ADDENDUM TO THE FY 2016/2017 GRAVITY SEWER IMPROVEMENTS PROJECT FINAL INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

INTRODUCTION

This environmental document is an addendum to the FY 2016/2017 Gravity Sewer Improvements Project Final Initial Study/Mitigated Negative Declaration (IS/MND), State Clearinghouse No. 2017122069, by the Ross Valley Sanitary District (the District). Amendments to the Final IS/MND[1] for the project include: 1) addressing a change of construction methods, and 2) fulfilling requirements for submittal of a State Revolving Fund (SRF) application. These changes and additions to the project have necessitated further environmental review. As demonstrated in this Addendum, the IS/MND continues to serve as the appropriate document addressing the environmental impacts of these improvements pursuant to California Environmental Quality Act (CEQA).

Background

The IS/MND was prepared to address construction-level impacts to the existing deficient gravity sewer mains owned by the District in two areas: the Butterfield/Meadowcroft alignment (Butterfield alignment) and the Nokomis alignment (see Figures 2 and 3 in the IS/MND). The IS/MND evaluated potential environmental effects on aesthetics, agriculture and forestry, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. All potential impacts evaluated and identified in the IS/MND were considered to be less than significant through implementation of mitigation measures specified in the IS/MND.

Since the publication of the IS/MND, the Nokomis alignment was completed in 2018, and the Butterfield alignment has been broken up into the following phases: Sir Francis Drake Boulevard to 145 Meadowcroft Drive (completed in 2019), 145 Meadowcroft Drive to Butterfield Road at Arroyo Avenue (scheduled to be completed by 2020), and Butterfield Road from Arroyo Avenue to Kenrick Avenue (scheduled to be completed by 2021; seeking SRF funding). This Addendum only addresses the portions of the project located between

[1] Scheidegger & Associates. 2017. Ross Valley Sanitary District, Initial Study and Mitigated Negative Declaration, FY 2016/17 Gravity Sewer Improvements Project. Prepared for Ross Valley Sanitary District, San Rafael, CA. Scheidegger & Associates, Danville, CA. December.

145 Meadowcroft Drive and Butterfield Road at Arroyo Avenue (Butterfield/Meadowcroft-Arroyo) and in Butterfield Road from Arroyo Avenue to Kenrick Avenue (Butterfield/ Arroyo-Kenrick).

The District is requesting funds from the State Water Resources Control Board (SWRCB) through the SRF for the Butterfield/Arroyo-Kenrick alignment. The SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (EPA) and is subject to federal environmental regulations. EPA has chosen to use CEQA as the compliance base for the SRF Loan Program, which SWRCB refers to as CEQA-Plus. Information from this Addendum will be used to supplement information included in the SRF application package.

The following sections outline the changes to the project description (PD; see Attachment A), including the addition of an environmental alternatives analysis for the Butterfield/ Arroyo-Kenrick portion (required for the SRF application), and provide an analysis of the adequacy of the existing IS/MND in light of the changes to the PD consistent with the provisions of CEQA Guidelines Section 15162(a).

Purpose of Addendum to the IS/MND

When a proposed project changes or if there are changes in environmental setting, a determination must be made by the lead agency as to whether an addendum or subsequent environmental impact report (EIR) or MND is prepared. CEQA Guidelines Sections 15162 and 15164 set forth criteria to assess which environmental document is appropriate. The criteria for determining whether an addendum or subsequent MND is prepared are outlined below. If the criteria below are true, then an addendum is the appropriate document:

- No new significant impacts will result from the project or from new mitigation measures.
- No substantial increase in the severity of environmental impact will occur.
- No new feasible alternatives or mitigation measures that would reduce impacts previously found not to be feasible have, in fact, been found to be feasible.

Based upon the analysis provided below in the Environmental Analysis section, the changes to the project will not result in new significant impacts or substantially increase the severity of impacts previously identified in the IS/MND, and there are no previously infeasible alternatives that are now feasible. None of the other factors set forth in Section 15162(a)(3) are present. Therefore, an addendum is appropriate, and this addