will be allowed to move out of the potentially hazardous situation to a secure location on its own volition. This procedure applies to situations where a California red-legged frog is encountered while it is moving to another location. It does not apply to animals that are uncovered or otherwise exposed or in areas where there is not sufficient adjacent habitat to support the species should the individual move away from the hazardous location. ▪ California red-legged frogs that are in danger will be relocated and released by the qualified biologist outside the work area within the same riparian area or watershed. If relocation of the individual outside the work area is not feasible (i.e., there are too many individuals observed per day), the biologist will relocate the animals to a USFWS preapproved location. Prior to the initial ground disturbance, the County will obtain approval of the relocation protocol from the USFWS in the event that a California red-legged frog is encountered and needs to be moved away from the work site. Under no circumstances will a California red-legged frog be released on a site unless the written permission of the landowner has been obtained by the County. The qualified biologist will limit the duration of the handling and captivity of the California red-legged frog to the minimum amount of time necessary to complete the task. If the animal must be held in captivity, it will be kept in a cool, dark, moist, aerated environment, such as a clean and disinfected bucket or plastic container with a damp sponge. ▪ The County will immediately notify the USFWS once the California red-legged frog and the site is secure. The USFWS contact for this situation is the Coast Bay Foothills Division Chief of the Endangered Species Program by email and at telephone (916) 414-6600. ▪ A litter control program will be instituted at each activity site. All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. The trash containers will be removed from the site at the end of each working day. ▪ The County will comply with all herbicide application requirements mandated by the USEPA and stipulated injunctions pertaining to California red-legged frog. For example, herbicides will be limited for controlling state-designated invasive species and noxious weeds, will not be used within 15 feet of aquatic breeding

BMP Number	BMP Title	BMP Description
		critical habitat or non-breeding aquatic critical habitat areas or within 15 feet of aquatic features within non-critical habitat sections subject to the 2006 Court-ordered injunction; precipitation is not occurring or forecast to occur within 24 hours; herbicide is limited to localized spot treatment using hand-held devices; and herbicide will be applied by a certified applicator or person working under the direct supervision of a certified applicator. ▪ For on-site storage of pipes, conduits and other materials that could provide shelter for California red-legged frogs, materials will be securely capped prior to storage or an open-top trailer will be used to elevate the materials above ground. This is intended to reduce the potential for animals to climb into the conduits and other materials. ▪ To the maximum extent practicable, no maintenance activities will occur during rain events or within 24-hours following a rain event. Prior to maintenance activities resuming, a qualified biologist will inspect the work area and all equipment/materials for the presence of California red-legged frogs. The animals will be allowed to move away from the work site of their own volition or moved by the qualified biologist. ▪ To the maximum extent practicable, night-time construction activities will be minimized or avoided by the County. Because dusk and dawn are often the times when the California red-legged frog most actively moving and foraging, to the maximum extent practicable, earthmoving and other project activities will cease no less than 30 minutes before sunset and will not begin again prior to 30 minutes after sunrise. Except when necessary for driver or pedestrian safety, to the maximum extent practicable, artificial lighting at a work site will be prohibited during the hours of darkness. ▪ Plastic monofilament netting (erosion control matting), loosely woven netting, or similar material in any form will not be used at the project site because California red-legged frogs can become entangled and trapped in them. Any such material found on site will be immediately removed by the qualified biologist, maintenance personnel, or County contractors. Materials utilizing fixed weaves (strands cannot move), polypropylene, polymer or other synthetic materials will not be used. ▪ Trenches or pits one (1) foot or deeper that are going to be left unfilled for more than forty-eight (48) hours will be securely covered with boards or other material to prevent the California red-legged frog from falling into them. If this is not possible, the County will ensure wooden ramps or other structures of suitable surface that provide adequate footing for the California red-legged frog are placed in the trench or pit to allow for their unaided escape. Auger holes or fence post holes that are greater than 0.10 inch in diameter will be immediately filled or securely covered so they do not become pitfall traps for the California red-legged frog. The qualified biologist will inspect the trenches, pits, or holes prior to their being

BMP Number	BMP Title	BMP Description
		filled to ensure there are no California red-legged frogs in them. The trench, pit, or hole also will be examined by the qualified biologist each workday morning at least one hour prior to initiation of work and in the late afternoon no more than one hour after work has ceased to ascertain whether any individuals have become trapped. If the escape ramps fail to allow the animal to escape, the qualified biologist will remove and transport it to a safe location, or contact the USFWS for guidance.
BIO-5	San Francisco Garter Snake Protection Measures	In areas within one mile of a documented occurrence of the San Francisco garter snake, onsite habitat shall be evaluated by a qualified biologist or biological monitor for the potential to support this species. If suitable habitat for San Francisco garter snake is determined to exist in or around the work area where ground disturbing activities or mowing are planned to occur, the following measures will be followed: ▪ To the extent feasible, maintenance activities should be conducted from April through October during the dry season when these semi-aquatic species are less likely to be found in a work area. ▪ Prior to implementation of maintenance work, the County will submit to the USFWS and CDFW for its review and approval the qualifications of proposed wildlife biologist(s) who will perform pre-activity surveys and on-site monitoring. ▪ To avoid harassment, injury, death, and harm to individual San Francisco garter snakes, immediately prior to (i.e., the day of) the initiation of maintenance activities that have potential for take of the San Francisco garter snake, a USFWS and CDFW-approved biologist will conduct daytime surveys throughout the project site. The approved biologist will be present during initial ground-disturbing activities (i.e., clearing and grubbing) within 250 ft of the work area to monitor for individual garter snakes. The biologist will also be present during any other maintenance activities that could potentially result in take, as determined by the biologist taking into account all information gathered during the desktop audit of the site as well as the preconstruction survey. If a San Francisco garter snake is observed within the maintenance work area, either during the pre-activity survey or at any time, activities that could potentially harm the individual will cease and the USFWS and CDFW will be contacted immediately. Work will not re-commence without written approval from CDFW. The on-site biologist will be the contact for any employee or contractor who might inadvertently kill or injure a garter snake or anyone who finds a dead, injured, or entrapped San Francisco garter snake. The on-site biologist shall possess a working cellular telephone whose number shall be provided to the USFWS and CDFW. ▪ For vegetation removal on berms or other sites with suitable San Francisco garter snake habitat, vegetation shall be cut down to 3 inches by hand tools (weedwhacker, etc.). Once the ground is visible, a visual survey for San Francisco garter snakes shall be conducted. If no sensitive species are found in the area, removal of

BMP Number	BMP Title	BMP Description
		vegetation may continue by mowing or mechanized equipment very slowly with a biological monitor walking in front of the equipment to observe. ▪ Maintenance-related vehicles will observe a 20 mile per hour speed limit while in the work area. ▪ San Francisco garter snakes may be attracted to structures that provide cavities such as pipes; therefore, all pipes, culverts, or similar structures that are stored at the site for one or more overnight periods will be either securely capped prior to storage or thoroughly inspected by the on-site biologist and/or the maintenance foreman/manager before the pipe is buried, capped, or otherwise used or moved. If a San Francisco garter snake is discovered inside a pipe, the biologist (or a member of the maintenance crew, if the biologist is not on-site) will watch the individual until it has moved out of the maintenance work area. ▪ A litter control program will be instituted at each activity site. All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. The trash containers will be removed from the site at the end of each working day.
BIO-6	Measures to Protect the Foothill Yellow-legged Frog, California Giant Salamander, Santa Cruz Black Salamander, and Western Pond Turtle	In areas within one mile of documented foothill yellow-legged frog, California giant salamander, Santa Cruz black salamander, or western pond turtle occurrences, or where suitable habitat for one or more of these species is determined to exist in or around the work area where ground disturbing activities or mowing are planned to occur, the County will implement applicable protection measures as follows: ▪ The qualified biologist will conduct a special-status species survey on each morning of and within 48 hours prior to the scheduled work commencing. 1. If no foothill yellow-legged frog, California giant Salamander, Santa Cruz black salamander, or western pond turtle is found, the work may proceed. 2. If eggs or larvae of the foothill yellow-legged frog, California giant salamander, Santa Cruz black salamander, are found, the qualified biologist will establish a buffer around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed, or the Permittee shall contact CDFW to develop site appropriate avoidance and minimization measures. 3. If an active western pond turtle nest is detected within the activity area, a 10-foot buffer zone around the nest will be established and maintained during the breeding and nesting season (April 1 – August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist.

BMP Number	BMP Title	BMP Description
		4. If adult or non-larval juvenile foothill yellow-legged frogs, California giant salamanders, Santa Cruz black salamanders, or western pond turtles are found, one of the following two procedures will be implemented: (a) If, in the opinion of the qualified biologist, capture and removal of the individual to a safe place outside of the work area is less likely to result in adverse effects than leaving the individual in place and rescheduling the work (e.g., if the species could potentially hide and be missed during a follow-up survey), the individual will be captured and relocated by a qualified biologist to suitable habitat at least 100 meters away and work may proceed. (b) If, in the opinion of the qualified biologist, the individual is likely to leave the work area on its own, and work can be feasibly rescheduled, a buffer will be established around the location of the individual(s) and work may proceed outside of the buffer zone. No work will occur within the buffer zone until the turtle has left the work area. Work within the buffer zone will be rescheduled if necessary.
BIO-7	Check for Wildlife in Pipes/Construction Materials	For maintenance activities that involve pipes or culverts, the County will visually check all sections of pipe for the presence of wildlife sheltering within them prior to moving any pipe or culvert sections that have been stored on the site overnight, or the pipes will have the ends capped while stored on site so as to prevent wildlife from entering. After attachment of the pipe/culvert sections to one another, the exposed end(s) of the pipe/culvert will be capped at the end of each day during construction to prevent wildlife from entering and being trapped within the pipeline/culvert.
BIO-8	Minimize Impacts on Dusky-footed Woodrat Nests	If suitable habitat for San Francisco dusky-footed woodrat is determined to exist in the work area, the following measure will be followed: ▪ No more than two weeks prior to the beginning of ground disturbance or other routine maintenance activities that could disturb woodrat nests, a qualified biologist will survey the work areas scheduled for maintenance. If any dusky- footed woodrat nests are found, the nests shall be flagged and construction fencing or flagging that will not impede the movement of the San Francisco dusty-footed woodrat shall be placed around the nest to create a 10-foot buffer (where feasible). If the nest is located adjacent to a road or trail, the nest shall be clearly flagged so equipment/truck drivers accessing sites can see the nest. If a dusky-footed woodrat nest is identified in a work area, the following measure will be implemented by the County.

BMP Number	BMP Title	BMP Description
		▪ The County will avoid physical disturbance of the nest if feasible. Ideally, a minimum 10-foot buffer should be maintained between maintenance construction activities and each nest to avoid disturbance. In some situations, a smaller buffer may be allowed if in the opinion of a qualified biologist removing the nest would be a greater impact than that anticipated as a result of maintenance activities. ▪ If a dusky-footed woodrat nest cannot be avoided and the nest is located in urban or bayside areas where woodrat populations are small and isolated from larger populations, the County will consult with CDFW regarding the appropriate measures to minimize impacts. ▪ If a dusky-footed woodrat nest cannot be avoided and the nest is located in more rural or natural areas and/or where woodrat populations are large and have connectivity to large populations, one of the following two relocation measures will be implemented by the County: ▪ If the woodrat nest site and the proposed relocation area are connected by suitable dispersal habitat for the woodrat, as determined by a qualified biologist, the following relocation methodology will be used: Prior to the beginning of construction activities, a qualified biologist will disturb the woodrat nest to the degree that all woodrats leave the nest and seek refuge outside of the maintenance activity area. Relocations efforts will avoid the nesting season (February-July) to the maximum extent feasible. Disturbance of the woodrat nest will be initiated no earlier than one hour before dusk to minimize the exposure of woodrats to diurnal predators. Subsequently, the biologist will dismantle and relocate the nest material by hand. All material from dismantled nests will be placed in a pile, preferably against a log or tree trunk, in suitable habitat located at least 20 feet from, but otherwise as close as possible to, the original nest locations, to provide material for woodrats to construct new nests. During the deconstruction process, the biologist will attempt to assess if there are juveniles in the nest. If immobile juveniles are observed, the deconstruction process will be discontinued until a time when the biologist believes the juveniles will be fully mobile. A 10-foot-wide no-disturbance buffer will be established around the nest until the juveniles are mobile. The nest may be dismantled once the biologist has determined that adverse impacts on the juveniles would not occur. All disturbances to woodrat nests will be documented in a construction monitoring report and submitted to CDFW. ▪ If a qualified biologist determines that the woodrat relocation area is separated from the nest site by major impediments, or a complete barrier, to woodrat movement, trapping for woodrats will be conducted prior to relocation of nest material. Prior to the start of nest relocation activities, artificial pine box shelters will be placed at each of the sites selected for relocation of nest materials. The dimensions of the artificial shelters will be approximately 8” long x 8” wide x 6” high. Each shelter will include two interior chambers

BMP Number	BMP Title	BMP Description
		connected by an opening. At the relocation sites, the artificial pine box shelters will provide basement structures for the relocated woodrat nest materials, allowing woodrats to enter, use, and modify the relocated nests. ▪ A qualified biologist will set two traps around each of the woodrat nests to be relocated. Traps will be set within one hour prior to sunset, and baited with a mixture of peanut butter, oats, and apples. Traps will also be equipped with cotton bedding and covered with cardboard. The traps will be checked the following morning, within one- and-a-half hours of sunrise. If a woodrat is captured it will be placed in a quiet area while its nest material is relocated; the animal will then be released at the relocated nest. If no woodrats are captured after the first night, the biologist will set the traps for one additional evening to increase the probability of capturing the animal and ensuring a safe relocation. If no woodrats are captured at a given house after two nights, it will be assumed that the house is not currently occupied. ▪ Trapping will only be conducted outside the breeding season, which for woodrats is from February through the end of July. If a litter of young is found or suspected while dismantling a nest for relocation, the nest material will be replaced, any trapped woodrats will be returned to the nest, and the nest will be left alone for 2 to 3 weeks, after which time the nest would be rechecked to verify that the young are capable of independent survival, as determined by the lead woodrat biologist, before proceeding with nest dismantling.
BIO-9	Measures to Protect Nesting Migratory Birds	▪ To the extent possible, conduct vegetation removal activities prior to nesting bird season (February 1 through August 31). ▪ For maintenance activities or tree removal that are scheduled to occur between February 1 and August 31, a qualified biologist will survey the work area and a minimum of 300 feet surrounding the work area for raptor nests and 100 feet for nests of non-raptors. This survey will occur no more than three days prior to starting work. If a lapse in maintenance-related work of 7 days or longer occurs, another focused survey will be conducted before maintenance work can be reinitiated. ▪ If nesting birds are found, a no-work buffer will be established around the nest and maintained until the young have fledged. A qualified biologist will identify an appropriate buffer based on a site-specific evaluation. Typical appropriate buffers are 300 feet for raptors, herons, and egrets (though larger for bald and golden eagles, as discussed in BIO-15); 100 feet for non-raptors nesting on trees, shrubs and structures, and 25 feet for ground-nesting non-raptors. ▪ The boundary of each buffer zone will be marked with fencing, flagging, or other easily identifiable marking if work will occur immediately outside the buffer zone.

BMP Number	BMP Title	BMP Description
		▪ Install physical barriers to nesting where appropriate (e.g., install netting over entryways to cavities, bridge ledges, culverts) and check regularly for any trapped birds. Work will not commence within the buffer until fledglings are fully mobile and no longer reliant upon the nest or parental care for survival. ▪ No trees or shrubs shall be disturbed that contain active bird nests until all eggs have hatched, and young have fully fledged (are no longer being fed by the adults and have completely left the nest site). To avoid potential impacts to tree or shrub-nesting birds, any project-specific trimming or pruning of trees or shrubs shall be conducted during the time period of September 1 to February 14 unless a preconstruction nesting bird survey has been conducted by a qualified biologist. No habitat removal or modification shall occur within the Ecologically Sensitive Area fenced nest zone even if the nest continues to be active beyond the typical nesting season for the species, until the young have fully fledged and will no longer be adversely affected by the project. ▪ Within areas subject to CDFW regulation under Section 1600 of the Fish and Game Code, nesting bird protection measures required as conditions of the Streambed Alteration Agreement will be implemented.
BIO-10	Measures to Protect Nesting Marbled Murrelet	▪ During marbled murrelet breeding/nesting season (March 24 to August 15), if suitable marbled murrelet nesting trees are present within 300 feet of the project area or if a marbled murrelet nest is detected, Permittee shall consult with CDFW before proceeding. If habitat trees are present within ¼- mile of the project site but are greater than 300 feet from the work area, Permittee may proceed with the following conditions: – Work within the ¼-mile buffer shall be confined to the period of August 15 to October 31[3]. – If activities cannot be performed during this window and would thus occur during the marbled murrelet breeding season (March 25 to August 15), seasonal disturbance minimization buffers as listed the USFWS document, Estimation of the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (2006) shall be followed. Permittee shall measure ambient noise and estimate construction activity noise to calculate seasonal buffer widths using that reference.

[3] Allowable construction window has been updated to be Project specific and varies from that approved in the County of San Mateo Routine Maintenance Program.

BMP Number	BMP Title	BMP Description
		– Alternatively, if protocol-level surveys are conducted and do not indicate that the habitat is occupied by marbled murrelet, seasonal and distance work restrictions may be lifted with written approval from CDFW. Protocol level survey procedures and information can be found at: http://www.pacificseabirdgroup.org/publications/PSG_TechPub2_MAMU_ISP.pdf
BIO-14	Measures to Protect Bat Colonies	▪ If high-quality habitat for roosting bats (i.e., large trees with cavities of sufficient size to support roosting bats, or buildings providing suitable roost sites, as determined by a qualified bat biologist) is present within 100 feet of a maintenance site, a qualified bat biologist will conduct a survey to look for evidence of bat use within two weeks prior to the onset of work activities. If evidence of bat occupancy is observed, or if high-quality roost sites are present in areas where evidence of bat use might not be detectable (such as a tree cavity), an evening survey and/or nocturnal acoustic survey may be necessary to determine if a bat colony is present and to identify the specific location of the bat colony. ▪ If no active maternity colony or non-breeding bat roost is located, project work can continue as planned. ▪ If an active maternity colony or non-breeding bat roost is located, the project work will be redesigned to avoid disturbance of the roosts, if feasible. ▪ If an active maternity colony is located, and the project cannot be redesigned to avoid removal or disturbance of the occupied tree or structure, disturbance will not take place during the maternity season (March 15 – July 31), and a disturbance-free buffer zone (determined by a qualified bat biologist) will be observed during this period. ▪ If an active non-breeding bat roost is located, and the project cannot be redesigned to avoid removal or disturbance of the occupied tree or structure, the individuals will be safely evicted between August 1 and October 15 or between February 15 and March 15 (as determined by a Memorandum of Understanding with CDFW). Bats may be evicted through exclusion after notifying CDFW. Trees with roosts that need to be removed will first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.
BIO-16	Avoidance Special-Status Plant Species	For projects located in areas where special-status plants have been identified as potentially occurring, a qualified biologist will assess habitat suitability for the potential occurrence of special-status plant species within the work area. If determined to be warranted, a qualified botanist will conduct appropriately timed surveys for the focal plant species in accordance with CDFW's special-status plant survey methodology. If a special-status species is observed in or near the project site, the County will follow the measures below as well as any additional measures that might be contained in the forthcoming Biological Opinion issued by the USFWS

BMP Number	BMP Title	BMP Description
		for the Maintenance Program. ▪ If discovered, the population size and occupied area of special-status plant populations identified during the field survey, and with potential to be impacted, will be estimated. A "population" will be defined as the group of individuals of a species present within a 0.10-mile radius. In addition, the population will be photographed and flagged to maximize avoidance, as well as to estimate the percentage of the population affected. If feasible, the project shall be redesigned or modified to avoid direct and indirect impacts on special-status plant species. ▪ Special-status plants to be avoided will be protected from disturbance by installing environmentally sensitive area fencing (orange construction barrier fencing or a suitable alternative). Protective fencing will be installed under the direction of a qualified biologist as necessary to protect the plant and its habitat; where feasible, the environmentally sensitive area fencing will be installed at least 50 feet from the edge of the population. The location of the fencing will be shown on the maintenance design drawings and marked in the field with stakes and/or flagging. The design specifications will contain clear language that prohibits maintenance-relate activities, vehicle operation, material and equipment storage, and other surface disturbing activities within the fenced environmentally sensitive area. For non-ground disturbing vegetation management activities conducted using only hand-held equipment, the non-disturbance buffer may be reduced to a minimum of 3 feet and flagging of the population may be used in place of environmentally sensitive fencing.
BIO-17	Sudden Oak Death Controls	▪ Before entering maintenance sites located in areas infested with Phytophthora, field workers will receive training that includes information on Phytophthora pathogens and how to prevent the spread of these and other soil-borne organisms by following approved phytosanitary procedures. ▪ The exterior and interior of all vehicles, construction equipment, and tools should be clean and free of debris, soil and mud (including mud on tires, treads, wheel wells and undercarriage) prior to arrival at a new job site, especially during the wet season. ▪ Work shoes should be kept clean by inspecting shoe soles and removing mud, debris and soil off treads before moving to a new job site. ▪ Do not collect or transport host plants from an infested or quarantined area. ▪ Vehicles should stay on established roads whenever possible.

BMP Number	BMP Title	BMP Description
		▪ To minimize the potential for spreading potentially contaminated soil and time required for decontamination, if possible, avoid vehicle traffic and field work when soils are wet enough to stick readily to shoes, tools, equipment and tires. ▪ Delivered nursery plants that will be held before planting will be transferred to cleaned and sanitized raised benches and maintained in accordance with the "Guidelines to Minimize Phytophthora Pathogens for holding (non-production) nurseries at restoration sites, Section 3." ▪ A portion of purchased nursery plants will be tested for Phytophthora using the pear-baiting methodology in which pear baits are placed in soil samples, water samples and root samples of nursery purchased plants. Incubation temperatures with diurnal fluctuations from 21 degrees Celsius to 27 degrees Celsius are generally suitable for detecting Phytophthora species using pear baits. If dark lesions appear on pears, the sample likely has Phytophthora inoculum. For additional information for the pear-baiting methodology, see: phytosphere.com/BMPs nursery/test3_2bait.htm ▪ Nursery plants will be transported on or in vehicles or equipment that have been cleaned before loading the stock. ▪ Nursery stock will not be placed on the soil or other potentially contaminated surfaces until they are placed at their specific planting sites. ▪ Minimize unnecessary movement of soil and plant material within a planting area, especially from higher to lower risk areas. ▪ On-site or off-site collection of plant materials, including seed and cuttings for direct planting, will be conducted in a phytosanitary manner. ▪ Only uncontaminated water or water that has been effectively treated to remove or kill Phytophthora should be used for rinsing or irrigating plant material.
BIO-18	Invasive Plant Control	▪ In order to minimize the spread of invasive plants, all equipment (including personal gear) will be cleaned of soil, seeds, and plant material prior to arriving on the project site to prevent introduction of undesirable plant species. ▪ Prior to implementation of Program activities at a given site, the proposed staging area, as well as any areas to be graded, will be surveyed for the presence of invasive weed species. Invasive weed species occurring within locations of construction clearing and grubbing shall be flagged for removal by the biological monitor or qualified biologist. Any invasive weeds with a California Invasive Plant Council (Cal-IPC) rating of "moderate" or "high" found within the survey area will be removed and disposed of in a

BMP Number	BMP Title	BMP Description
		sanitary landfill, incinerated off-site, or disposed in a high-temperature composting facility that can compost using methods known to kill weed seeds, taking care to prevent any seed dispersal during the process by bagging material or covering trucks transporting such material from the site. ▪ Suitable onsite disposal areas should be identified to prevent the spread of weed seeds. Invasive plant material should be rendered nonviable (partially decomposed, very slimy or brittle) when being treated onsite. Maintenance staff shall desiccate or decompose invasive plant material until it is nonviable. Depending on the type of plant, disposed plant material can be left out in the open as long as roots are not in contact with moist soil, or can be covered with a tarp to prevent material from blowing or washing away. Permittee shall monitor all sites where invasive plant material is disposed onsite and treat any newly emerged invasive plants. Invasive plant material removed during work activities shall be bagged and appropriately incinerated or disposed of in a landfill or permitted composting facility. ▪ No invasive plants shall be planted at maintenance work areas. Prohibited exotic plant species include those identified in the Cal-IPC's Inventory Database, which is accessible at: https://www.cal-ipc.org/plants/inventory/.
BIO-19	Restore Channel Features	Following completion of bank stabilization activities, any temporary modifications to the low-flow channels will be reversed so that the channel is contoured to facilitate fish passage at least as well following the activity as it did prior to the stabilization activity.
BIO-21	General Wildlife Protection Measures	If any wildlife is encountered during project activities, said wildlife shall be allowed to leave the area unharmed and on their own volition, except in cases where relocation by a qualified biologist is permitted by conditions below.
BIO-24	Pathogen Control	▪ In order to minimize the spread of plant and animal pathogens, all equipment (including personal gear such as boots) will be cleaned of soil, seeds, and plant material prior to arriving on a maintenance site. All organic matter will be removed from nets, traps, boots, vehicle tires and all other surfaces that have come into contact with water or potentially contaminated sediments. ▪ Equipment, including maintenance equipment and field gear used to capture and relocate special-status species such as frogs, will be disinfected after exiting one aquatic habitat and before entering the next aquatic habitat, unless the waters are hydrologically connected to one another. Cleaning equipment in the immediate vicinity of aquatic habitats will be avoided (e.g., clean in an area at least 100 feet from aquatic features).

BMP Number	BMP Title	BMP Description
		▪ Boots, nets, gloves, and any other equipment used to handle amphibians or aquatic organisms will be scrubbed with a bleach solution (0.5 to 1.0 cup per 1.0 gallon of water), Quat-128™ (1:60), or a 3 to 6 percent sodium hypochlorite solution and thoroughly rinsed clean with water between maintenance sites. Care will be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat. ▪ When working at sites with known or suspected disease problems, disposable gloves will be worn and changed between handling each animal. Gloves will be wetted with water from the site or distilled water prior to handling any amphibians. Gloves will be removed by turning inside out with hands cleaned using a hand cleaner and water rinse to minimize cross-contamination.

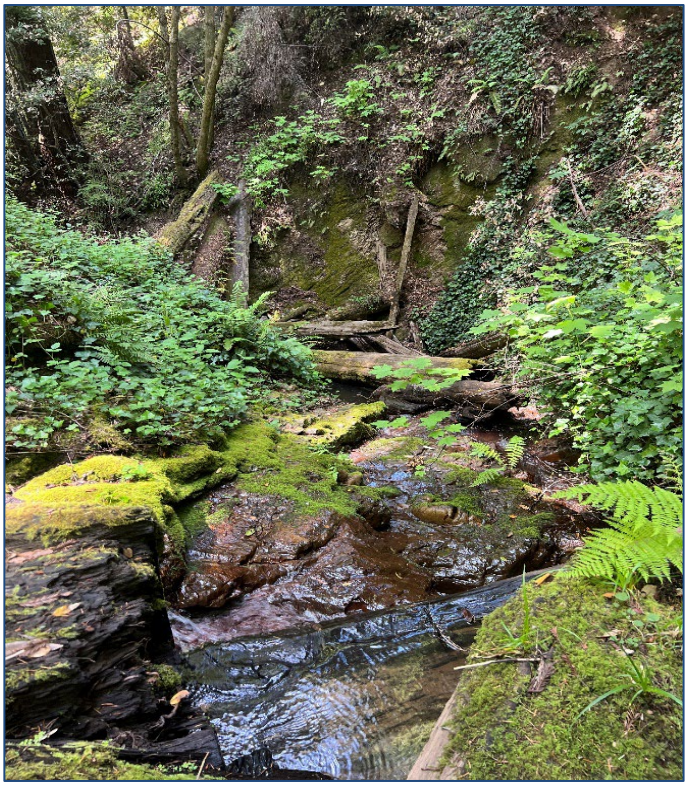
Appendix F

Aquatic Resources

Delineations Report

Aquatic Resource Delineation Report

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



August 2025

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EXECUTIVE SUMMARY

The County of San Mateo (County) Department of Public Works (DPW) plans to conduct culvert maintenance activities to improve and repair existing roadway culverts along Wurr Road, Pescadero Creek Road, and Cloverdale Road (Project) within unincorporated San Mateo County (**Figures 1 and 2**). To support the Project, an aquatic resources delineation was conducted for an approximate 2.1-acre study area, which included twelve (12) individual culvert sites located along the three road segments. This delineation was conducted in accordance with:

- Corps of Engineers Wetland Delineation Manual (1987);
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (2010); and
- A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (2014).

The study area contained 0. 181acre (1,202 linear feet [LF]) of potential non-wetland waters of the U.S. These features typically lacked hydrophytic vegetation and/or hydric soils.

No potentially jurisdictional wetlands were mapped in the study area.

An additional 0.312acre (802 LF) of waters of the state, not considered waters of the U.S., were delineated within the study area. These waters of the state were directly adjacent to waters of the state but above the ordinary high water mark (OHWM).

A total of 0.009 acre (248 LF) of non-jurisdictional roadside ditches were mapped in the study area.

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ACRONYMS AND ABBREVIATIONS

County	County of San Mateo
CWA	Clean Water Act
DD	decimal degrees
DPW	Department of Public Works
GPS	Global Positioning System
Montrose	Montrose Environmental
HUC	Hydrologic Unit Code
LF	linear feet
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
Project	Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
°F	degrees Fahrenheit

1.0 INTRODUCTION

The County of San Mateo (County) Department of Public Works (DPW) plans to conduct culvert maintenance activities to improve and repair existing road pass-through culverts along Wurr Road, Pescadero Creek Road, and Cloverdale Road (Project) within unincorporated San Mateo County (**Figure 1**).

The Project involves culvert repair and site improvements to improve water quality and maintain proper roadway drainage conveyance along at twelve (12) locations Wurr Road, Pescadero Creek Road, and Cloverdale Road in unincorporated San Mateo County near the communities of Pescadero and Loma Mar in unincorporated San Mateo County, California .The Project includes installation of three (3) new culverts, replacement of two (2) culverts, upsizing five (5) culverts, the addition of trash/debris racks at one (1) location, and additional improvements such as new headwalls and rock inlet protection and outfall energy dissipation. Additionally, the Project will remove sediment and enhance habitat at one (1) location along Cloverdale Road. The anticipated work at Cloverdale Road will include removing accumulated sediment and obstructive vegetation, demolishing existing concrete structures that impede fish passage near the double box culvert, and restoring streambed habitat both upstream and downstream of the crossing. The sites were identified as priority locations in the Pescadero-Butano Watershed County Road Inventory and Sediment Assessment (Waterways 2022) and will help to reduce erosion and sediment delivery throughout the Pescadero-Butano Creek watershed in accordance with objectives of the Total Maximum Daily Load (TMDL) for Sediment and Habitat Enhancement Plan for Pescadero-Butano Watershed (California Regional Water Quality Control Board 2018).

This report presents the methods and results of an aquatic resources (wetland) delineation conducted for the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project. The wetland delineation was conducted to identify and describe aquatic resources at these sites, referred to herein as the 'study area.' The study area was confined to encompass the area needed to conduct the specific maintenance activity at each culvert site. For example, the study area at a culvert repair site would typically include the full length of the culvert plus up to 8 linear feet (LF) beyond the culvert inlet and outlet. Some culvert study areas encompass a larger study area to capture nearby aquatic features that could potentially be impacted by Project construction, including potential access and staging areas. The study area has a combined area of approximately 0.9 acre.

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2.0 LOCATION & SETTING

The Project is located in unincorporated San Mateo County near the communities of La Honda, Loma Mar and the Town of Pescadero, California (Figure 1). Waterways within the study area include stormwater drainage ditches and unnamed ephemeral and intermittent drainages along Wurr Road and Pescadero Creek Road, and perennial streams such as Bloomquist Creek (Site 263), Peterson Creek (Site 268), and Little Butano Creek (Site 190) (**Figure 2**). The coordinates and directions to each site are shown in Table 1 below.

Site photographs are provided in **Appendix A**.

Table 1. Site Location & Driving Directions

Wurr Road		
Downstream Waterbody	Bloomquist Creek, Peterson Creek, Pescadero Creek	
Watershed HUC and Name	180500060103, Lower Pescadero Creek	
Section, Township, Range	S3 T8S R4W	
USGS Quadrangle(s)	La Honda	
Directions	From San Francisco, merge onto US-101 South. Take exit 423B for I-380 West toward I-280 San Bruno. Take exit 5B on the left to merge onto I-280 South toward San Jose. Take exit 25 onto CA-84 towards Woodside Road and at the stop sign, turn right on Woodside Road. Continue on CA-84/La Honda Road for 13.3 miles. Turn left onto Pescadero Creek Road and continue for 1.1 mile then make a slight right to stay onto Pescadero Creek Road for 4.1 miles. Turn left onto Wurr Road, destination(s) will be along Wurr Road.	
Access Restrictions	The sites are accessible from Wurr Road.	
Site(s)	Site 263 (Figure 5, sheet 6)	37.271687, -122.299245
	Site 265 (Figure 5, sheet 7)	37.271786, -122.297325
	Site 265.1 (Figure 5, sheet 8)	37.271693, -122.296134
	Site 266 (Figure 5, sheet 9)	37.271805, -122.295186
	Site 268 (Figure 5, sheet 10)	37.271868, -122.292955
	Site 270 (Figure 5, sheet 11)	37.272476, -122.287520
	Site 270.1 (Figure 5, sheet 12)	37.272132, -122.288990
Pescadero Creek Road		
Downstream Waterbody	McCormick Creek, Pescadero Creek	
Watershed HUC and Name	180500060103, Lower Pescadero Creek	
Section, Township, Range	S27 T7S R4W	
USGS Quadrangle(s)	La Honda	
Directions	From San Francisco, merge onto US-101 South. Take exit 423B for I-380 West toward I-280 San Bruno. Take exit 5B on the left to merge onto I-280 South toward San Jose. Take exit 25 onto CA-84 towards Woodside Road and at the stop sign, turn right on Woodside Road. Continue on CA-84/La Honda Road for 13.3 miles. Turn left onto Pescadero Creek Road and continue for 1.1 mile then make a slight right to stay onto Pescadero Creek Road for 1.9 miles. Destination(s) will be along Pescadero Creek road within a stretch of 2.7 mile.	
Access Restrictions	The sites are accessible from Pescadero Creek Road.	
Site(s)	Site 94 (Figure 5, sheet 1)	37.278302, -122.294876
	Site 102 (Figure 5, sheet 2)	37.282198, -122.284452
	Site 119 (Figure 5, sheet 3)	37.292778, -122.27865
	Site 128.1 (Figure 5, sheet 4)	37.296779, -122.276936

Cloverdale Road		
Downstream Waterbody	Butano Creek, Pescadero Creek	
Watershed HUC and Name	180500060102, Butano Creek	
Section, Township, Range	S00 T8S R5W	
USGS Quadrangle(s)	Franklin Point	
Directions	From San Francisco, CA, take U.S. 101 south for 2 miles, then merge onto I-280 south. Continue on CA-1 S/Cabrillo Highway south for 34 miles. Turn left onto Pescadero Creek Road and continue for 2.5 miles and then make a slight right and continue on Cloverdale Road. Site 190 is immediately south of the intersection of with Butano Park Road where Little Butano Creek passes under the roadway.	
Access Restrictions	The site can be viewed from Cloverdale Road. Access to the creek channel crosses private parcels and is prohibited without prior authorization from the County and local land owners.	
Site(s)	Site 190 (Figure 5, sheet 5)	37.199867, -122.344175

2.1 TOPOGRAPHY AND HYDROLOGY

The study area is located within the Pescadero-Butano watershed. The watershed has two principal streams, Pescadero Creek and Butano Creek, which have their confluence in Pescadero Marsh. The watershed drains approximately 81 square miles within the Santa Cruz Mountains and the coastal valleys into the Pacific Ocean near the Town of Pescadero. The headwaters of Pescadero and Butano creeks originate within the Santa Cruz Mountains before transitioning to a more gradually sloped alluvial valley and relatively flat coastal terrace at the confluence in Pescadero Marsh Natural Preserve and eventually flowing into the Pacific Ocean. The Project area ranges from approximately 1,000 feet (Sites 128.1 on Pescadero Creek Road) to 210 feet (Site 190 at Cloverdale Road) in elevation.

Culvert sites are located along perennial and intermittent streams, including Little Butano Creek, Peterson Creek, Bloomquist Creek, and unnamed intermittent and ephemeral drainages to Pescadero Creek. Bloomquist and Peterson Creeks are tributaries of Pescadero Creek, flowing south to north and draining to Pescadero Creek in Memorial County Park. Existing stormwater infrastructure within the Project area includes roadside ditches and culverts that convey stormwater to ephemeral channels and/or tributary creeks to Pescadero Creek. The Project sites are located in a rural and sparsely inhabited area that is not served by a municipal storm sewer system.

The study area also includes Little Butano Creek at Cloverdale Road (Site 190), a main tributary to Butano Creek. Little Butano Creek originates in Butano State Park and passes through the Project area at Cloverdale Road, flowing north parallel to the west side of Cloverdale Road before discharging to Butano Creek near Eden W Road approximately 1.5 miles north of the Project area.

2.2 LAND USE

The study area is located in Santa Cruz Mountains near the communities of Loma Mar and Pescadero in unincorporated San Mateo County. The upper watershed area is undeveloped, forested, natural watershed lands. The study area generally consist of parklands and open space areas, rural residential communities, and rural County roadways. Several sites are adjacent to Memorial County Park and one is adjacent to Butano State Park.

2.3 CLIMATE

The study area exhibits a Mediterranean climate with mild, wet winters and warm, dry summers. Regional climatic conditions are moderated by a cooler, moist marine layer from the Pacific Ocean with precipitation patterns influenced by the orographic effects of the relatively steep Santa Cruz Mountains. Average annual precipitation in the study area may range from 22-29 inches of precipitation along the Pacific Coast, and 42-50 inches in the upper watershed areas, with the majority of precipitation occurring from November through April (Western Regional Climate Center 2025). Temperatures are strongly influenced by the Pacific Ocean to the west, and the Santa Cruz Mountains, which results in a variety of microclimates. The Coast side region has a stronger maritime influence on its climate, characterized by cool, foggy summers and moist winters (NRCS 2025a).

2.4 SOILS

Eleven (11) soil types are present within the study area (NRCS 2025a). These soil mapping units are listed in **Table 2**; **Figure 3** shows the soils mapped in the study area. Due to the dispersed nature of the study area, only soils within 50 feet of the individual project sites were included in the table below. The individual site in the vicinity of each soil type is listed as well in Table 2. Two soil types mapped within the study area were included on the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) list of Hydric Soils, these soils were: (1) Mixed alluvial land, and (2) Lockwood loam, nearly level, imperfectly drained (NRCS 2025b).

Table 2. NRCS Soil Types Mapped in the Study Area

Map Unit Symbol	Map Unit Name	Map Unit Details	Hydric Soil	Site
LIE2	Lobitos loam	steep, eroded	No	128.1
LID2	Lobitos loam	moderately steep, eroded	No	128
HuF	Hugo and Josephine loams	very steep	No	119, 94
HuD2	Hugo and Josephine loams	moderately steep, eroded	No	102
HuD	Hugo and Josephine loams	moderately steep	No	94
HvC	Hugo and Josephine loams	very deep, sloping	No	94
HzD	Hugo and Josephine sandy loams	very deep, moderately steep	No	263, 265, 265.1, 266, 268, 270, 270.1
HyF	Hugo and Josephine sandy loams	very steep	No	266
Ma	Mixed alluvial land	--	Yes	190
LmB	Lockwood loam	gently sloping	No	190

Table 2. NRCS Soil Types Mapped in the Study Area

Map Unit Symbol	Map Unit Name	Map Unit Details	Hydric Soil	Site
LoA	Lockwood loam	nearly level, imperfectly drained	Yes	190

2.5 NATIONAL WETLANDS INVENTORY (NWI)

Waters mapped in the study area by the National Wetlands Inventory (NWI) are shown in **Figure 4** (USFWS 2025). Waters mapped within the study area by the NWI are classified by the U.S. Fish and Wildlife Service (USFWS) according to the Cowardin convention (Cowardin et *al.* 1979) as Riverine (R3UBH and R4SBC). According to NWI wetland maps (USFWS 2025), aquatic resources are not mapped within the study areas sites of 119, 128.1, 265, 265.1, 266, 270, and 270.1.

2.6 BIOLOGICAL CONDITIONS

This section describes landcover present within the study area. Vegetation in the study area was surveyed during the delineation field surveys and vegetation categories are provided below. Vegetation descriptions are based on the following resources: Holland's system of classification (Holland 1986), the California Manual of Vegetation (Sawyer et al. 2009), and CALVEG Zone 6 descriptions (U.S. Forest Service 2014). Botanical nomenclature follows the second edition of the Jepson Manual (Baldwin et al. 2012), except where synonyms are used from the National Wetland Plant List (USACE 2020). A list of plants observed in the study area is included in **Appendix B**.

2.6.1 Aquatic Habitats

Aquatic habitat includes areas that are permanently or persistently inundated. Aquatic habitats that occur in the study area are described below.

Riverine

Riverine habitat in the study area includes streams and intermittent drainages. Streams and drainages on steep slopes convey water in narrow channels at fast flow rates, typically have rocky bottoms, and can be episodic with higher flows responding to more intensive precipitation events. These channels are typically situated at higher elevations in the Santa Cruz Mountains. Streams and drainages on more gradual slopes tend to exhibit wider channels with slower moving water, have fine substrate bottoms, and generally convey longer to continuous, perennial flows. Perennial and intermittent streams may support a variety of aquatic species depending on hydrological conditions and habitat structure, including California, rough-skinned and hybridized newts (*Taricha* spp.), California giant salamander (*Dicamptodon ensatus*), California red-legged frog (*Rana draytonii*), Pacific chorus frog (*Pseudacris regilla*), and garter snake (*Thamnophis* spp.).

2.6.2 Terrestrial Habitats

Terrestrial habitats include upland areas, including riparian woodland, redwood forest, mixed conifer-hardwood forest, upland Chapparal, and grassland areas. Developed areas are also classified as terrestrial habitat. Terrestrial habitats in the study area are described below.

Riparian Woodland

Riparian woodland is a tree-dominated community, with typical species including white alder (*Alnus rhombifolia*), Pacific willow (*Salix lasiandra*), bigleaf maple (*Acer macrophyllum*), California bay laurel (*Umbellularia californic*a), Coast live oak (*Quercus agrifolia*), Oregon ash (*Fraxinus latifolia*), and American dogwood (*Cornus sericea*). The understory within the bank is variable in composition, including a shrub or vine layer that includes California blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), spreading gooseberry (*Ribes divaricatum*), western thimbleberry (*Rubus parviflorus*), red elderberry (*Sambucus racemosa var. racemosa*), and young willows. Other understory species present include native species such as great horse tail (*Equisetum telmateia*), California mugwort (*Artemisia douglasiana*), field horsetail (*Equisetum arvense*), California bee plant (*Scrophularia californica*), stinging nettle (*Urtica dioica*), and western dock (*Rumex occidentalis*). Non-native species present include poison hemlock (*Conium maculatum*), and grasses such as Harding grass (*Phalaris aquatica*), Italian ryegrass (*Festuca perennis*), slender oat (*Avena barbata*). In the study area, this habitat occurs at Little Butano Creek at Cloverdale Road (Site 190).

Redwood Forest

Redwood forest is a composite habitat name for a variety of conifer species that grow in the coastal influence zone. Redwood forest habitats are largely restricted to areas of coastal influence with relatively stable temperatures and summer coastal fog. The tree composition includes redwood (*Sequoia sempervirens*) as the dominant or co-dominant species with a mixture of other conifer species, including Douglas fir (*Pseudotsuga menziesii*), and mixed with coastal oak woodland. San Mateo County is located near the southern end of the distribution of the redwood community, and therefore the associates can also include California bay and Oregon ash. The understory contains species such as sword fern (*Polystichum californicum*), thimbleberry, wood sorrel (*Oxalis corniculata*), tanoak (*Notholithocarpus densiflorus*), and bee plant. In the study area, this habitat occurs at the Pescadero Creek Road (Site 94 and 102) and the Wurr Road areas (Sites 263 through 270.1).

Mixed Conifer-Hardwood Forest

This habitat type contains both hardwoods and conifers in a closed canopy forest setting. Characteristically, this habitat contains a mixture of small stands, either pure conifer stands or small pure broadleaf tree stands. Common trees are Douglas fir, tanoak, Pacific madrone (*Arbutus menziesii*), coast live oak, big leaf maple, and redwood. This habitat represents a transition between conifer forests and montane hardwood. It may also occur as a transition zone between other habitats, including chaparral and other open woodlands. Mixed conifer-hardwood forest occurs in the outer coast range in inland portions of the range, often at redwood forest margins. In the study area, this habitat occurs along many of the Wurr Road and Pescadero Creek Road sites.

Upland Chapparal

Upland chapparal communities are characterized by woody shrub-dominated landscapes, with few to no trees. Common dominant species associated with this land cover type within the study area include coyote brush and poison oak. Upland chapparal habitat is present along the

Pescadero Creek Road sites (119 and 128.1). Non-native grasses and herbaceous species are often prevalent in this community, such as ripgut brome (*Bromus diandrus*), rattlesnake brome (*Bromus briziformus*), hairy vetch (*Vicia villosa*), Italian thistle (*Carduus pychocephalus*), bristly oxtongue (*Helminthotheca echioides*), and Italian ryegrass.

Ruderal & Developed

Ruderal vegetation is characterized by non-native forbs and grasses in a disturbed habitat typically along the edges of developed/landscaped cover or areas with frequent disturbance. Dominant ruderal species include Harding grass, rattlesnake brome, Italian thistle, Italian ryegrass, ripgut brome, soft chess, foxtail barley (*Hordeum jubatum*), and other opportunistic weedy species. Ruderal cover in the study area was observed along Wurr Road, Pescadero Creek Road, and Cloverdale Road.

3.0 METHODS

A routine wetland delineation was conducted in accordance with:

- Corps of Engineers Wetland Delineation Manual (1987);
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (2010); and
- A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (2014).

In addition, the following information was reviewed prior to conducting the delineation:

- Natural Resources Conservation Service (NRCS) Soil Survey Data (NRCS 2024a);
- NRCS National Hydric Soils List (NRCS 2024b); and
- USFWS NWI data (USFWS 2024).

3.1 DATA COLLECTION

Field data collection for this delineation was conducted May 31, 2024, by Montrose Environmental (Montrose) certified wetland delineator, Brian Piontek, and biologists, Jessica Gonzalez and Alex Kellogg. An additional site visit to delineate additional downstream area of Little Butano Creek at Cloverdale Road (Site 190) was conducted on July 22, 2025 by Jessica Gonzalez and Susannah Kiteck.

The study area was investigated for evidence of wetland indicators such as hydrophytic vegetation, ponded water, or saturated soil conditions. Soil conditions were investigated in locations that could potentially support wetlands (e.g., streambanks, floodplains, drainage channels). Evidence of the OHWM (e.g., presence of bed/banks, scour lines, change in vegetative cover, changes in soil texture, presence of leaf litter and debris deposits) was used to determine the location of the OHWM along channels.

The locations of the OHWM were mapped using an Arrow 100 GPS receiver with sub-meter accuracy where possible (see Section 3.2., *Limitations of Survey* below). GPS data were imported into ESRI ArcGIS Pro software for developing aquatic resource maps. Georeferenced, high resolution aerial photographs, and topographical survey data were used in ArcGIS to interpret waters boundaries in conjunction with data collected in the field. Because the study area encompasses many small drainage features, the majority of waters of the U.S. were delineated to the top of bank instead of the OHWM. At these locations, the boundaries of waters of the U.S. were expanded to match waters of the state. This method is conservative, and slightly overestimates the area of waters of the U.S. In a few instances where there was a substantial difference between waters of the U.S. and waters of the state, jurisdictional boundaries were mapped separately.

3.2 LIMITATIONS OF SURVEY

The survey was limited by the lack of aerial imagery of streams and rivers in portions of the study area due to the dense canopy cover of forested areas. This dense canopy cover, along with steep terrain, also reduced the accuracy of the GPS by limiting the horizontal extent of view and

satellite connectivity. In such situations, potential jurisdictional waters were mapped based on GPS data points overlayed on CAD and topographical data, supplemented by field notes to correct GPS data errors or inaccuracies. Therefore, the exact positioning of some stream channels may vary slightly in the field as compared to delineation mapping.

3.3 REGULATORY DEFINITION OF JURISDICTIONAL WATERS AND HABITATS

3.3.1 Potential Waters of the U.S.

Waters of the U.S., including wetlands, are defined in 33 CFR Section 328.3 and under the regulatory authority of the USACE. In non-tidal waters USACE jurisdiction extends to the OHWM, defined in 33 CFR Section 328.3 as "the line on the shore established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris." When non-isolated wetlands are present, the jurisdiction extends beyond the OHWM to the boundary of those wetlands.

Wetlands are defined using a three-parameter approach (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology) based on USACE regulatory guidance and the Corps of Engineers Wetland Delineation Manual (1987) and corresponding regional supplements. Alternatively, a two-parameter approach to identifying wetlands may be appropriate in atypical situations where vegetation, soils, or hydrology indicators are absent due to recent human disturbances or natural events.

3.3.2 Other Features Likely Not Waters of the U.S.

As stated in 33 CFR 328.3, "Non-tidal drainage and irrigation ditches excavated on dry land" are generally not considered to be waters of the U.S. Additionally, the June 5, 2007, *CWA Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* memorandum to Environmental Protection Agency (EPA) regions and USACE districts states, "The agencies generally would not assert jurisdiction over the following features: (1) Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow), and (2) Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water" (USACE and EPA 2007). These features may include concrete lined and unlined channels, that generally begin or end in a culvert. In general, these features do not have an apparent nexus to traditionally navigable waters, and include engineered features, features that drained only uplands, and features without a defined bed and bank or hydrophytic vegetation.

California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act) was enacted in 1969, and together with the federal Clean Water Act, provides regulatory guidance to protect water quality and water resources. The Porter-Cologne Act established regulatory authority over "waters of the State," which are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (California Water Code, Division 7, Section 13050). More specifically, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over the bed and banks of a stream channel, its riparian corridor, and its beneficial uses.

4.0 AQUATIC RESOURCES

This section presents the results of the delineation of aquatic resources. Aquatic resources delineated in the study area are shown in **Table 3**. Table 3 provides a summary of the location, aquatic resource type, Cowardin classification, latitude and longitude, size (acres), and length (linear feet) of aboveground aquatic resources delineated in the study area.

Figure 5 provides the aquatic resources delineation maps. Datasheets are included in **Appendix C**. This information is also provided in **Appendix D** (ORM upload sheet).

Table 3. Aquatic Resources in the Study Area

Location (Site)	Latitude, Longitude	Aquatic Resources Classification			Aquatic Resource Size	
		Aquatic Resource Code	Type	Cowardin Code	Area (acre)	Length (LF)
Potential Non-Wetland Waters of the U.S.						
Site 94 (Figure 5, sheet 1)	37.278302, -122.294876	94 WOTUS	Water	R4SB3	0.024	196
Site 102 (Figure 5, sheet 2)	37.282198, -122.284452	102 WOTUS	Water	R4SB5	0.013	198
Site 119 (Figure 5, sheet 3)	37.292778, -122.27865	119 WOTUS	Water	R4SB5	0.011	36
Site 263, Bloomquist Creek (Figure 5, sheet 6)	37.271687, -122.299245	263 WOTUS	Water	R3UB2	0.020	125
Site 265 (Figure 5, sheet 7)	37.271786, -122.297325	265 WOTUS	Water	R4SB5	0.004	114
Site 266 (Figure 5, sheet 9)	37.271805, -122.295186	266 WOTUS	Water	R4SB5	0.002	70
Site 268, Peterson Creek (Figure 5, sheet 10)	37.271868, -122.292955	268 WOTUS	Water	R3UB3	0.003	34
Site 190, Little Butano Creek (Figure 5, sheet 5)	37.199867, -122.344175	190 WOTUS	Water	R3UB1	0.104	429
Total – Potential Non-Wetland Waters of the U.S.[1]					**0.181**	**1,202**

Location (Site)	Latitude, Longitude	Aquatic Resources Classification			Aquatic Resource Size	
		Aquatic Resource Code	Type	Cowardin Code	Area (acre)	Length (LF)
Additional Waters of the State (not considered Waters of the U.S.)						
Site 94 (Figure 5, sheet 1)	37.278302, -122.294876	94 WOTS	Water	R4SB3	0.043	211
Site 263, Bloomquist Creek (Figure 5, sheet 6)	37.271687, -122.299245	263 WOTS	Water	R3UB2	0.062	125
Site 268, Peterson Creek (Figure 5, sheet 10)	37.271868, -122.292955	268 WOTS	Water	R3UB3	0.004	37
Site 190, Little Butano Creek (Figure 5, sheet 5)	37.199867, -122.344175	190 WOTS	Water	R3UB1	0.203	429
Additional Waters of the State (not considered Waters of the U.S.)[1]					**0.312**	**802**
Total – Potential Non-Wetland Waters of the U.S.					**0.181**	**1,202**
Total – Waters of the State[2]					**0.493**	**1202**

[1] The sum of some numbers may not add up due to rounding.

[2] Additional waters of the state are parallel to waters of the U.S. Therefore, the total additional waters of the state include areas that extend beyond waters of the U.S.

4.1 POTENTIAL WATERS OF THE U.S.

Waters of the U.S. include non-wetland waters and wetlands. Wetlands exhibit three parameters (i.e., hydric soils, dominance of hydrophilic plants, and hydrology), while non-wetland waters lack at least one of these wetland parameters.

4.1.1 Potential Non-wetland Waters

A total of 0.181acre (1,202 LF) of non-wetland waters was delineated within the study area (see Figure 5). These include riverine perennial and intermittent features.

Riverine Perennial

Perennial streams maintain flowing water year-round during a typical year. A total of 0.127 acre (588 LF) riverine perennial non-wetland waters of the U.S. were delineated based on the presence of the following geomorphic indicators: break in bank slope, change in vegetation species, change in vegetation cover, and presence of drift and/or debris. Geomorphic indicators of riverine perennial features were found at:

- Site 190 Cloverdale at Little Butano Creek (190 WOTUS; Figure 5, sheet 5)
- Site 263 at Bloomquist Creek (263 WOTUS; Figure 5, sheet 6)
- Site 268 at Peterson Creek (268 WOTUS; Figure 5, sheet 10)

Riverine Intermittent

Intermittent streams lack unidirectional flowing water during certain periods of the year. A total of 0.054 acre (614 LF) of riverine intermittent non-wetland waters of the U.S. were delineated based on the presence of the following geomorphic indicators: break in bank slope, change in vegetation species, change in vegetation cover, and presence of drift and/or debris. Riverine intermittent features were found at:

- Site 94 at unnamed drainage (94 WOTUS; Figure 5, sheet 1)
- Site 102, unnamed drainage ditch (102 WOTUS; Figure 5, sheet 2)
- Site 119, unnamed drainage ditch (119 WOTS; Figure 5, sheet 3)
- Site 265, unnamed drainage ditch (265 WOTUS; Figure 5, sheet 7)
- Site 266, unnamed drainage ditch (266 WOTUS; Figure 5, sheet 9)

4.1.2 Potential Wetlands

No potential jurisdictional wetlands were mapped in the study area.

4.2 OTHER FEATURES NOT LIKELY WATERS OF THE U.S.

4.2.1 Non-jurisdictional Stormwater Features

Features classified as non-jurisdictional features were either small drainage features that did not meet the relatively permanent standard and/or were roadside ditches excavated wholly in and draining only uplands that conveyed surface waters for a short duration after precipitation events

(i.e., hours or days). These features can generally be described as roadside ditches or earthen swales connected by stormwater culverts. These features are generally less than or equal to 3 feet in width, depending on the size of the associated culvert and did not exhibit a hydrological surface connection to waters of the U.S. and/or navigable water.

A total of 0.009 acre (248 LF) of non-jurisdictional roadside ditches were mapped in the study area.

4.2.2 Waters of the State

Several features were not considered waters of the U.S. but would be considered waters of the state. As described in Section 3.1, in instances where there was a substantial difference between waters of the U.S. and waters of the state, additional areas of waters of the state were delineated above the OHWM. Mapped waters of the state were delineated to include the channels from top-of-bank to top-of-bank.

A total of 0.312 acre (802 LF) of additional waters of the state above the OHWM were mapped in the study area and are shown on Figure 5:

- Site 94 at unnamed drainage (94 WOTS; Figure 5, sheet 1)
- Site 190 Cloverdale at Little Butano Creek (190 WOTS; Figure 5, sheet 5)
- Site 263 at Bloomquist Creek (263 WOTS; Figure 5, sheet 6)
- Site 268 at Peterson Creek (268 WOTS; Figure 5, sheet 10)

The total waters of state (i.e., waters of the U.S. and waters of the state) mapped in the study area was 0.493 acre (1,202 LF).

5.0 SUMMARY

A delineation for aquatic resources was conducted to support the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project in San Mateo County. The study area includes twelve (12) individual culvert sites.

A total of 0.181 acre (1,202 LF) of potential non-wetland waters of the U.S. were delineated within the study area.

No potentially jurisdictional wetlands were mapped in the study area.

An additional 0.312acre (802 LF) of waters of the state, not considered waters of the U.S., were delineated within the study area.

A total of 0.009 acre (248 LF) of non-jurisdictional roadside ditches were mapped in the study area.

6.0 REFERENCES

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Figures

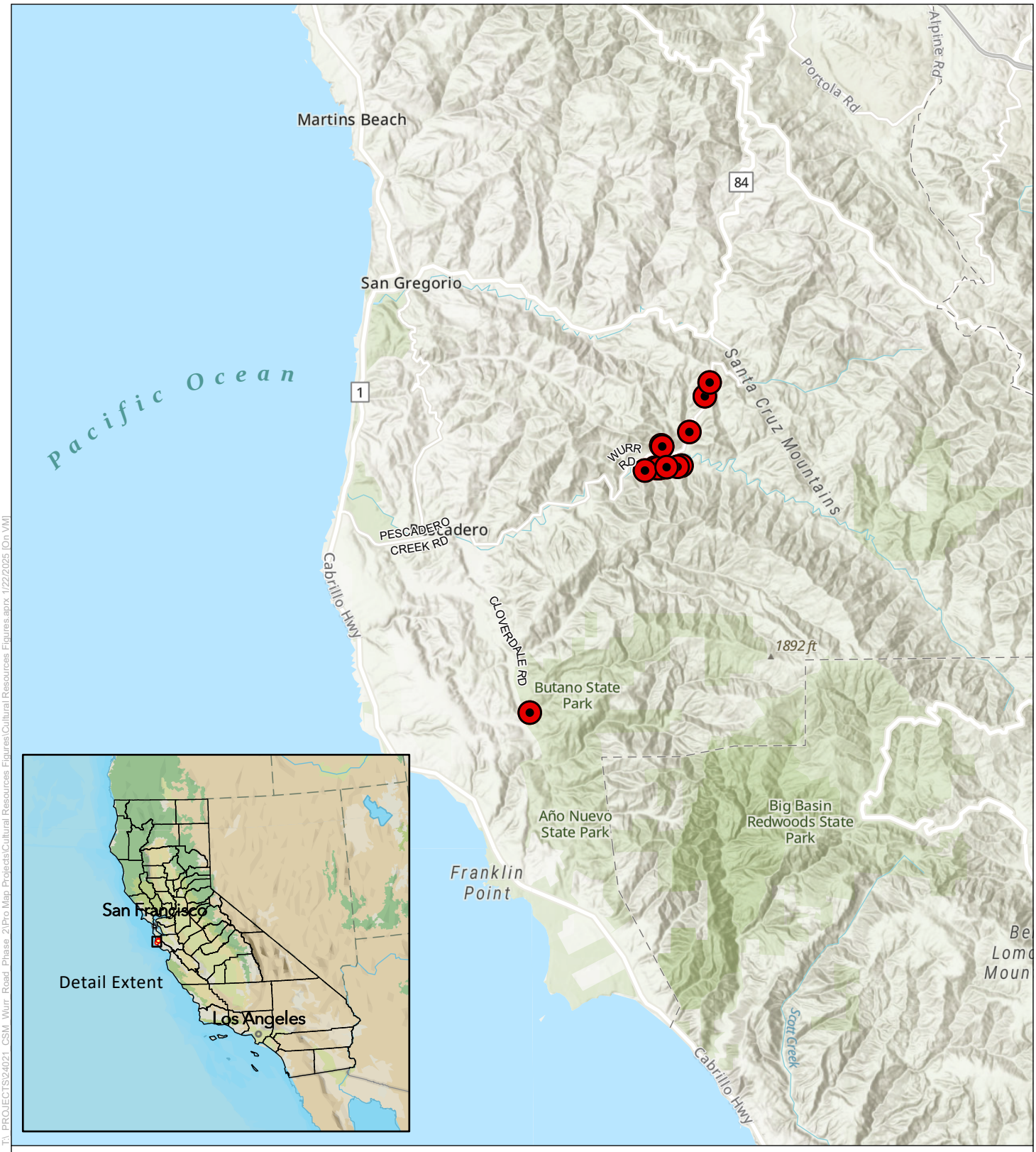


Figure 1
Project Vicinity

Project Locations

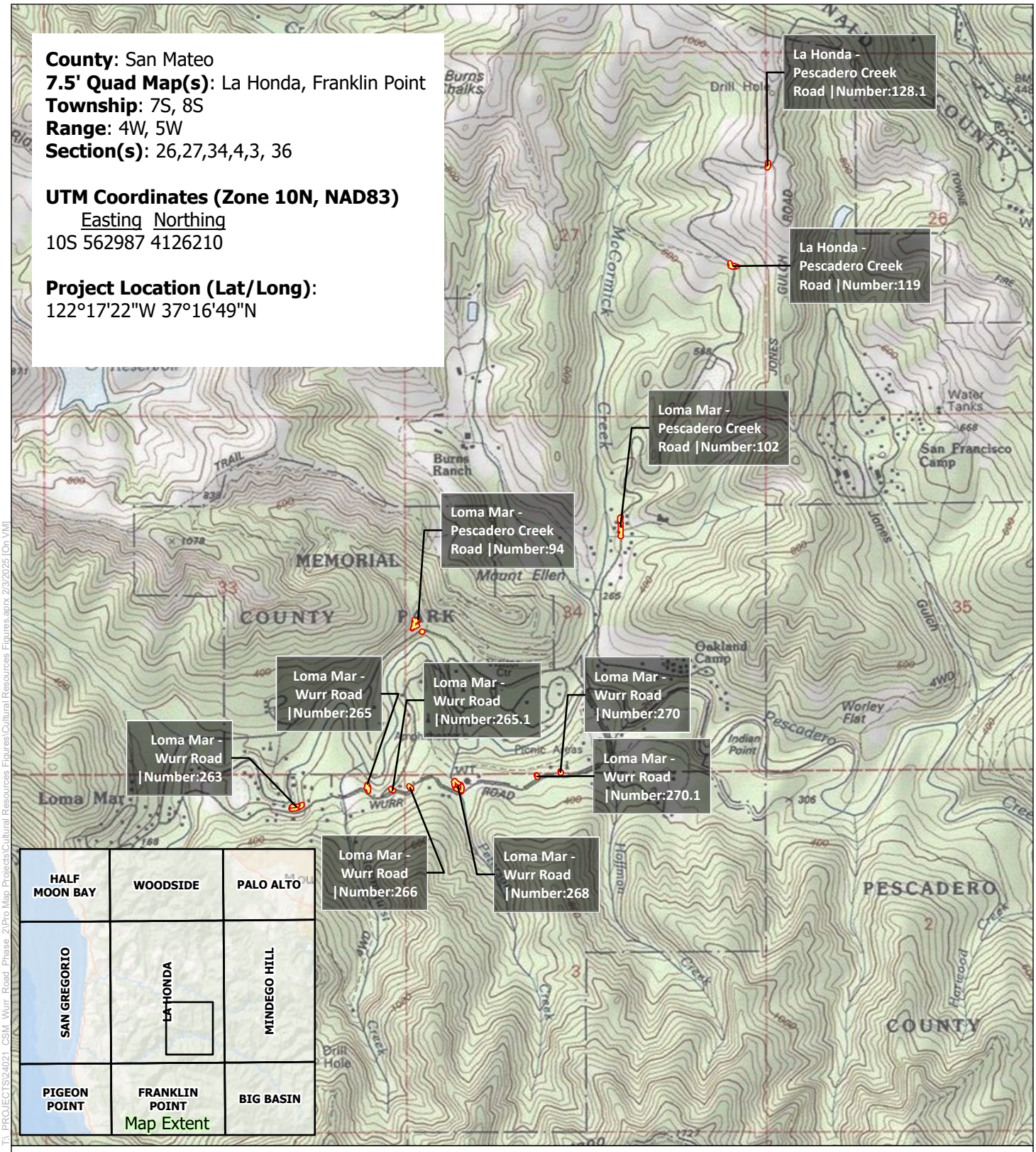
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MONTROSE ENVIRONMENTAL

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

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County: San Mateo
7.5' Quad Map(s): La Honda, Franklin Point
Township: 7S, 8S
Range: 4W, 5W
Section(s): 26,27,34,4,3, 36

UTM Coordinates (Zone 10N, NAD83)

	Easting	Northing
10S	562987	4126210

Project Location (Lat/Long):
122°17'22"W 37°16'49"N

Figure 2
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

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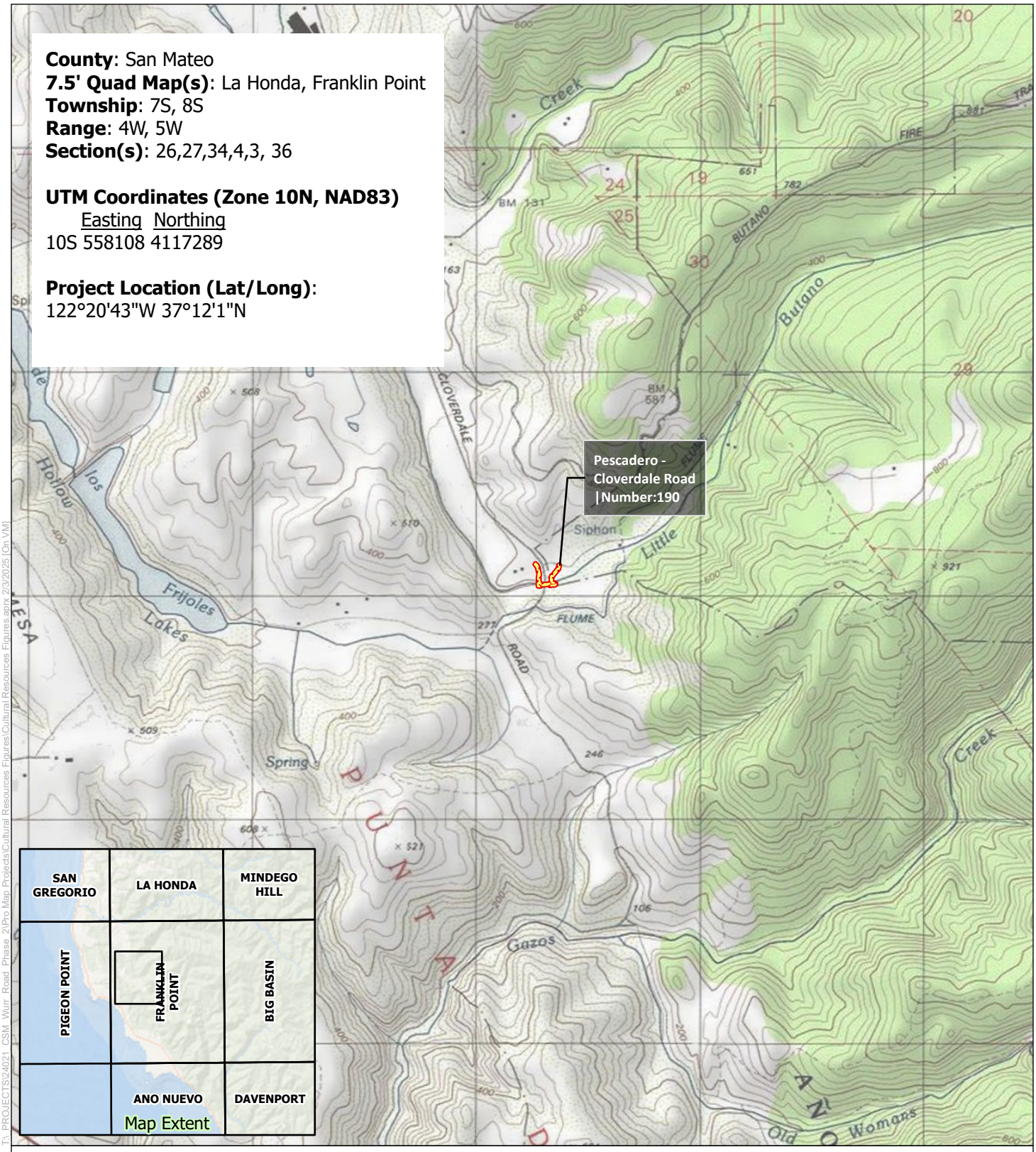
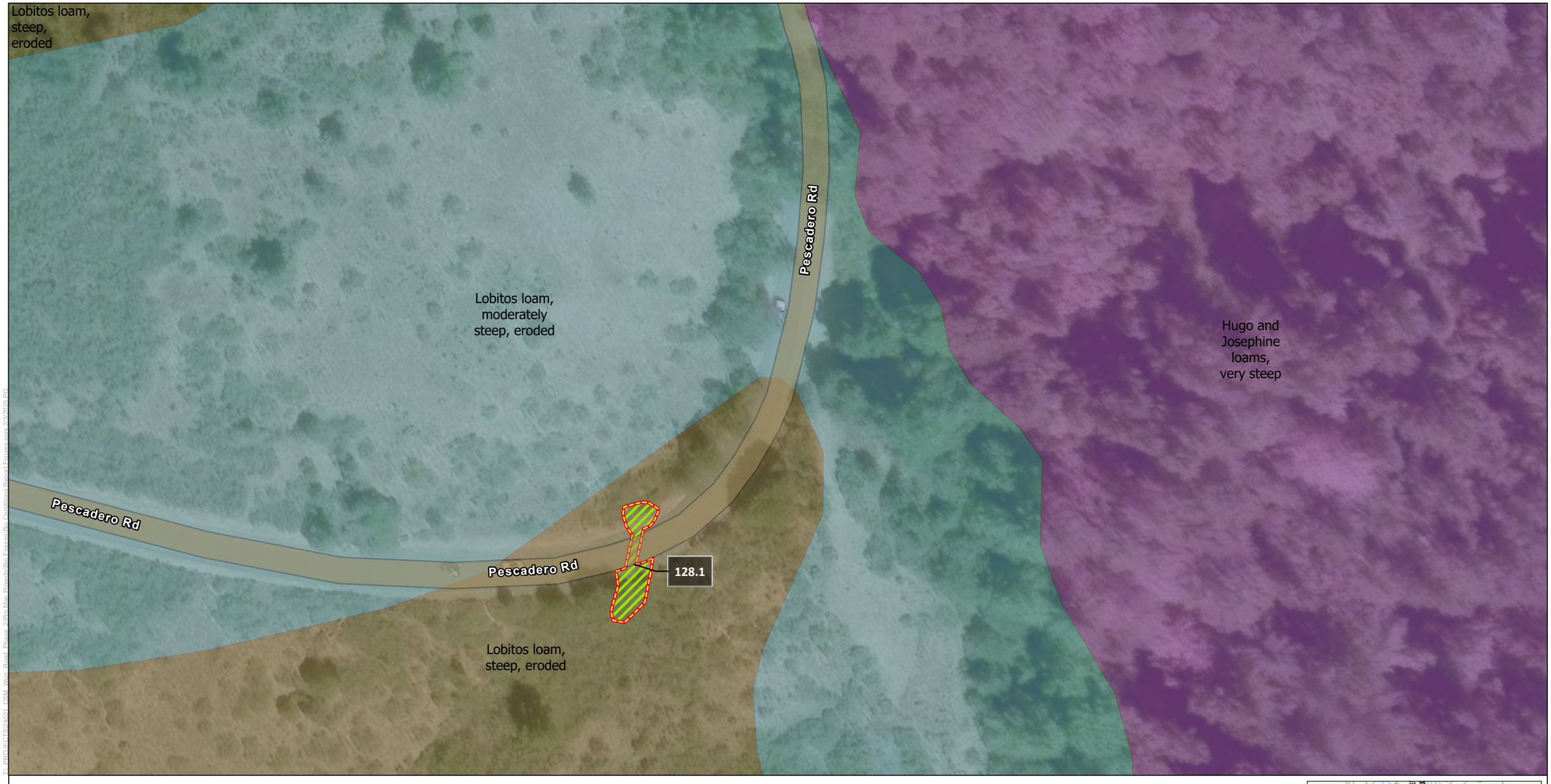


Figure 2
Project Location

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL



Project Location

Soil Units

- Hugo and Josephine loams, very steep
- Lobitos loam, moderately steep, eroded
- Lobitos loam, steep, eroded

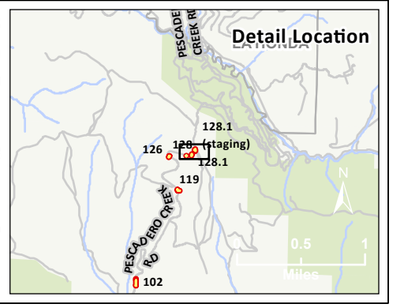
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0 50 100 Feet

MONTROSE ENVIRONMENTAL

Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area



Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

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Gazos and Lobitos soils, steep and very steep, severely eroded

Pomponio loam, moderately steep, eroded

Hugo and Josephine loams, very steep

Lobitos loam, moderately steep, eroded

Pescadero Rd

119

Project Location

N

0 50 100 Feet

Soil Units

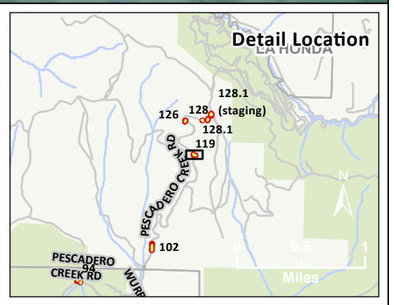
- Gazos and Lobitos soils, steep and very steep, severely eroded
- Hugo and Josephine loams, very steep
- Lobitos loam, moderately steep, eroded
- Pomponio loam, moderately steep, eroded

MONTROSE ENVIRONMENTAL

Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



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Project Location

Soil Units

- Botella loam, sloping, eroded
- Hugo and Josephine loams, moderately steep, eroded
- Hugo and Josephine loams, very steep
- Mixed alluvial land

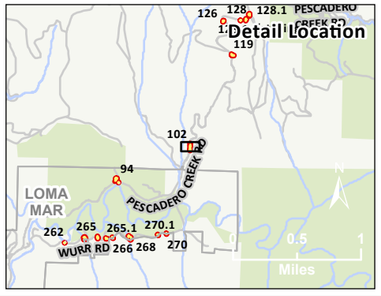
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0 50 100 Feet

MONTROSE ENVIRONMENTAL

Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

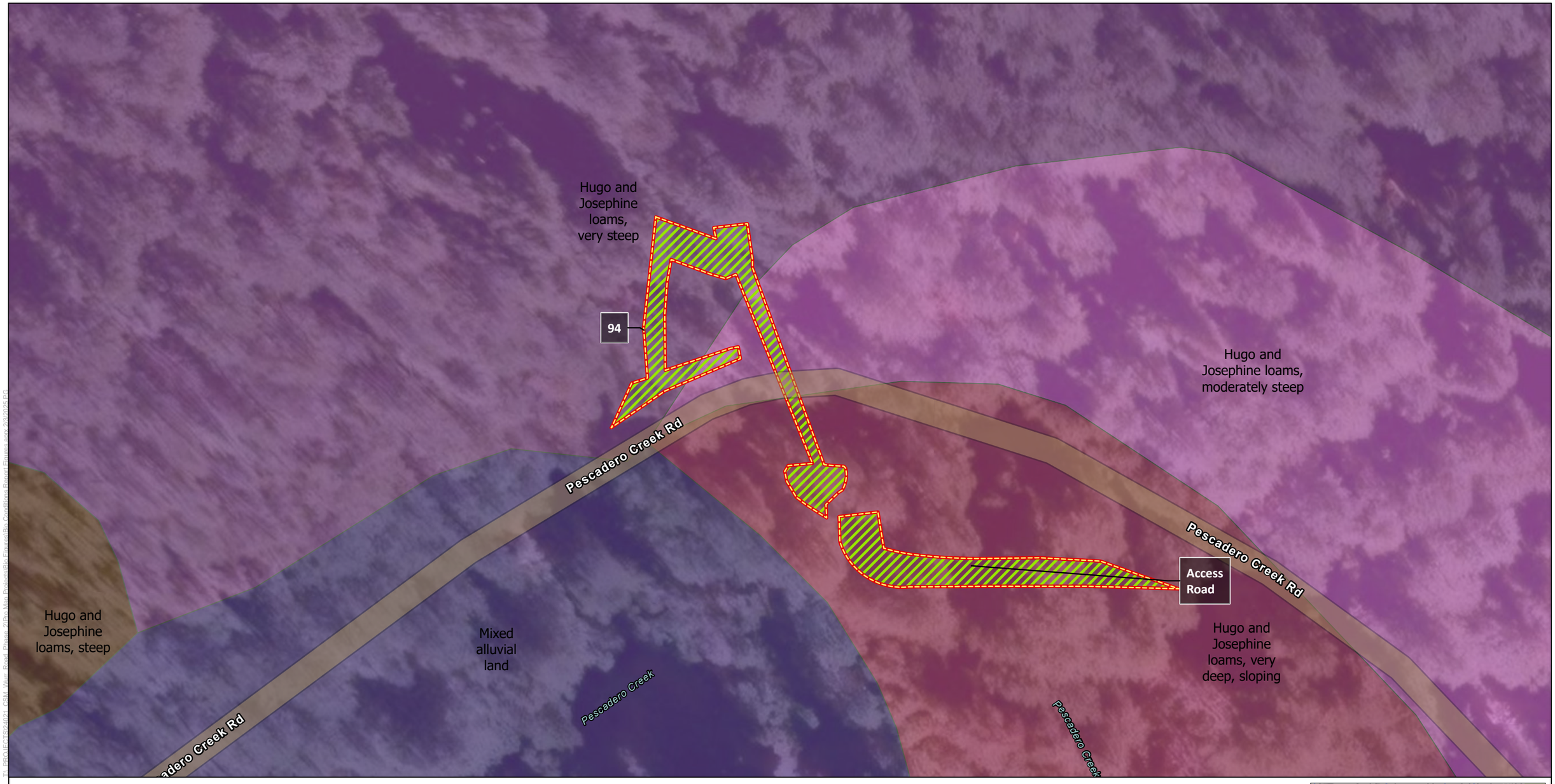
Figure 3
NRCS Soils within the Study Area



Page 3 of 8
Site 102

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

T:\PROJECTS\2021_GSN_Wurr_Road_Phase_2\Pre_Map_Projects\Bio_Figures\Bio_Conditions_Report_Figures.aprx 2/2/2025 RS



MONTROSE ENVIRONMENTAL

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

T:\PROJECTS\2024_GSN_Wurr_Road_Phase_2\Pre_Map_Projects\Bio_Figures\Bio_Conditions_Report_Figures.aprx 2/3/2025 RS



Project Location

Soil Units

- Hugo and Josephine sandy loams, very deep, moderately steep
- Hugo and Josephine sandy loams, very steep

N

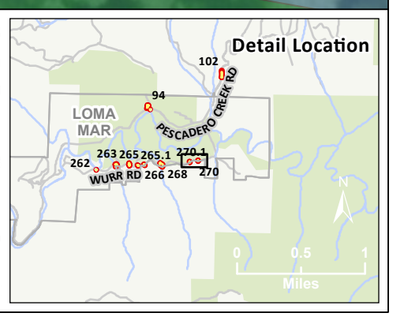
0 50 100 Feet

MONTROSE ENVIRONMENTAL

Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\2021_CSM_Wurr_Road_Phase_2\Dv\Maps_PDs\Maps_Projects\Fig_Figures\Fig_Conditions Report Figures.aprx 2/2/2025 PS

Mixed alluvial land

Sequoia

Hugo and Josephine sandy loams, very deep, moderately steep

Wurr Rd

Peterson Creek

265

265.1

Wurr Rd

266

268

Wurr Rd

Hugo and Josephine sandy loams, very steep

Peterson

Project Location

Soil Units

Hugo and Josephine sandy loams, very deep, moderately steep

Hugo and Josephine sandy loams, very steep

Mixed alluvial land

N

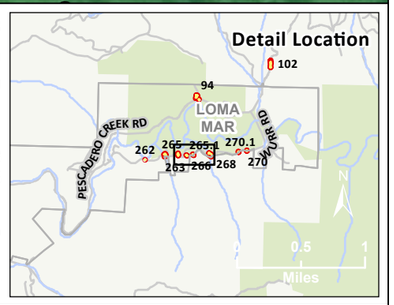
0 50 100 Feet

MONTROSE ENVIRONMENTAL

Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\2021_GSM_Wurr_Road_Phase_2\Pro Map Projects\Bio Figures\Bio Conditions Report Figures.aprx 2/2/2022 RG



Project Location

Soil Units

- Hugo and Josephine sandy loams, very deep, moderately steep
- Hugo and Josephine sandy loams, very deep, sloping
- Hugo and Josephine sandy loams, very steep
- Mixed alluvial land

N

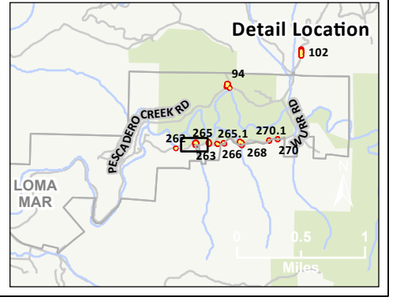
0 50 100 Feet

MONTROSE ENVIRONMENTAL

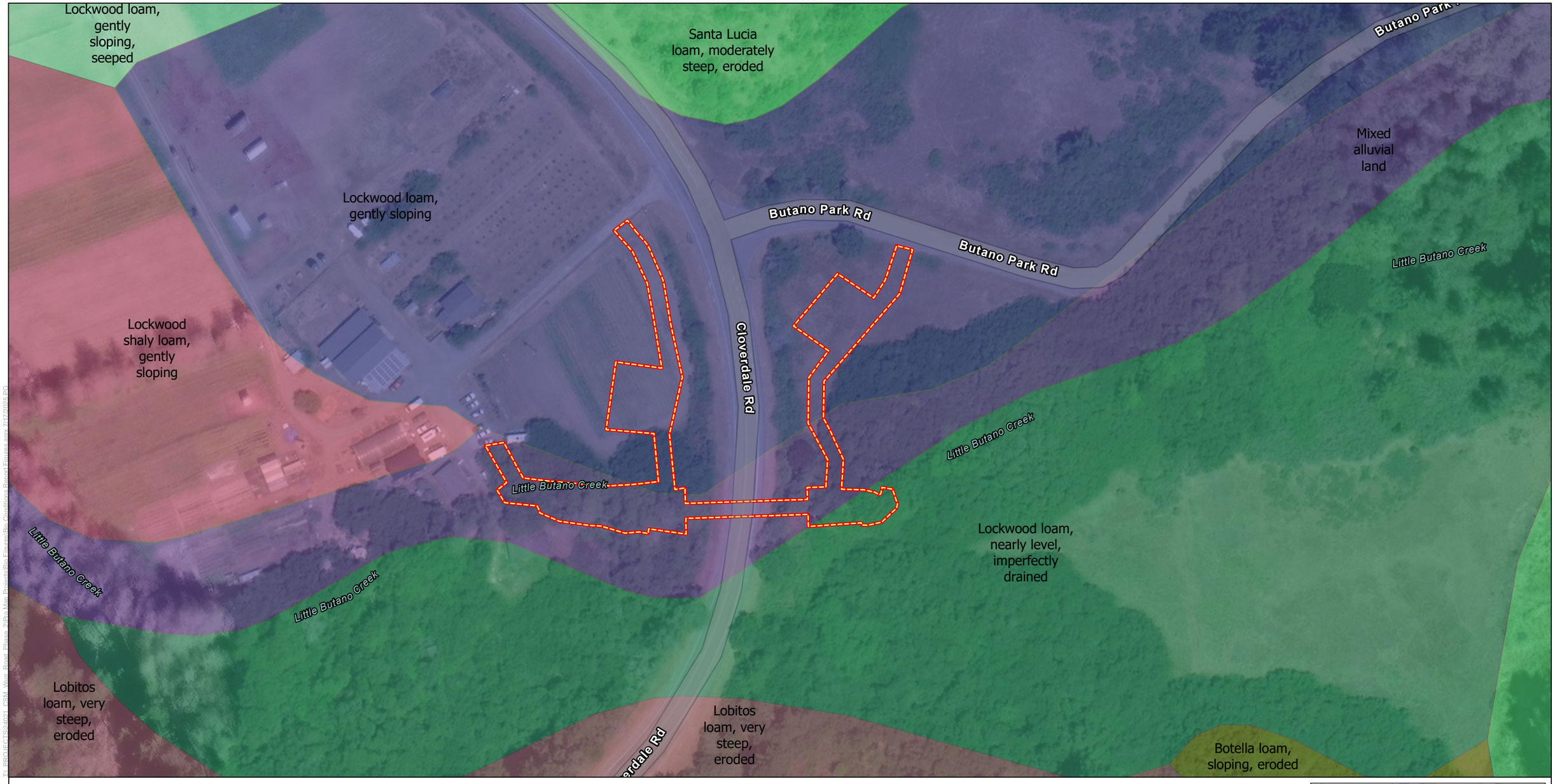
Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\3401_GIS\Wurr Road Phase 2\Rpt Map Prints\RptFigures\Rpt Figures.aprx 2/2/2025 RG



Project Limits

Soil Units

- Botella loam, sloping, eroded
- Lobitos loam, very steep, eroded
- Lockwood loam, gently sloping
- Lockwood loam, gently sloping, seeped
- Lockwood loam, nearly level, imperfectly drained
- Lockwood shaly loam, gently sloping
- Mixed alluvial land
- Santa Lucia loam, moderately steep, eroded

N

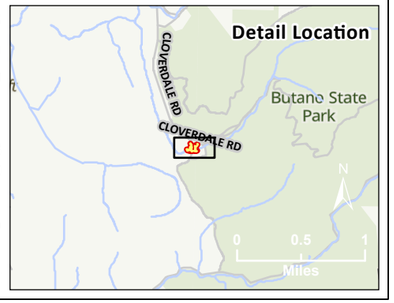
0 50 100 Feet

MONTROSE ENVIRONMENTAL

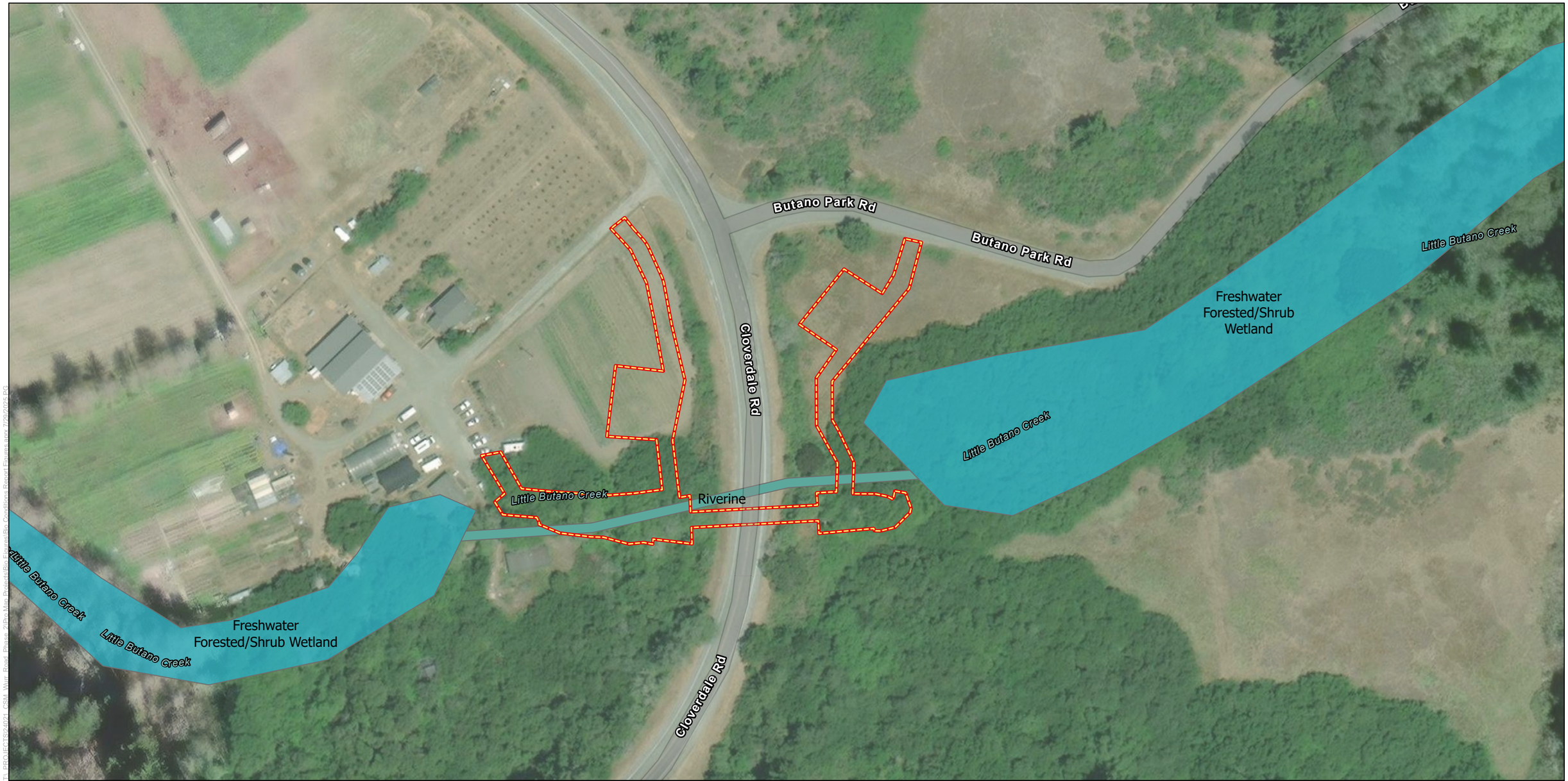
Data Source: Soil Survey Geographic Database (SSURGO), 2021. https://arcg.is/1Oy8um0

Figure 3
NRCS Soils within the Study Area

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



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N

0 50 100 Feet

Project Limits

National Wetland Inventory

- Freshwater Forested/Shrub Wetland
- Riverine

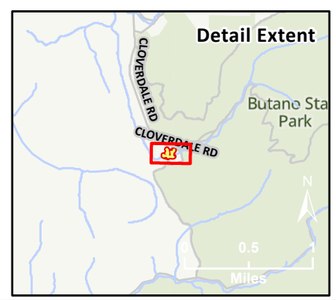
MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

Figure 2
National Wetland Inventory

Location Site 190

Wurr Road, Pescadero
Creek Road, and Cloverdale Road
Culvert Repairs Project



T:\PROJECTS\2024_CSM_Wurr Road_Phase 2\Pre Map Projects\Pre Figures\Pre Conditions Report Figures.aprx 7/29/2025 DC



N

0 50 100 Feet

Project Location

National Wetland Inventory

Riverine

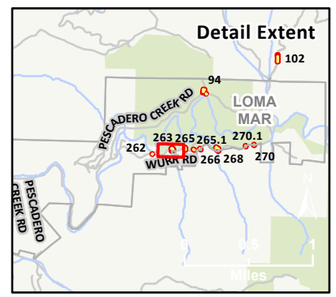
MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

Figure 2
National Wetland Inventory

Location Site 263

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\2024_GSM_Wurr_Road_Phase_2\Pre-Mgt_Projects\Bio_Figures\Bio_Conditions_Report_Figures.aprx 2/2/2025 DG



N

0 50 100 Feet

Project Location

National Wetland Inventory

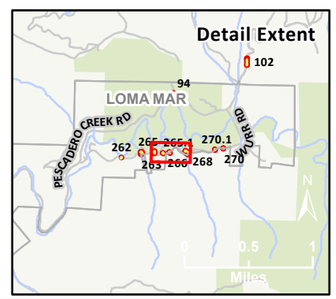
Riverine

Figure 2

National Wetland Inventory

Page 3 of 8

Location Sites 268, 266, 265.1, and 265



Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

T:\PROJECTS\4901_SSM_Wurr_Road_Phase_2\Rpt\Map Projects\Bio Figures\Bio Conditions Report Figures.aprx 2/2/2026 DG



Project Location

N

0 50 100 Feet

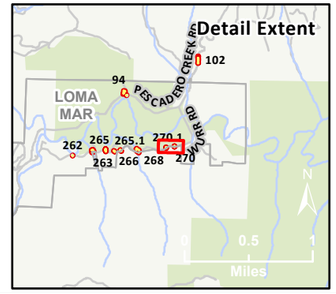
MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

Figure 2
National Wetland Inventory

Location Sites 270 and 270.1

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\2021_GSA_Wurr_Road_Phase_2\Pre-Map_Projects\Bio_Figures\Bio_Conditions_Report_Figures.aprx 2/2/2022 RS



Project Location

National Wetland Inventory

Riverine

N

0 50 100 Feet

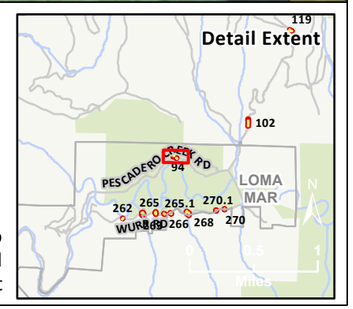
MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

Figure 2
National Wetland Inventory

Location Site 94

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



T:\PROJECTS\2021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Bio Figures\Bio Conditions Report Figures.aprx 2/2/2026 RS



N

0 50 100 Feet

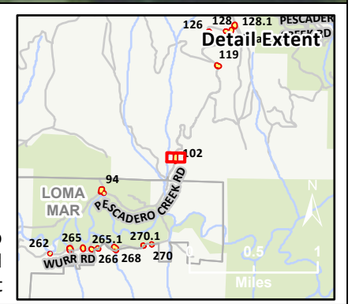
Project Location

National Wetland Inventory

Riverine

Figure 2
National Wetland Inventory

Location Site 102



Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project

MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

T:\PROJECTS\6004_GSM_Wurr Road_Plans_2Dp\Mxd_Projects\Bio Figures\Bio Conditions Report Figures.mxd 2/2/2026 RG



Project Location

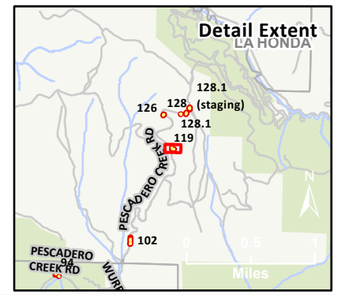
N

0 50 100 Feet

Figure 2
National Wetland Inventory

Location Site 119

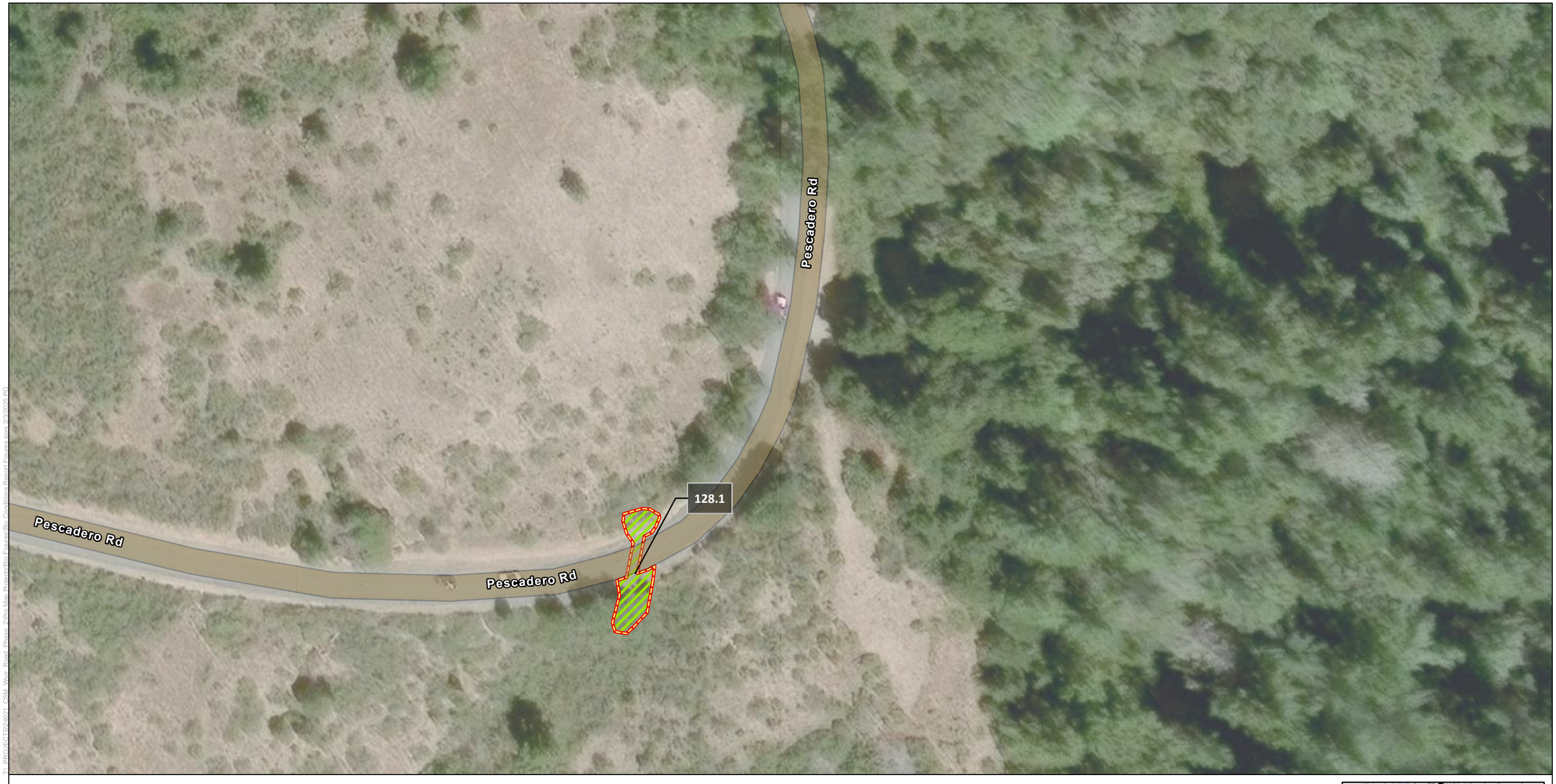
Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

T:_PROJECTS\24021_GSM_Wurr_Road_Phase_2\Pro Map Projects\Pro Figures\Pro Conditions Report Figures.aprx 2/3/2025 PG



Project Location

N

0 50 100 Feet

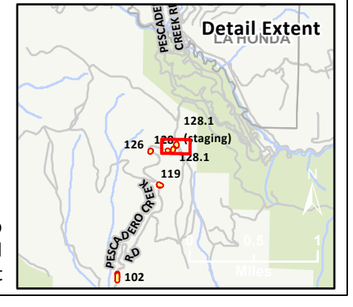
MONTROSE ENVIRONMENTAL

Data Source: National Wetland Inventory, https://fwspublicservices.wim.usgs.gov/wetlandsmapservice/services
Note: If no NWI data shown, no mapped wetlands occur in this location.

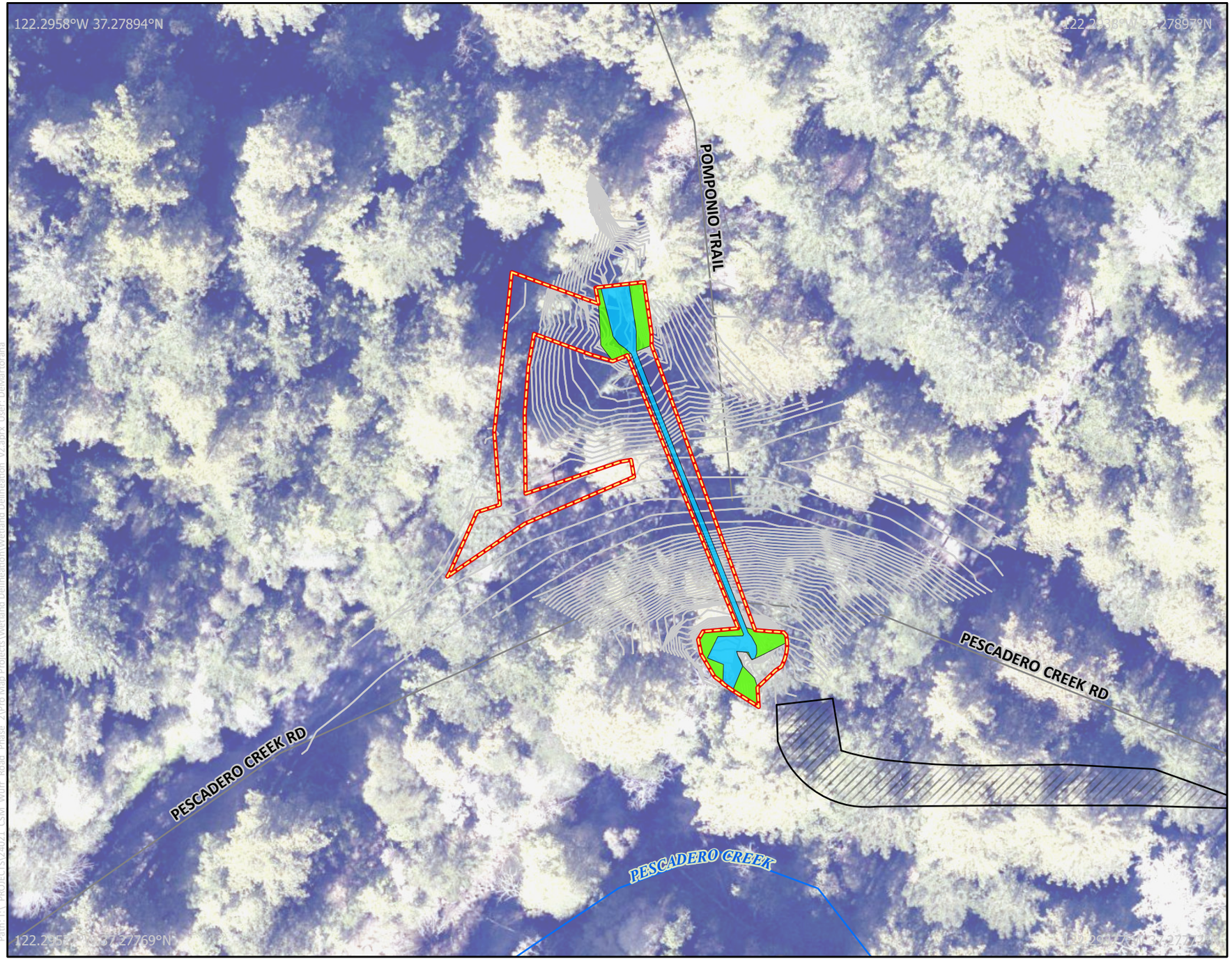
Figure 2
National Wetland Inventory

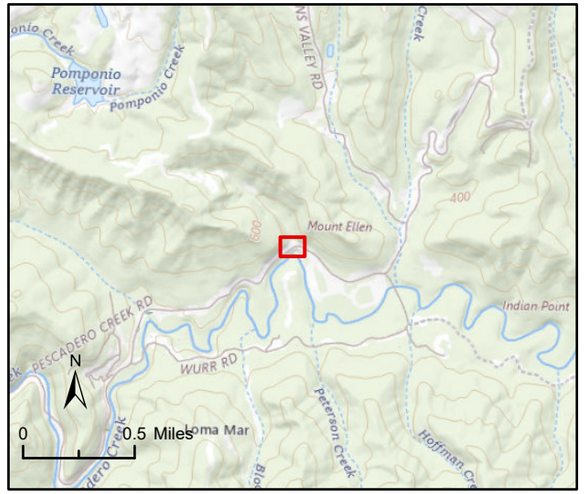
Location Site 128.1

Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project



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- Access Road
- Project Limits
- WOTS
- WOTUS
- Contours
- Streams
- Roads

0 30 60
Feet

N

1:700
1 inch equals 58 feet

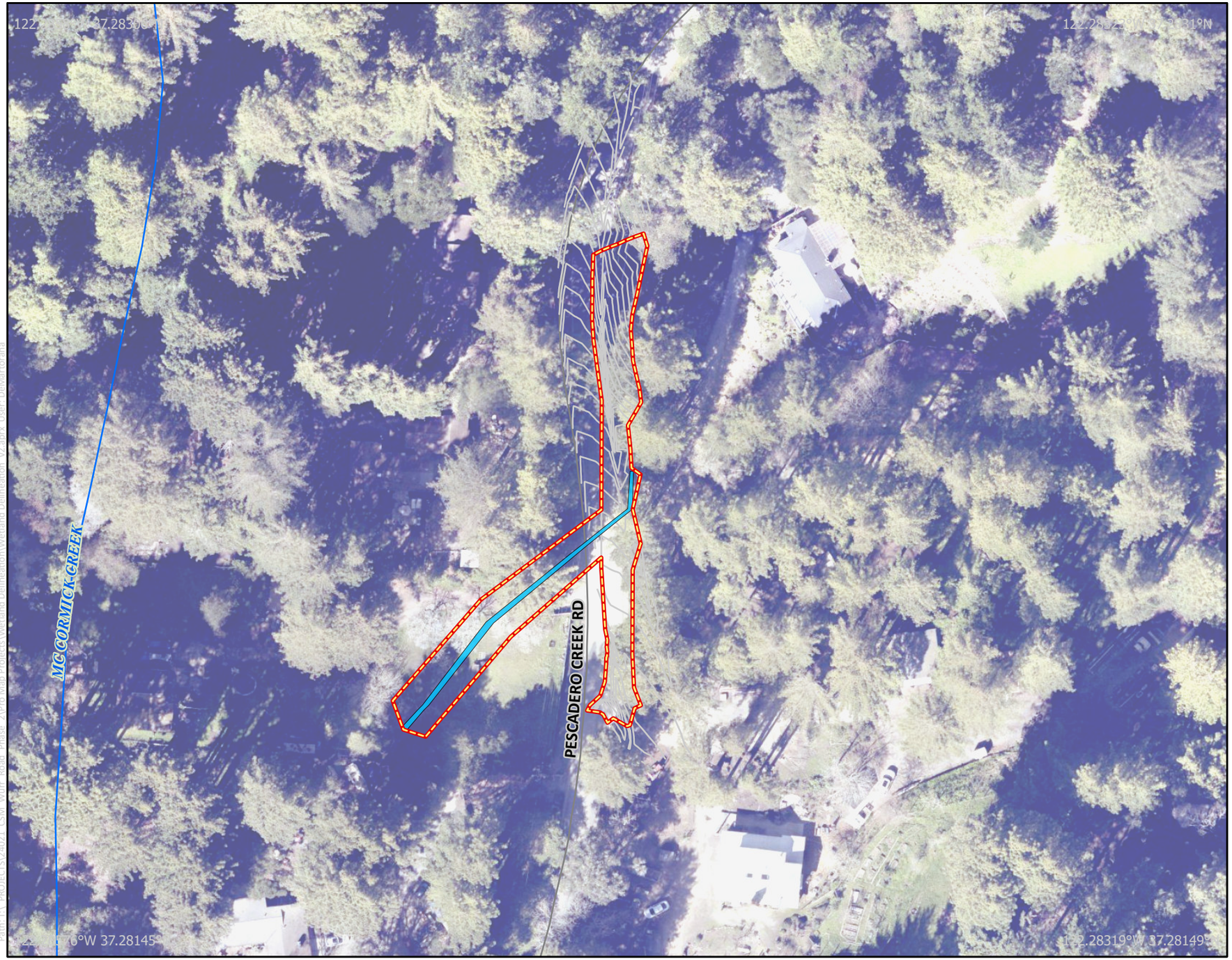
PREPARED BY:	PREPARED FOR:
MONTROSE ENVIRONMENTAL 1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:	USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

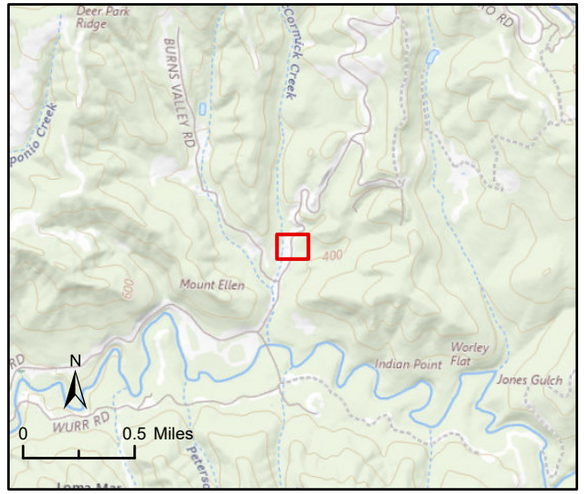
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DaMartorana





Project Limits
WOTUS
Contours
Streams
Roads

0 37.5 75
Feet

N
1:900
1 inch equals 75 feet

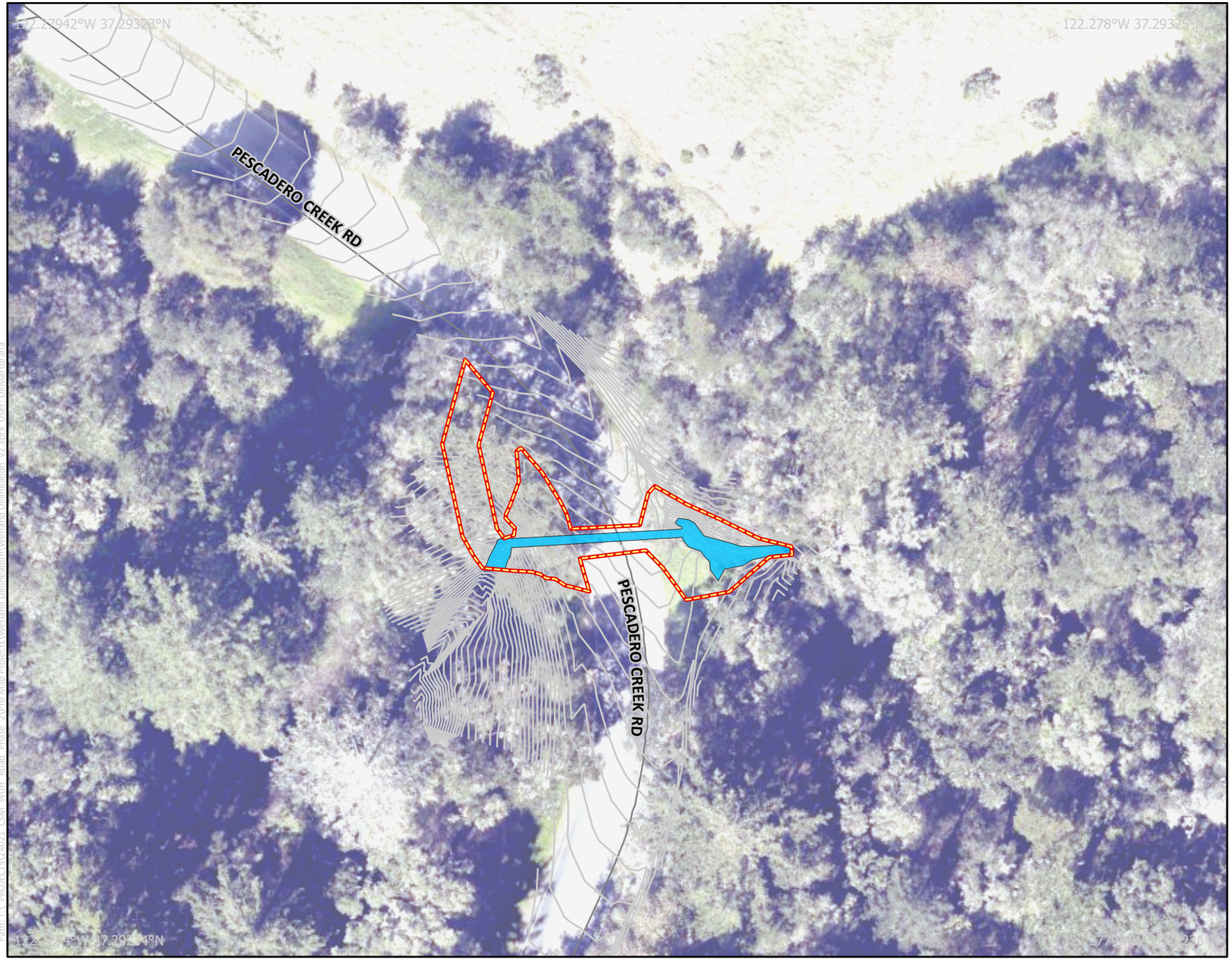
PREPARED BY:	PREPARED FOR:
MONTROSE ENVIRONMENTAL 1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:	USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

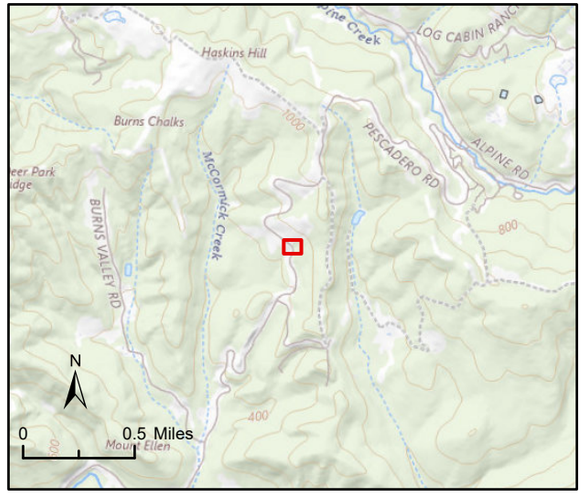
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DoMartorana





Project Limits
WOTUS
Contours
Roads

0 20 40
Feet

N
1:500
1 inch equals 42 feet

PREPARED BY:	PREPARED FOR:
MONTROSE ENVIRONMENTAL 1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:	USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

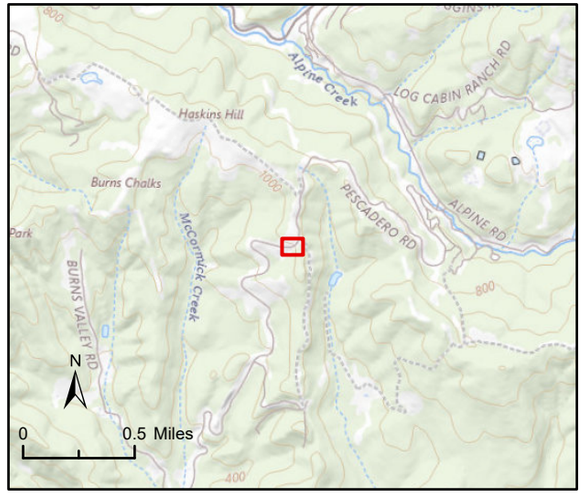
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx, User: DaMartorana





Project Limits
Non-Jurisdictional Stormwater Ditch
Contours
Roads

0 25 50
Feet

N

1:600
1 inch equals 50 feet

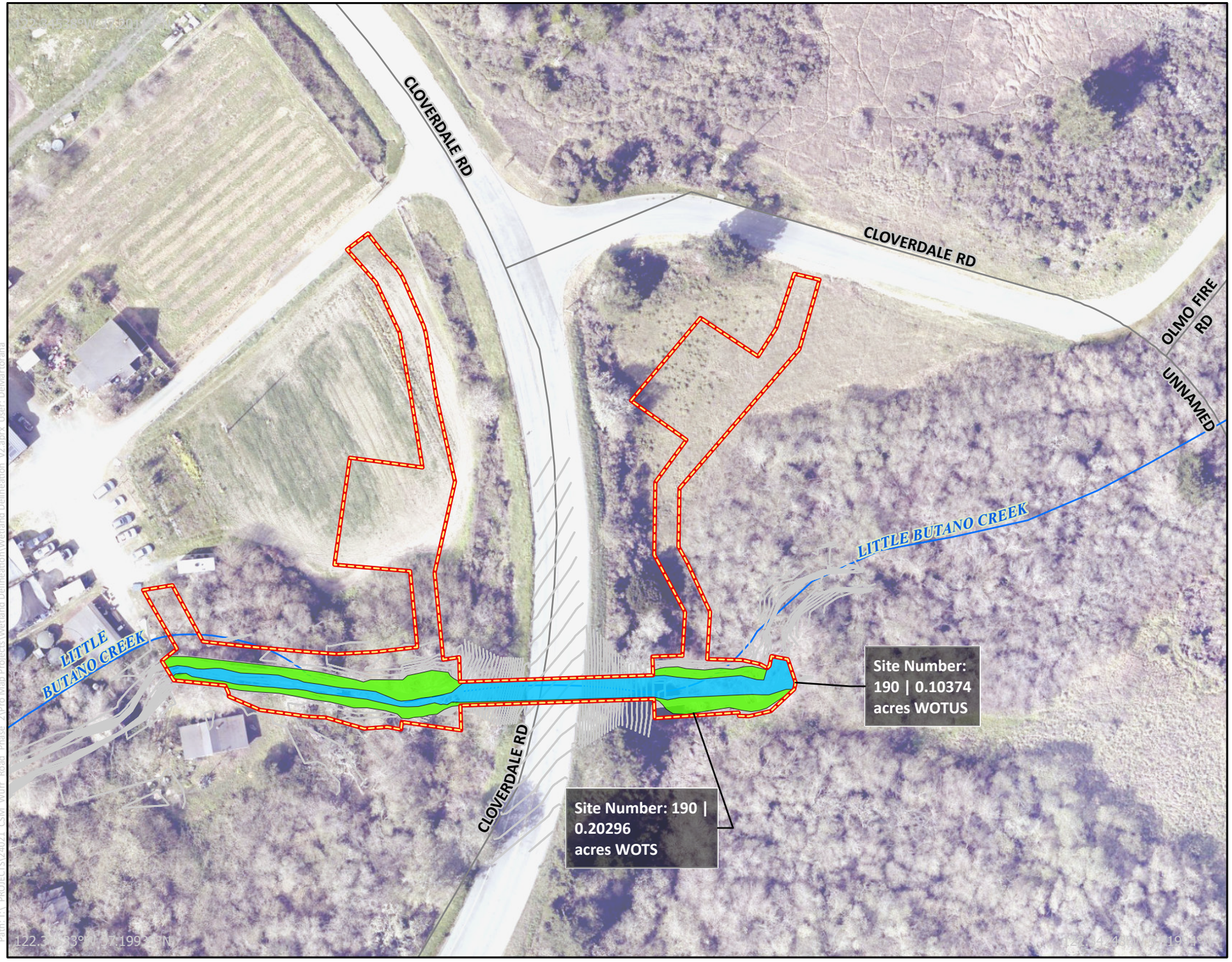
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

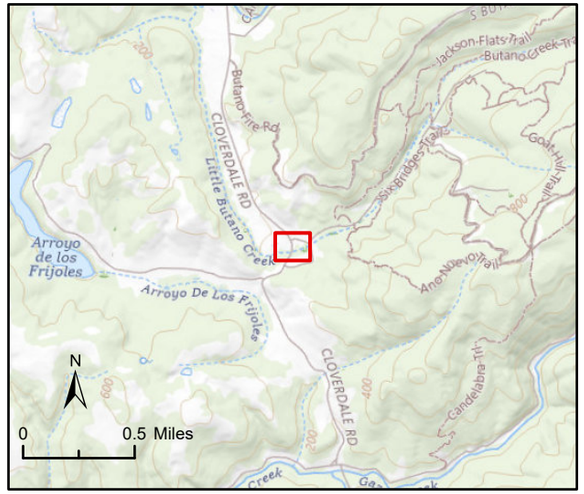
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DaMartorana





- Project Limits
- WOTS
- WOTUS
- Contours
- Streams
- Roads

0 40 80 Feet

N

1:1,000

1 inch equals 83 feet

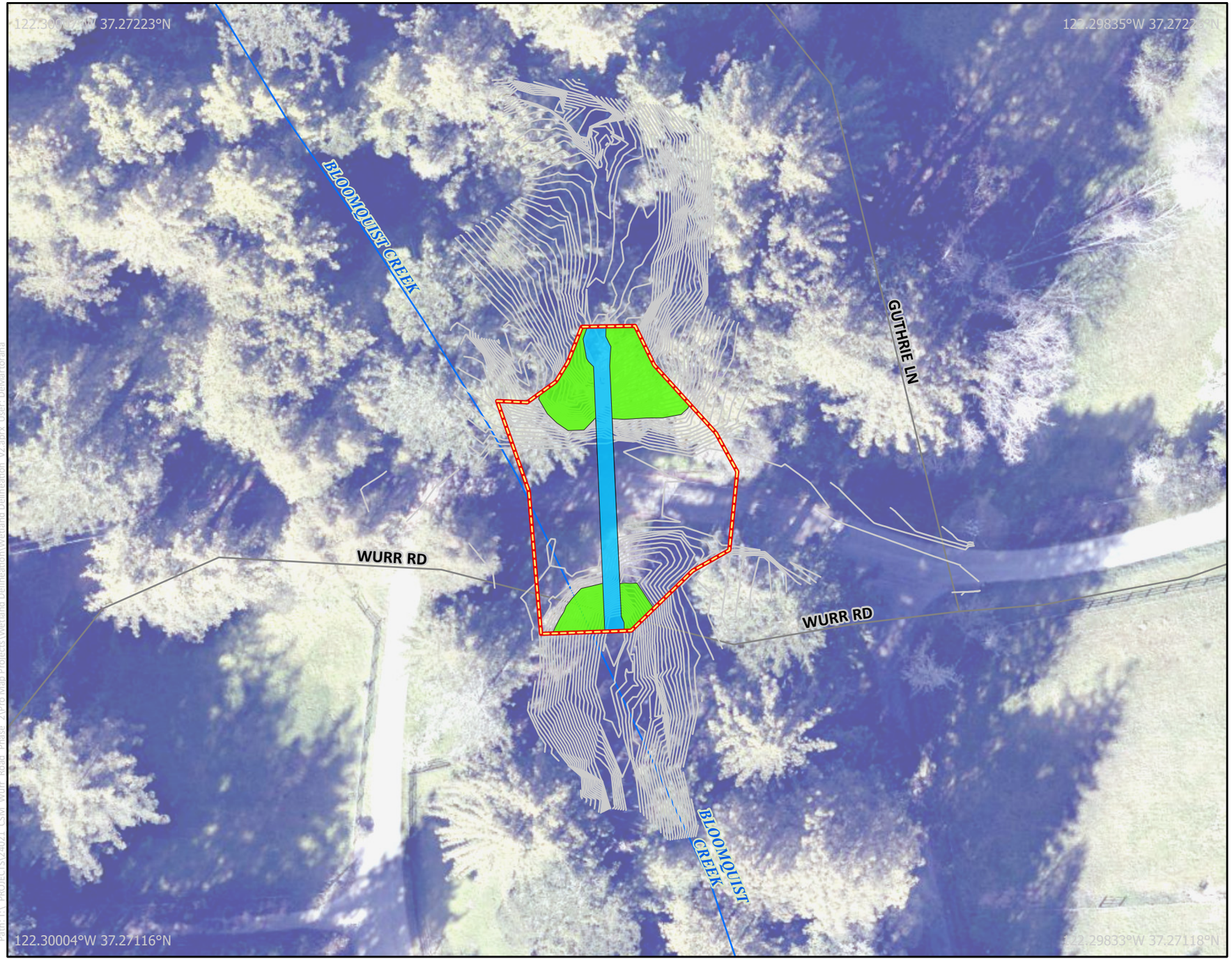
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 7/29/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

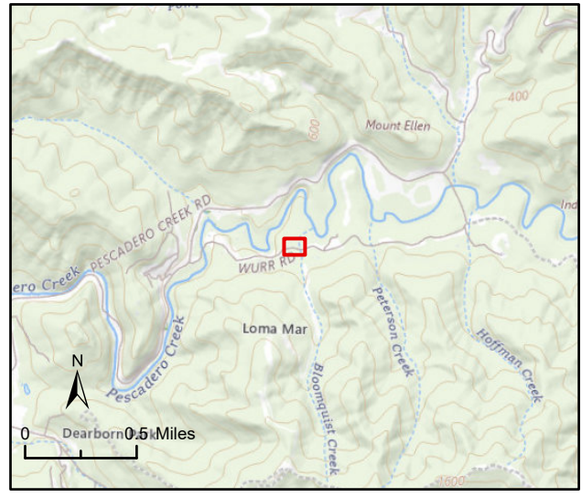
REVISIONS		
DATE	DESCRIPTION	BY
7/29/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Location: 190 | Page 5 of 12

Figure 5
Aquatic Resources





Project Limits
WOTS
WOTUS
Contours
Streams
Roads

0 25 50
Feet

N

1:600
1 inch equals 50 feet

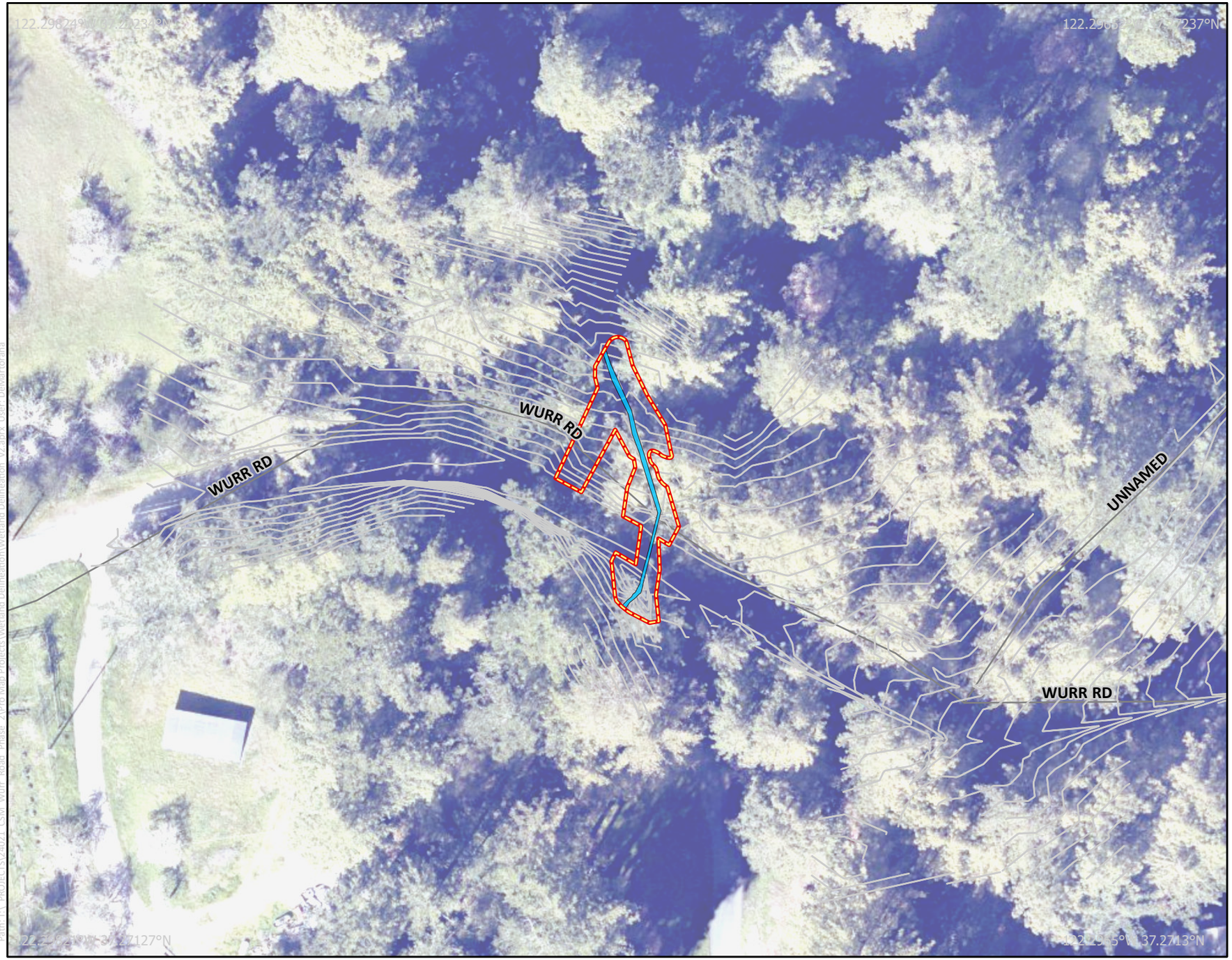
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

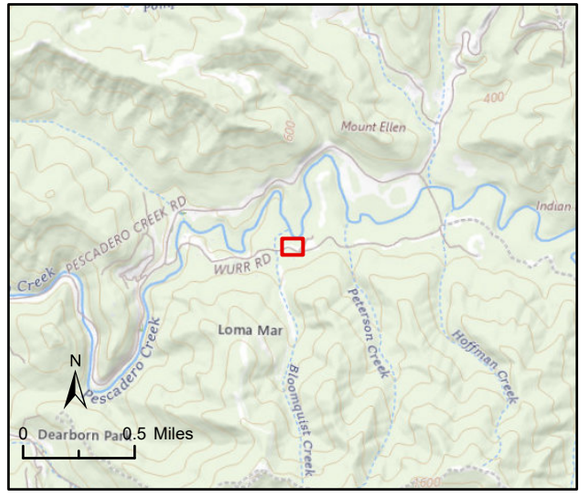
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DaMartorana





Project Limits
WOTUS
Contours
Roads

0 25 50
Feet

N
1:600
1 inch equals 50 feet

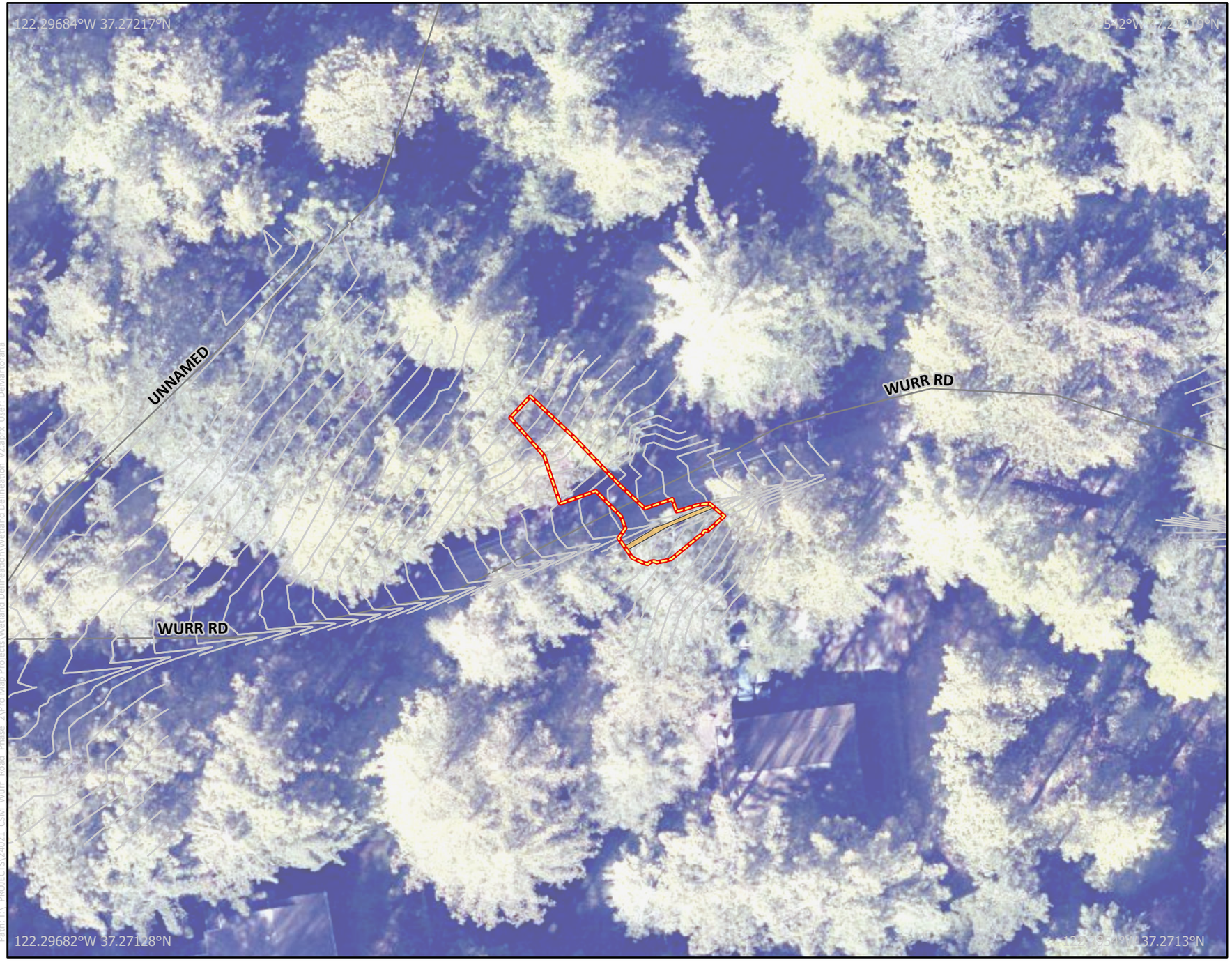
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

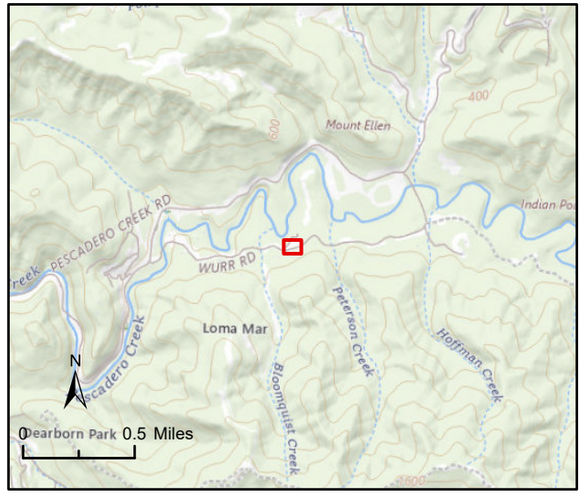
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DeMartorana





Project Limits
Non-Jurisdictional Stormwater Ditch
Contours
Roads

0 20 40
Feet

N
1:500
1 inch equals 42 feet

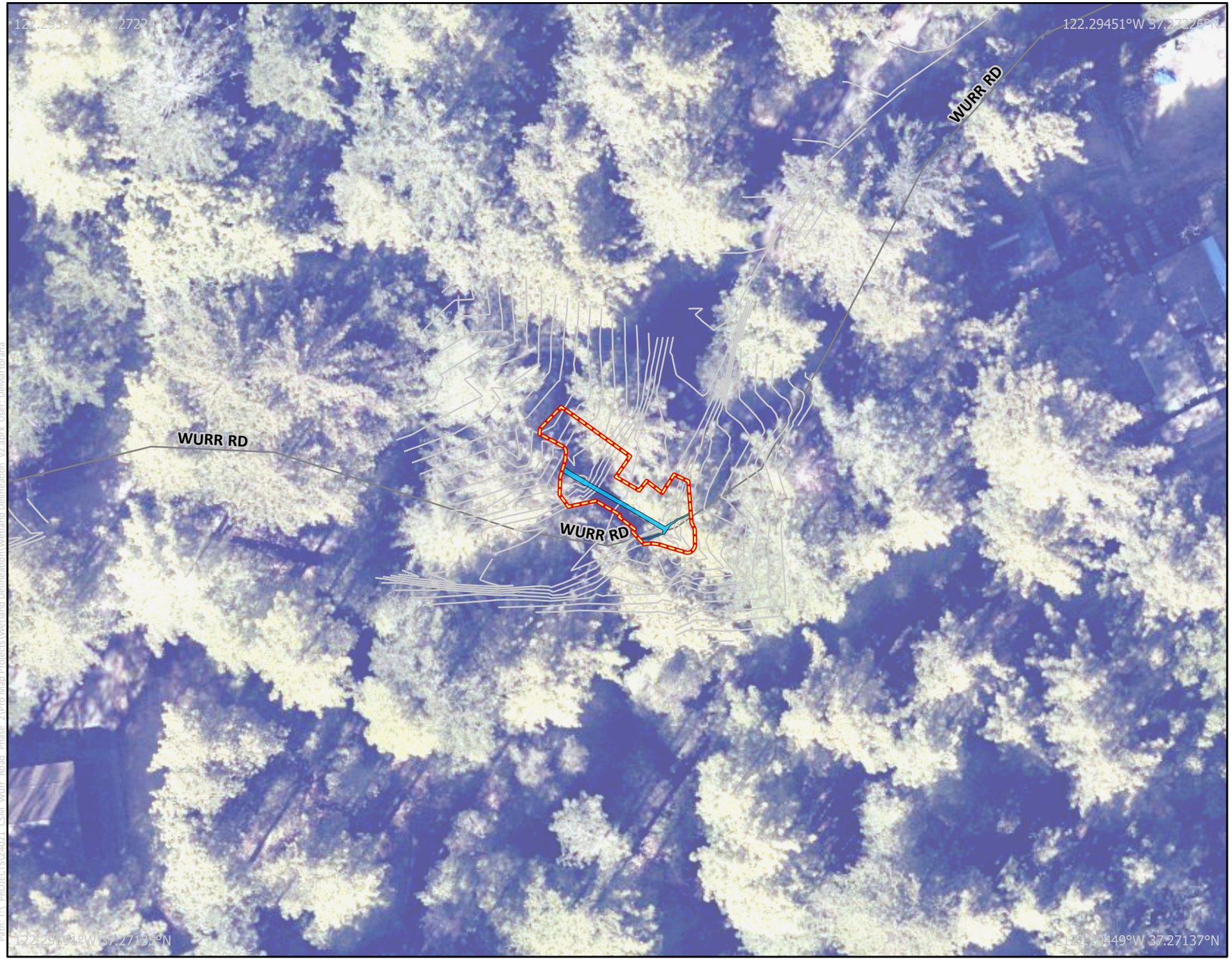
PREPARED BY: MONTROSE ENVIRONMENTAL 1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	PREPARED FOR: County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:	USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

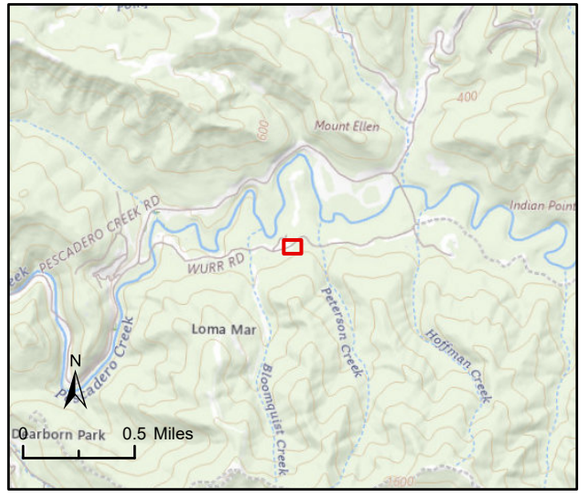
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\ProMap Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DaMartorana





Project Limits
WOTUS
Contours
Roads

0 20 40
Feet

N
1:500
1 inch equals 42 feet

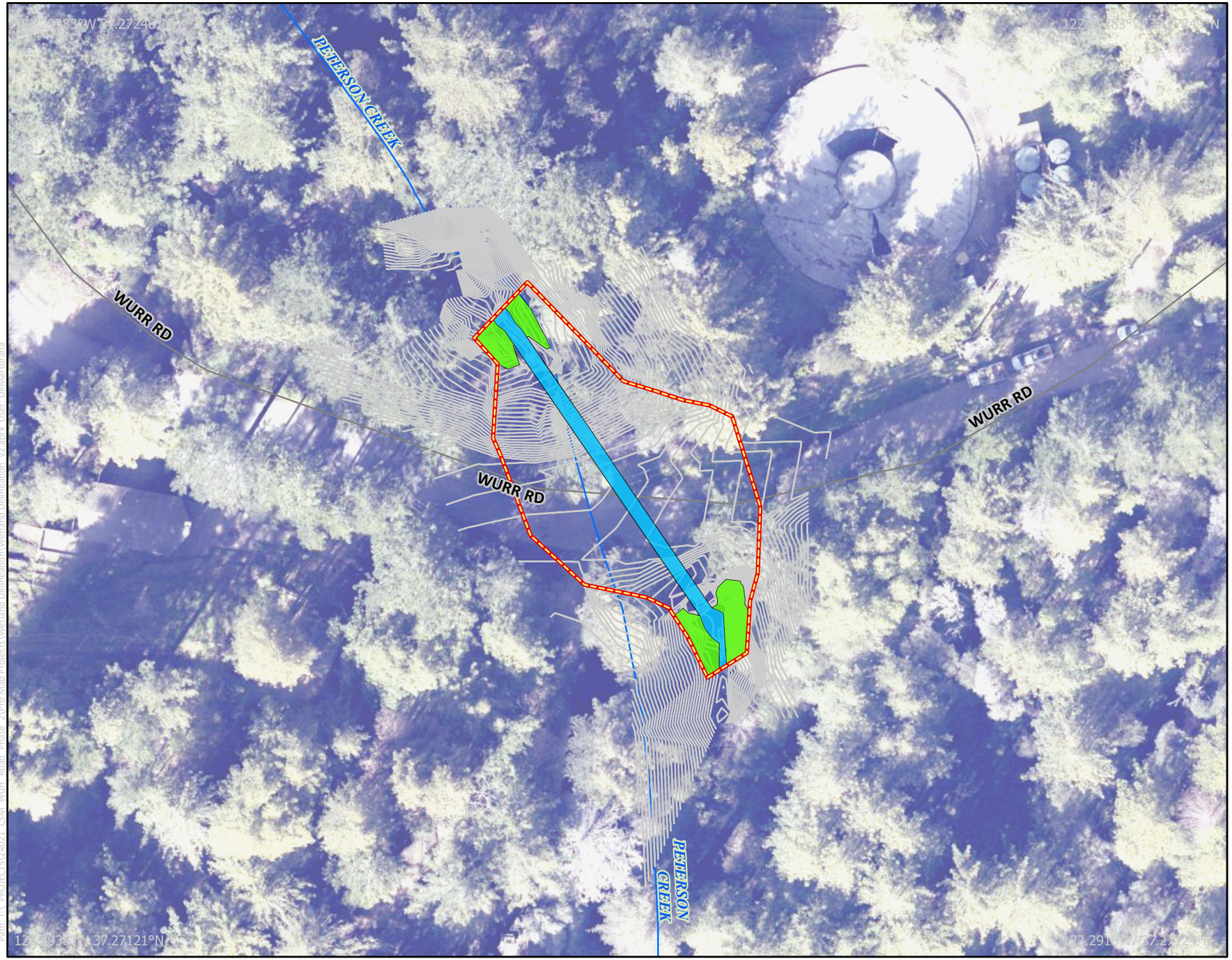
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

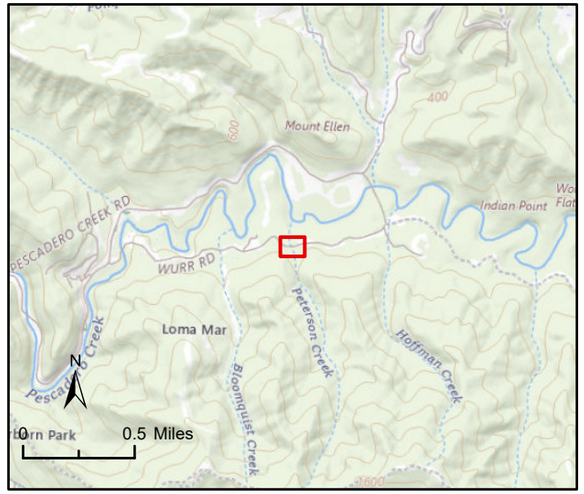
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx, User: DeMartorana





Project Limits
WOTS
WOTUS
Contours
Streams
Roads

0 30 60
Feet

N

1:700
1 inch equals 58 feet

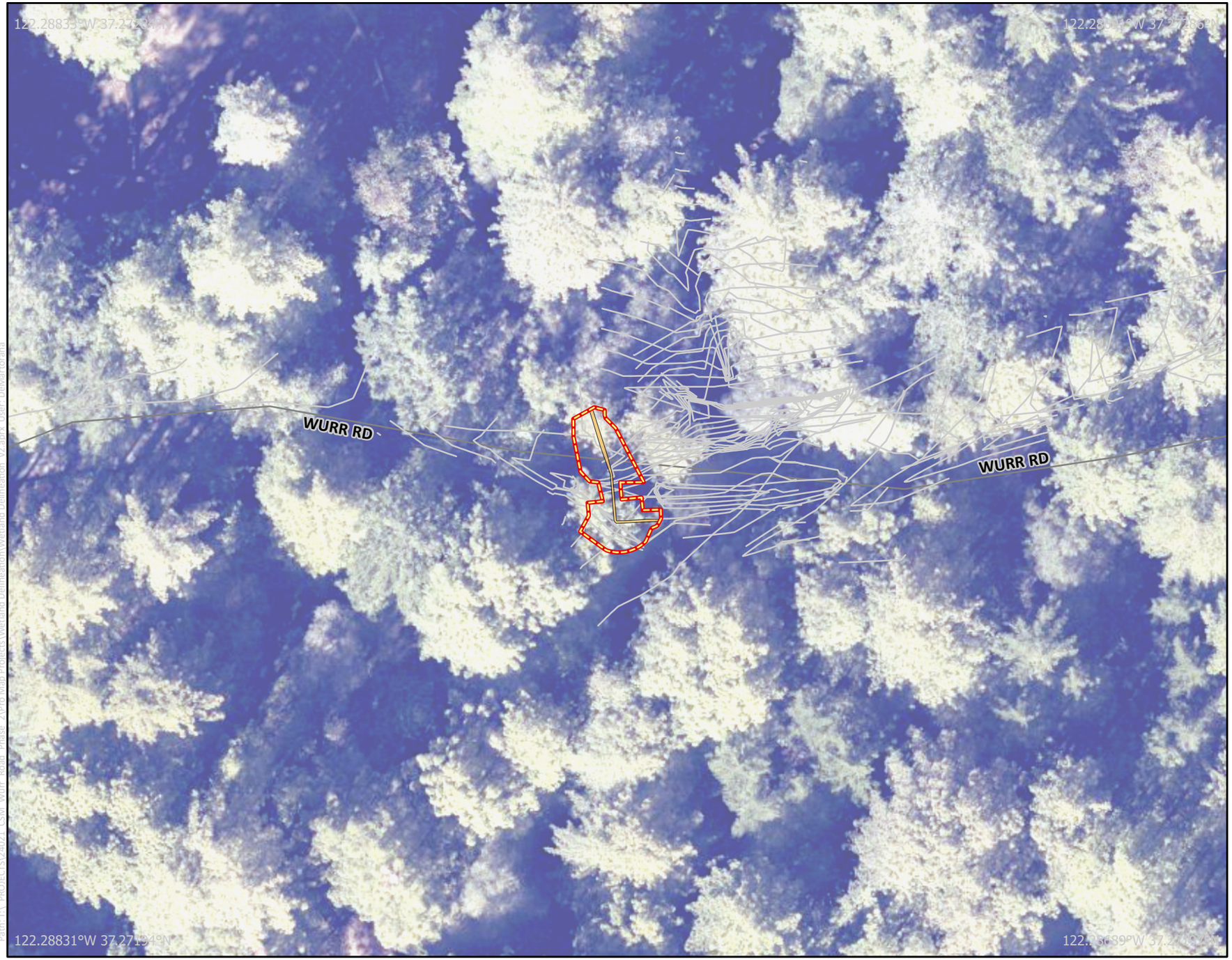
PREPARED BY: MONTROSE ENVIRONMENTAL 1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	PREPARED FOR: County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:	USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

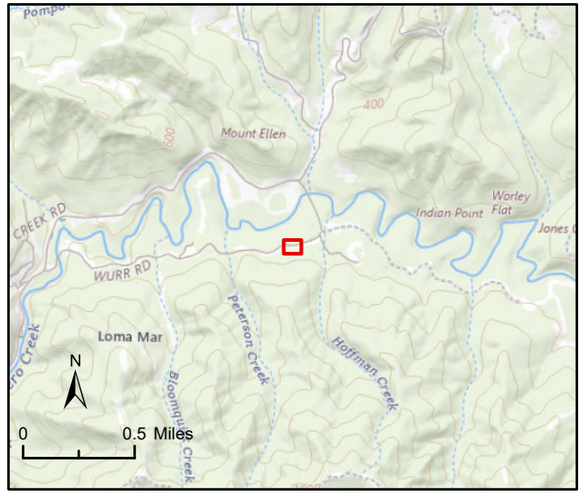
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DeMartorana





Project Limits
Non-Jurisdictional Stormwater Ditch
Contours
Roads

0 20 40
Feet

N
1:500
1 inch equals 42 feet

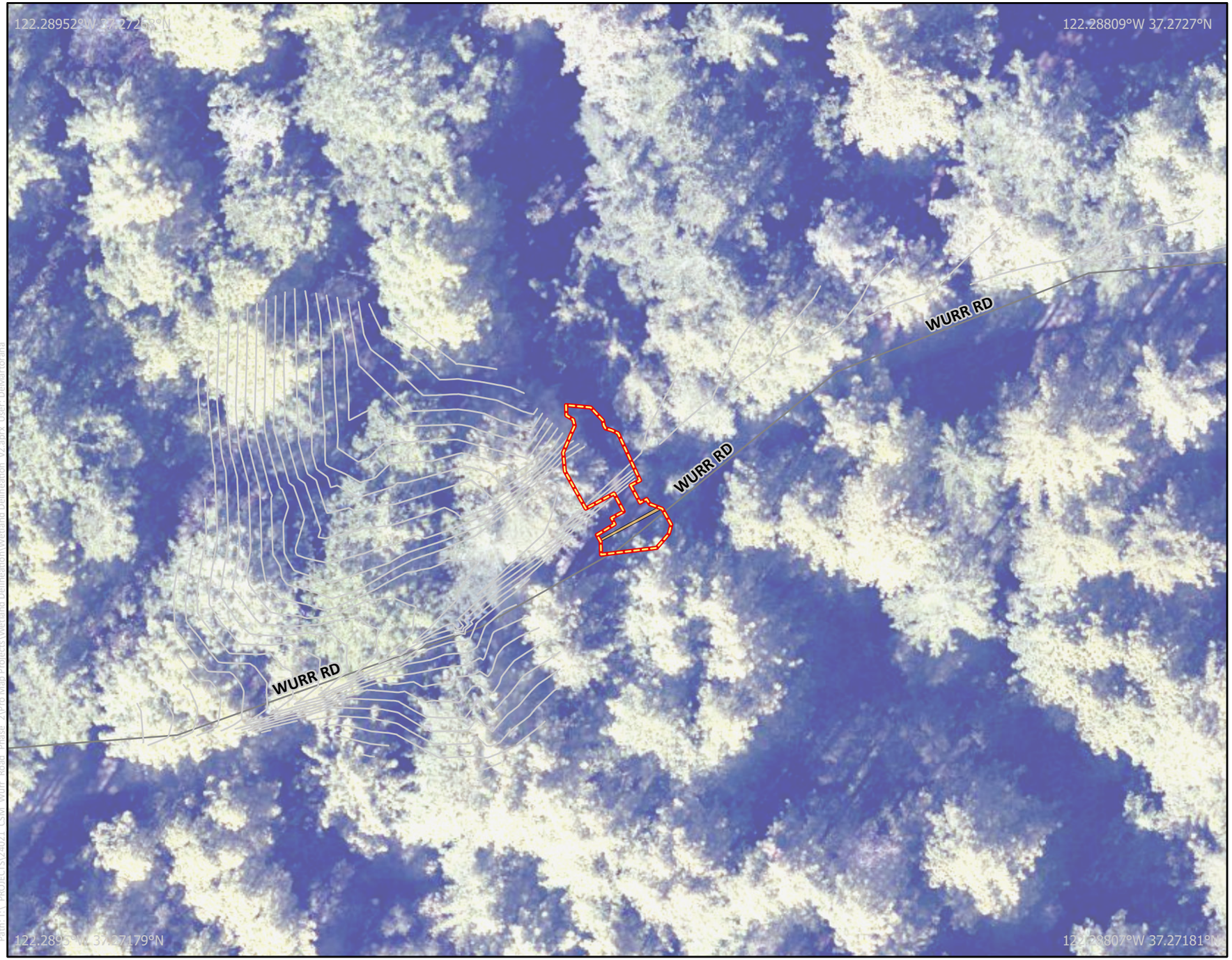
PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

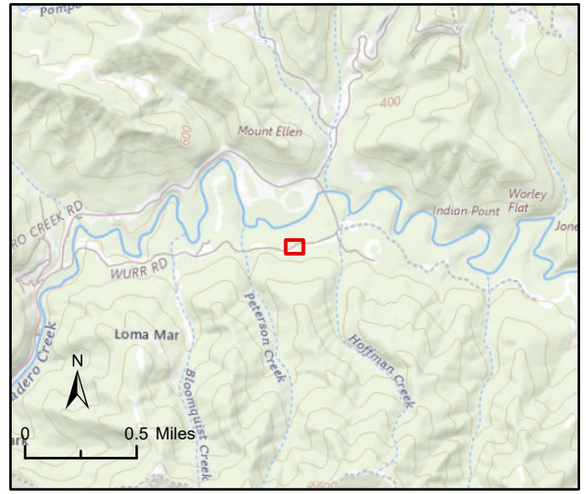
REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DeMartorana





Project Limits

Non-Jurisdictional Stormwater Ditch

Contours

Roads

0 20 40
Feet

N

1:500

1 inch equals 42 feet

PREPARED BY:		PREPARED FOR:
MONTROSE ENVIRONMENTAL	1 Kaiser Plaza Suite 340 Oakland, CA 94612 510-986-1850	County of San Mateo Public Works
DRAWN BY: A. Kellogg & D. Martorana 3/24/2025 DELINEATION BY: A. Kellogg, J. Gonzalez, B. Piontek DATE OF FIELD WORK:		USACE REGULATORY FILE: VERIFIED BY: DATE OF VERIFICATION:

REVISIONS		
DATE	DESCRIPTION	BY
3/24/2025	Stormwater Acreages and OHWM acreage	B. Piontek

County of San Mateo
Wurr Road Culvert Repairs Project

Location: 270.1 | Page 12 of 12

Figure 5
Aquatic Resources

Path: T:_PROJECTS\24021_CSM_Wurr_Road_Phase_2\Pro Map Projects\Wetland Delineation\Wetland Delineation_v2.aprx User: DeMartorana

Appendix A

Site Photographs

Appendix A. Site Photographs

Site 94, unnamed drainage at Pescadero Creek Road			
Photo No.	1	**Photo No.**	2
Date	February 2024	**Date**	May 2024
Road Side	South; Upstream	**Road Side**	North; Downstream
			
Culvert inlet on unnamed drainage.		Culvert outlet area.	

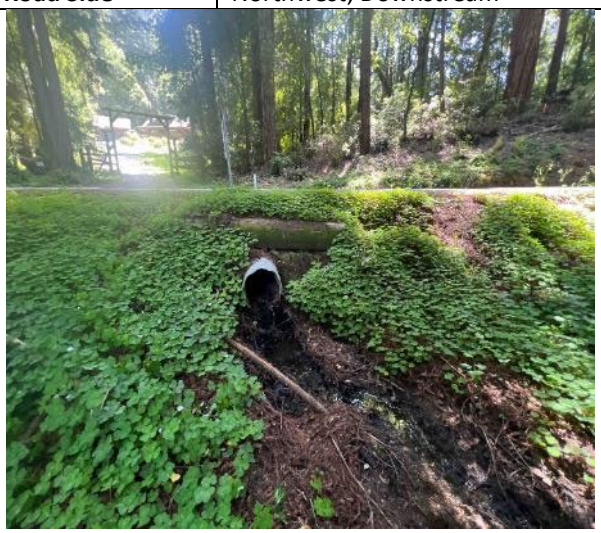
Site 102, unnamed drainage at Pescadero Creek Road			
Photo No.	3	**Photo No.**	4
Date	May 2024	**Date**	February 2024
Road Side	South; Upstream	**Road Side**	South; Downstream
			
Culvert inlet area that goes underneath roadway.		Drainage ditch on opposite (downstream) side of road.	

Appendix A. Site Photographs

Site 119, unnamed drainage at Pescadero Creek Road			
Photo No.	5	**Photo No.**	6
Date	February 2024	**Date**	February 2024
Road Side	West; Downstream	**Road Side**	West; Downstream
			
Headwall; Culvert inlet area.		Culvert outlet area.	
Site 128.1 at Pescadero Creek Road			
Photo No.	7	**Photo No.**	8
Date	May 2024	**Date**	May 2024
Road Side	North; inlet area	**Road Sid**	South; outlet area
			
Proposed new culvert inlet area (roadside ditch).		Proposed outfall area.	

Appendix A. Site Photographs

Site 263, Bloomquist Creek at Wurr Road			
Photo No	9	**Photo No.**	10
Date	May 2024	**Date**	May 2024
Road Side	North; Upstream	**Road Side**	South; Downstream
			
Culvert inlet area (yellow) on Bloomquist Creek.		Culvert outfall on Bloomquist Creek.	

Site 265, unnamed drainage at Wurr Road			
Photo No.	11	**Photo No.**	12
Date	May 2024	**Date**	May 2024
Road Side	Northwest; Upstream	**Road Side**	Northwest; Downstream
			
Culvert inlet of an unnamed drainage passing under Wurr Road		Culvert outfall of unnamed drainage.	

Appendix A. Site Photographs

Site 265.1 at Wurr Road			
Photo No.	13	**Photo No.**	14
Date	May 2024	**Date**	May 2024
Road Side	Southwest; inlet area	**Road Side**	Northwest; outlet area
			
Proposed culvert inlet area along Wurr Road.		Proposed culvert outfall area along Wurr Road.	

Site 266, unnamed drainage at Wurr Road			
Photo No.	15	**Photo No.**	16
Date	May 2024	**Date**	May 2024
Road Side	Southeast; Upstream	**Road Side**	West; Downstream
			
Culvert inlet area (unnamed drainage) approaching Wurr Road.		Culvert outfall area.	

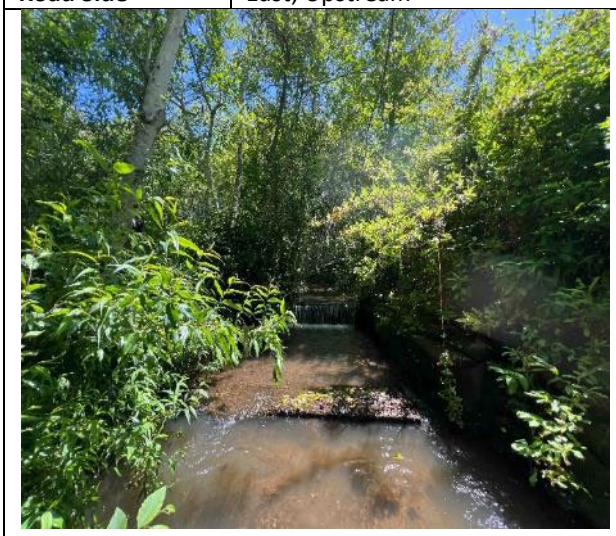
Appendix A. Site Photographs

Site 268, Peterson Creek at Wurr Road			
Photo No.	17	**Photo No.**	18
Date	May 2024	**Date**	May 2024
Road Side	Southeast; Downstream	**Road Side**	Southwest; Downstream
			
Culvert inlet indicated with yellow circle (Peterson Creek).		Culvert outlet area (Peterson Creek).	
Site 270 at Wurr Road			
Photo No.	19	**Photo No.**	20
Date	December 2024	**Date**	December 2024
Road Side	West; inlet area	**Road Side**	North; outlet area
			
Culvert inlet area and inboard drainage ditch parallel to Wurr Road.		Culvert outlet area. The culvert discharge has formed a channel that dissipates downstream of the trees (yellow arrow).	

Appendix A. Site Photographs

Site 270.1 at Wurr Road			
Photo No.	21	**Photo No.**	22
Date	December 2024	**Date**	December 2024
Road Side	South; inlet area	**Road Side**	North; outlet area
			
Proposed culvert inlet area (yellow) parallel to Wurr Road.		Proposed culvert outfall area on the downslope side of Wurr Road.	
Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	23	**Photo No.**	24
Date	May 2024	**Date**	June 2024
Road Side	East; Upstream	**Road Side**	East; Upstream
			
Little Butano Creek looking upstream from the upstream extent of the project. Stream depth was approximately 6-8 inches at the time of the site visit.		Upstream of the culvert crossing looking at the concrete streambed, concrete drop structure, and sacked concrete banks with by overhanging vegetation.	

Appendix A. Site Photographs

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	25	**Photo No.**	26
Date	May 2024	**Date**	May 2024
Road Side	East; Upstream	**Road Side**	West; Upstream
			
Standing at the culvert upstream face looking upstream. The streambed is concrete with sacked concrete on both banks.		The left culvert opening facing downstream. The culvert had a relatively thin layer of sediment along the bottom with sediment plugging much of the right culvert (not shown, photo right).	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	27	**Photo No.**	28
Date	June 2024	**Date**	May 2024
Road Side	Northeast; Downstream	**Road Side**	West; Downstream
			
The culvert outfall area with significant sediment accumulated in the right culvert (yellow circle) and on the concrete apron.		Downstream view of Little Butano Creek from the edge of the concrete apron. The cascade has created a drop between the apron and the streambed below.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	29	**Photo No.**	30
Date	July 2025	**Date**	July 2025
Road Side	East; Upstream	**Road Side**	Northwest; Downstream
			
Upstream view of Little Butano Creek from the edge of the concrete apron.		Downstream view of Little Butano Creek downstream of the concrete apron.	

Site 190 at Little Butano Creek, Cloverdale Road			
Photo No.	31	**Photo No.**	32
Date	July 2025	**Date**	July 2025
Road Side	East -southeast; Upstream	**Road Side**	Northeast; Upstream
			
Upstream view of Little Butano Creek downstream of the concrete apron.		Upstream view from the edge of the Project area (bridge crossing).	

Appendix B

Plant Species List

Scientific Name	Common Name	Indicator Status	Native
Acer macrophyllum	Big-leaf Maple	FACU	Yes
Adiantum jordanii	California Maidenhair	FAC	Yes
Alnus rhombifolia	White Alder	FACW	Yes
Athyrium cyclosorum	Western lady fern	FAC	Yes
Avena barbata	Slender oat	NL	No
Baccharis pilularis	Coyote Brush	NL	Yes
Bromus briziformus	Rattlesnake brome	UPL	No
Bromus diandrus	Rip-gut brome	NL	No
Carduus tenuiflorus	Italian thistle	NL	No
Centromadia pungens	Common tarweed	UPL	Yes
Chlorogalum pomeridianum	Soap plant	NL	Yes
Claytonia perfoliata	Minor's lettuce	FAC	Yes
Conioselinum pacificum	Hemlock parsley	FACW	Yes
Cornus sericea	American dogwood	NL	Yes
Equisetum arvense	Field Horsetail	FAC	Yes
Equisetum telmateia	Giant Horsetail	FACW	Yes
Fragaria vesca	Woodland strawberry	FACU	Yes
Fraxinus latifolia	Oregon ash	FACW	Yes
Galium aparine	Common Bedstraw	FACU	Yes
Genista monspessulana	French broom	NL	No
Hedera helix	English Ivy	FACU	No
Helminthotheca echioides	Bristly Ox-Tongue	FAC	No
Hordeum jubatum	Foxtail barley	FAC	Yes
Juncus effuses	Common bog rush	FACW	Yes
Lapsana communis	Common nipplewort	FACU	No
Lotus corniculatus	Bird's-foot-trefoil	FAC	No
Myosotis latifolia	Forget-Me-Not	NL	No
Notholithocarpus densiflorus	Tanoak	NL	Yes
Oxalis oregana	Redwood Sorrel	FACU	Yes
Pinus contortata	Lodgepole pine	FAC	Yes
Pinus pinea	Italian stone pine	NL	No
Plantago major	Great plantain	FAC	No
Polystichum munitum	Western sword fern	FACU	Yes
Pseudotsuga menziesii	Douglas Fir	FACU	Yes
Quercus agrifolia	Coast live oak	NL	Yes
Rubus parviflorus	Western thimble-berry	FACU	Yes
Rubus ursinus	California Blackberry	FACU	Yes
Rumex occidentalis	Western Dock	FACW	Yes
Salix lasiandra	Pacific willow	FACW	Yes
Scoliopus bigelovii	Slink pod	NL	Yes
Scrophularia californica	California bee plant	FAC	Yes
Sequioa sempervirens	Coast redwood	NL	Yes
Soleirolia soleirolii	Baby's tears	FAC	No
Taraxacum officinale	Commen dandelion	FACU	No
Toxicodendron diversilobum	Poison Oak	FACU	Yes
Trifolium angustifolium	Narrow leafed clover	NL	No

Trillium ovatum	Western trillium	FACU	Yes
Umbellularia californica	Bay laurel	FAC	Yes
Urtica dioica	Stinging nettle	FAC	Yes
Vaccinium ovatum	California-huckleberry	FACU	Yes
Veronica americana	American Brooklime	OBL	Yes
Vicia villosa	Hairy vetch	NL	No

Appendix C

Wetland Delineation and Ordinary High Water Data Sheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Muir road | **Date:** 5/31 | **Time:** 1106
Project Number: | **Town:** | **State:** CA
Stream: | **Photo begin file#:** | **Photo end file#:**
Investigator(s): J.gandar, B Pinnock, A Kellogg

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

Y ☐ / N ☑ Is the site significantly disturbed?

Location Details: downstream @ Cleveland

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
sacked concrete on left bank

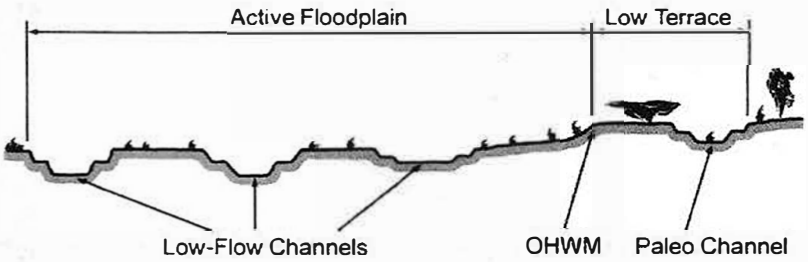
Brief site description: 6x7 double box culvert concrete drop with sedimentation RB culvert w/ sedimentation. sacked concrete on LB. sediment @ outlet: material at outlet & downstream of concrete drop

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units



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

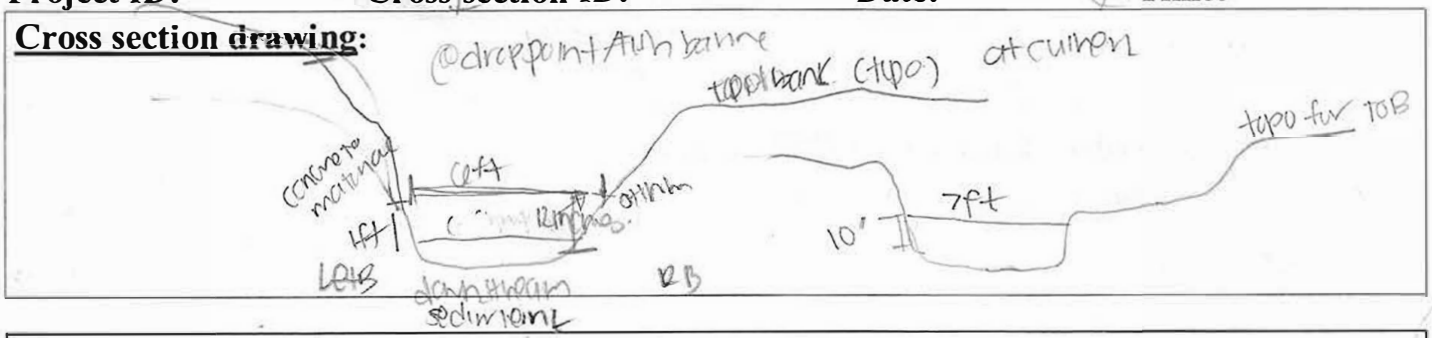
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is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

downstream DS

upstream BNE of face

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

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☑ Change in vegetation species
- ☑ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit:

☑ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: concrete bed downstream @ fish barrier, pebbles, rock @ culvert

Total veg cover: 1 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

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

veg rooted above OHWM canopy variable 5% to 80%

Indicators:

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

Comments:

sediment bed w/ fish barrier downstream. concrete sac on LB.
scouring along bank further downstream
sedimentation within culvert & for right bank

Cloverdale upstream Bridge

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Mill road | **Date:** 5/31/24 | **Time:** 1225
Project Number: | **Town:** Pescadero | **State:**
Stream: | **Photo begin file#:** | **Photo end file#:**
Investigator(s): J. Gonzalez, B. Pickrell, Aerie

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: upstream cloverdale

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

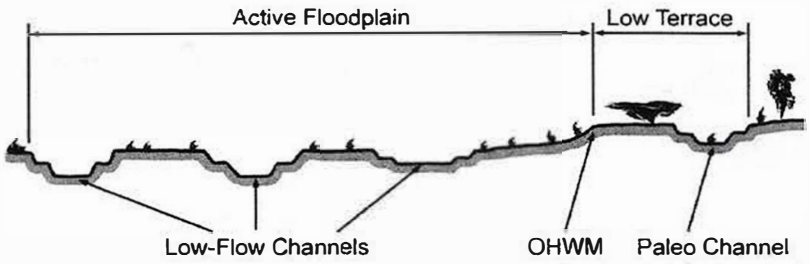
Brief site description: upstream of bridge/culvert

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

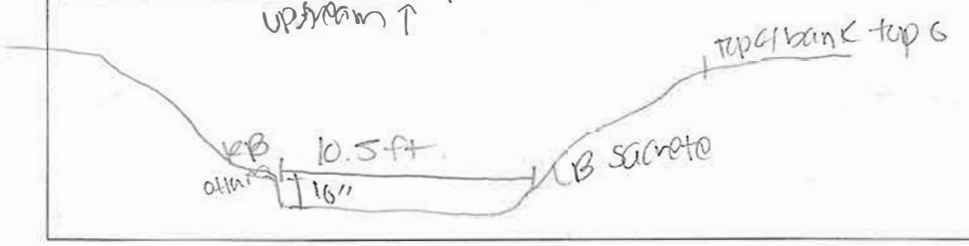


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing: upstream of concrete drop



OHWM

GPS point: _____

Indicators:

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

Comments: pools upstream of drop structure.

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: pebbles & fine sediment concrete at drop structure

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

Community successional stage:

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

tree cover variable 5% - 10 50 %

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Wurr Rd
Project Number:
Stream:
Investigator(s): B Ponte's, J Gonzalez, A Kellogg

Date: 5/31
Town: Pescadero
Time: 3:00pm
State: CA
Photo begin file#:
Photo end file#:

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:
Wurr Rd 263

Projection: **Datum:**
Coordinates:

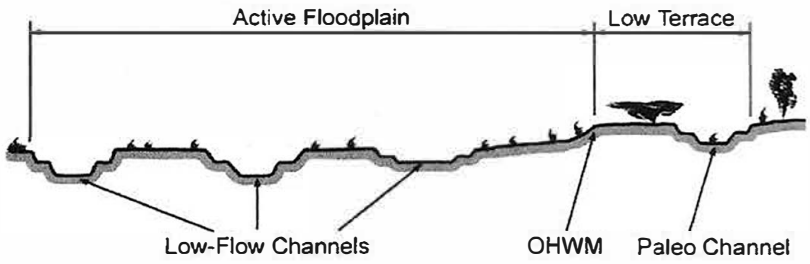
Potential anthropogenic influences on the channel system:
Wurr Road

Brief site description:
78" Culvert under Wurr Rd, ~40LF. Rusted out bottom in sections.

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

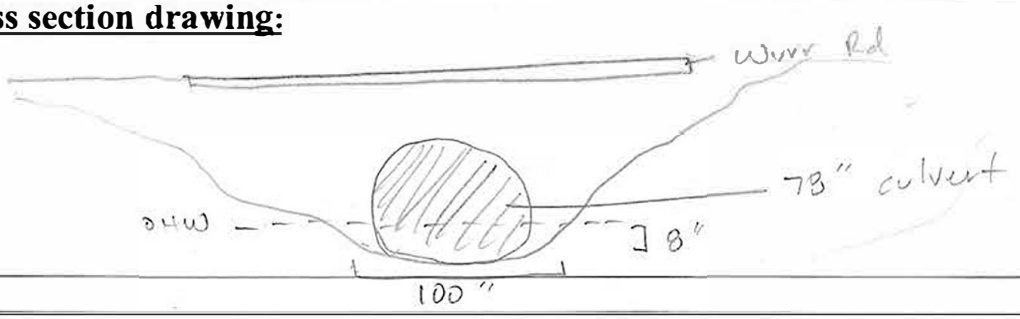


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



OHWM

GPS point: WWW 269

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:
No vegetation on tributary bed. Minor break in slope @ 6"-8" above channel bed.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fines

Total veg cover: 75 % Tree: 50 % Shrub: 5 % Herb: 40 %

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Worr Rd
Project Number:
Stream:
Investigator(s): B. Prentice, J. Gonzalez, M. Kelley

Date: 5/31
Town: Pescadero
Photo begin file#:

Time: 2:00pm
State: CA
Photo end file#:

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:
Worr Road 263

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Worr Road

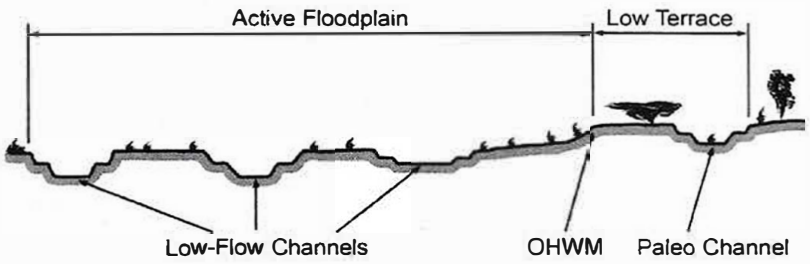
Brief site description:
78" culvert conveying tributary under Worr Rd.

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

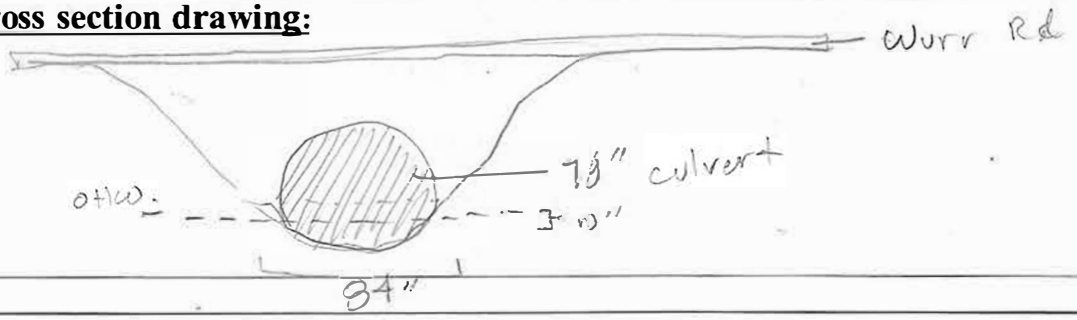


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



OHWM

GPS point: Wurr 263

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:
channel bed is unvegetated. Defined topographical break ~10" above bed elevation indicating OHWM.

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

GPS point: —

Characteristics of the floodplain unit:

Average sediment texture: fines

Total veg cover: 35 % Tree: 5 % Shrub: 5 % Herb: 25 %

Community successional stage:

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

Indicators:

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

Comments:
No vegetation on bed, moderate cover on banks.

NR-1 262

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Murr Road | **Date:** 5/21 | **Time:** 130
Project Number: | **Town:** | **State:**
Stream: N/A | **Photo begin file#:** | **Photo end file#:**
Investigator(s):

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:
TMDL 262

Projection: 37.271142 **Datum:**
Coordinates: -122.302025

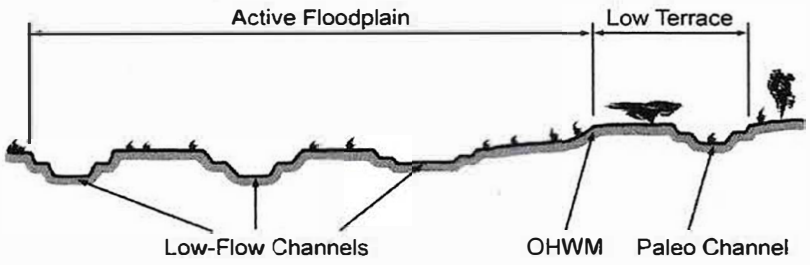
Potential anthropogenic influences on the channel system:
Murr Rd and adjacent private properties

Brief site description:
15" CMP draining ~890' ditch; thru culvert to junction box

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

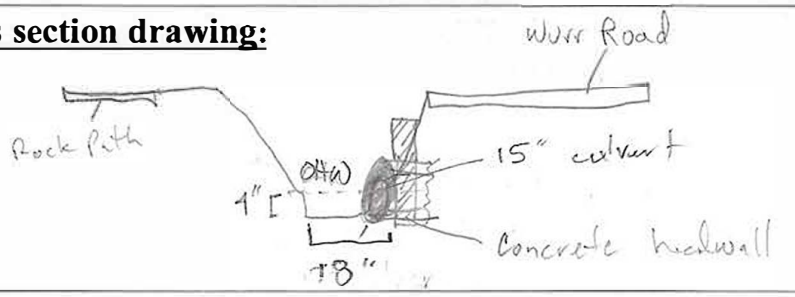


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



OHWM

GPS point: Wurr 262.3

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:
No vegetation on ditch bottom.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: —

Characteristics of the floodplain unit:

Average sediment texture: fines

Total veg cover: 30 % Tree: — % Shrub: — % Herb: 30 %

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: WWV road
Project Number: 23039
Stream:
Investigator(s): J-gonzalez

Date:
Town:
Photo begin file#:

Time:
State:
Photo end file#:

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: 102

Projection:
Coordinates:

Datum:

Potential anthropogenic influences on the channel system:
pescadero creek road. small unamed drainage roadside drainage ditch.
2.5-3ft wide, 12" deep ephemeral, stormwater, not delineated

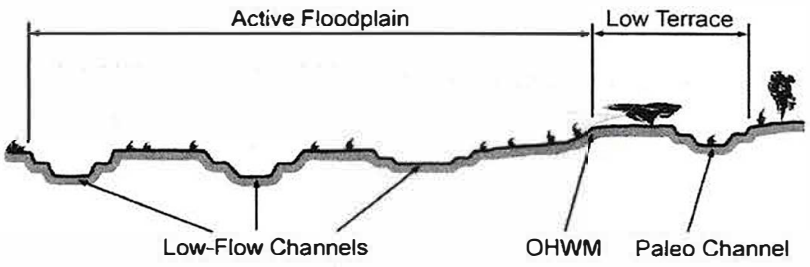
Brief site description:

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

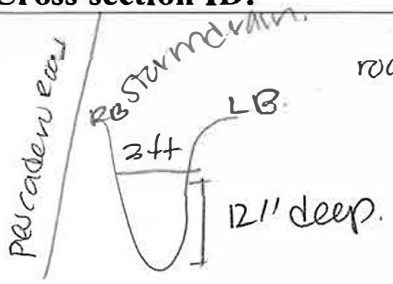


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



drive way culvert then parallel to road, drainage goes under pescadro creek road

standing water, no flow.

OHWM

GPS point: location 102

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

overgrown vegetation, culvert inlet/outlet clogged
small roadside drainage runs parallel to road, driveway culvert, then crosses under pescadro creek road

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine ddebris from driveway culvert

Total veg cover: 60 % Tree: ++ % Shrub: 0 % Herb: 80 %

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Wurr Rd
Project Number:
Stream:
Investigator(s): B Pinnock, A Kellogg
Date: 5/31
Time: 5:00 pm
Town:
State: CA
Photo begin file#:
Photo end file#:

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: RESC 119

Projection: **Datum:**
Coordinates:

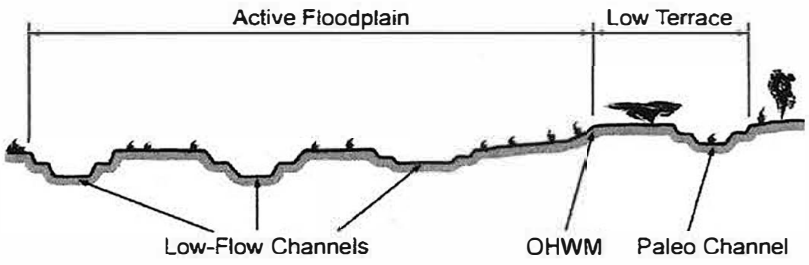
Potential anthropogenic influences on the channel system:
Pescadero Rd

Brief site description:
36" culvert, bolt, cross drain

Checklist of resources (if available):

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

Hydrogeomorphic Floodplain Units

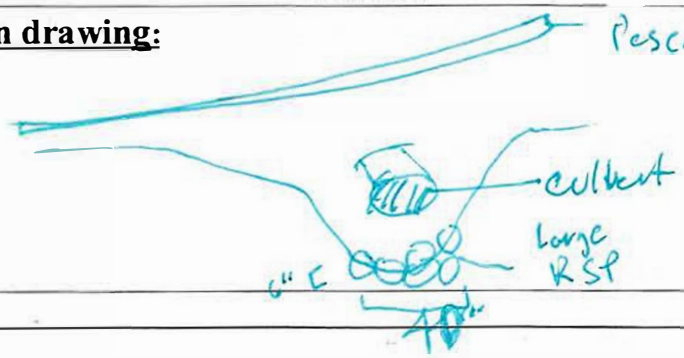


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



OHWM

GPS point: Pesc 119

Indicators:

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

Comments:
Rock boulder channel, very steep

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

GPS point: ~

Characteristics of the floodplain unit:
Average sediment texture: RSP
Total veg cover: 70 % Tree: 50 % Shrub: 20 % Herb: 10 %
Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Wurr Rd
Project Number:
Stream:
Investigator(s):

Date:
Town:
Photo begin file#:

Time:
State:
Photo end file#:

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

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Wurr 128

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:
Pescadero Rd

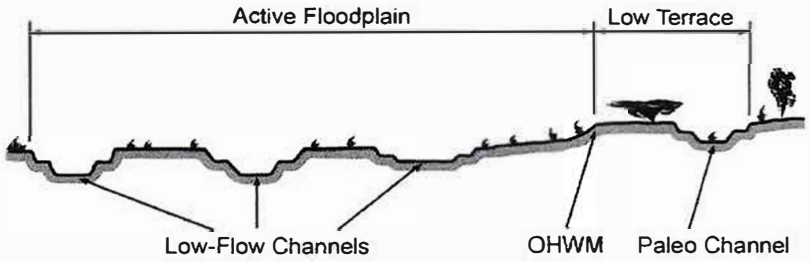
Brief site description:
24" HDPE with slope drain and gullying on downstream side

Checklist of resources (if available):

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

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

Hydrogeomorphic Floodplain Units

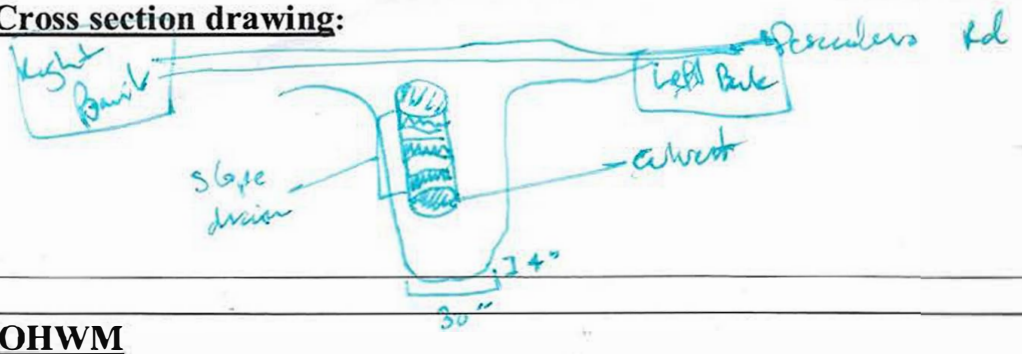


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

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

Cross section drawing:



OHWM

GPS point: WW 123

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Eroding / gullying at outfall and downslope

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: fine

Total veg cover: 50 % Tree: — % Shrub: 40 % Herb: 20 %

Community successional stage:

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

Chaparral

Indicators:

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

Comments:

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX
Approval Expires:

Project ID #: Wurr Rd | Site Name: Cloverdale Rd | Date and Time: 7/22; 8:20am

Location (lat/long): 37.199892, -122.344676 | Investigator(s): J. Gonzalez, S. Kiteck

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [ ] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
None

Step 2 Site conditions during field assessment
First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Fish barrier present; concrete drop. Erosion present along the banks. Bridge at western end of Project Area.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:**
  - [x] *on the bank:*
  - [ ] *undercut bank:*
  - [ ] *valley bottom:*
  - [ ] Other: _____
- [x] **Shelving:**
  - [x] *shelf at top of bank:*
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:**
  - [ ] *shelving (berms) on bar:*
  - [ ] *unvegetated:*
  - [x] *vegetation transition (go to veg. indicators)*
  - [x] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [x] **Instream bedforms and other bedload transport evidence:**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
  - [x] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*
- [ ] **Secondary channels:**

Sediment indicators

- [ ] **Soil development:**
- [x] **Changes in character of soil:**
- [ ] **Mudcracks:**
- [x] **Changes in particle-sized distribution:**
  - [x] *transition from* silt to cobble
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:**

Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

- [1] *vegetation absent to:*
- [2] *moss to:*
- [2] *forbs to:*
- [ ] *graminoids to:*
- [3] *woody shrubs to:*
- [4] *deciduous trees to:*
- [ ] *coniferous trees to:*

- [ ] **Vegetation matted down and/or bent:**
- [ ] **Exposed roots below intact soil layer:**

Ancillary indicators

- [ ] **Wracking/presence of organic litter:**
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators?

Describe:

Step 4 Is additional information needed to support this determination?

- [ ] Yes
- [ ] No

If yes, describe and attach information to datasheet:

Project ID #: Wurr Rd / Cloverdale Rd

Step 5 Describe rationale for location of OHWM

- Scouring present
- Sediment transition from silt to cobble
- channel free of vegetation, transition to moss/forbs to woody shrubs to deciduous trees

Additional observations or notes

99" – widest part of the stream channel @ OHWM

55" – narrowest part of the stream, @ OHWM

10" to 20" – depth of the stream

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description
	See Appendix A.

Appendix D

OMBIL Regulatory Module (ORM)

Upload Sheet

Appendix G

Noise Calculations

Noise Calculations for Wurr Road Culvert Repair Project

Mechanical		
Construction Equipment 1 (Vibratory Roller)	85	dBA at 50 feet
Construction Equipment 2 (Trucks)	84	dBA at 50 feet
Combined Daytime Noise at 50 feet (Ltotal at 50 feet)	87.5	dBA
Ltotal=10 log(10^L1/10+10^L2/10)		

Noise Threshold Limits and Distances from Project Sites to those Limits for Construction Equipment by Technique

Noise Threshold	**Threshold Level - Leq (dBA)**	**Distance to Leq Threshold from Middle of Project Site (feet)**
Sensitive Receptors	90	37.7
Source: FTA 2018		

Vibration Source Levels for Construction Equipment (FTA 2018)

Equipment	**PPV at 25 feet**	**VBA**
Vibratory Roller	0.21	94
Loaded Trucks	0.076	86

Vibration Calculations with Equations for Vibration-Causing Equipment for Project Site (Roller)

Threshold	**Distance to Threshold from Middle of Project Site (feet)**	**Notes**
PPV=PPVref * (25/d)^1.5	36.3	Building damage threshold - 0.12 PPV (extremely susceptible buildings)
VdB=VdBref-30log(d/25)	73.2	Human Annoyance (80 VdB)

Vibration Calculations with Equations for Vibration-Causing Equipment for Project Site (Loaded Trucks)

Threshold	**Distance to Threshold from Middle of Project Site (feet)**	**Notes**
PPV=PPVref * (25/d)^1.5	18.4	Building damage threshold - 0.12 PPV (extremely susceptible buildings)
VdB=VdBref-30log(d/25)	39.6	Human Annoyance (80 VdB)

Appendix H

Mitigation Monitoring and Reporting Plan

WURR ROAD, PESCADERO CREEK ROAD, AND CLOVERDALE ROAD CULVERT REPAIRS PROJECT

MITIGATION MONITORING AND REPORTING PLAN

The following mitigation monitoring and reporting program (MMRP) summary table includes the mitigation measures identified in the Wurr Road, Pescadero Creek Road, and Cloverdale Road Culvert Repairs Project Draft Initial Study/ Mitigated Negative Declaration (IS/MND). For each mitigation measure, this table identifies monitoring and reporting actions that shall be carried out, the party responsible for implementing these actions, and the monitoring schedule. This table also includes a column where responsible parties can check off monitoring and reporting actions as they are completed. It is the responsibility of the contractor to ensure that actions required for all the mitigation measures listed herein are included in the project plans and specifications. It is the responsibility of the County of San Mateo (County) to review and confirm that all the mitigation measure actions described herein are in the project plans and specifications.

Aesthetics

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Agriculture and Forestry Resources

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Air Quality

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Biological Resources

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Cultural Resources

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
CUL-1. A Qualified Archaeologist Shall Monitor Project Activities on Cloverdale Road (Site No. 190) Prior to the onset of construction activities, the County shall retain a qualified archaeologist, per the Secretary of Interior's Standards (36 CFR § 800.2(a)(1)), to monitor all ground disturbing activity during construction at the Project site located on Cloverdale Road (Site No. 190). The consulting archaeologist will determine the most suitable levels of monitoring (e.g., full time or spot checking) based on the proposed types of construction activities. In addition, the consulting archaeologist shall have the authority, with the County's approval, to discontinue monitoring if the project activities will no longer have the potential to cause adverse effects to archaeological deposits (e.g., activities occurring directly in the streambed). In the event that cultural resources are exposed during construction, the monitor shall temporarily halt activities in the immediate vicinity of the discovery while it is evaluated for significance and communicate with the County regarding the find. The resource shall be evaluated as a unique cultural resource based on the criteria set forth in § 21083.2 of CEQA and as necessary, the County will seek Native American	1. NA 2. Comply with archaeologist recommendations during ground disturbing activities at Site 190. 3. Halt work and comply with archaeologist recommendations, if necessary. 4. NA 5. Comply with archeologist and County recommendations and measures. 6. Do not resume work until clearance is given.	1. Retain a qualified archaeologist prior to the start of ground disturbing activities. 2. Ensure that archaeologist recommendations are followed. 3. Work with archaeologist to evaluate resources, if necessary. 4. Consult with responsible agencies and interested tribes for archaeological resource discoveries and ensure that native American consultation is completed if an archaeological site is determined to be a Tribal Cultural Resource. 5. Ensure recommended measures are followed, if deemed necessary.	1. Prior to the start of ground disturbing activities. 2. During ground disturbing activities at Site 190. 3. Following any cultural resource discovery. 4. Following any cultural resource discovery. 5. Following any cultural resource discovery. 6. Following any cultural resource discovery.	

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
input and consultation. If the resource is determined to not be considered "unique" then no further mitigation would be required. However, if the archeologist determines that the cultural resources exposed are unique archeological resources, and construction cannot avoid the location, then the archeologist shall follow CEQA Guidelines § 15126.4 (b)(3) to determine the most suitable mitigation, which may require full data recovery of the site(s), in consultation with the County and any consulting Tribal representatives as needed.		6. Provide contractor clearance on when work may resume.		

Energy

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Geology, Soils, and Seismicity

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.		1.	1.	

Greenhouse Gas Emissions

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Hazards and Hazardous Materials

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Hydrology and Water Quality

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Land Use and Planning

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Mineral Resources

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Noise

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
NOI-1. Implement Construction Noise Reduction Measures. • To the extent feasible, contractor shall restrict the operation of noise-generation equipment to 7:00 am – 6:00 pm, Monday through Friday. • If weekend work is required, these activities would be further restricted to between 9:00 a.m. to 5:00 p.m. on Saturdays in compliance with the San Mateo County Noise Ordinance Code Chapter 4.88 • All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or noise-reducing features in good	1. Comply with recommended restrictions regarding hours of operation, equipment noise shielding mechanisms, and shutting off equipment when not in use, to measure specifications.	1. Ensure contractor compliance with listed measures.	1. During work activities.	

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
operating condition that met or exceed original factory specifications. • Mobile noise-generation equipment and machinery shall be shut off when not in use.				

Population and Housing

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Public Services

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Recreation

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Transportation

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Tribal Cultural Resources

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Utilities and Service Systems

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Wildfire

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				

Cumulative Impacts

Mitigation Measures	Contractor Responsibility	County Responsibility	Monitoring Schedule	Completion Date and Initials
None required.				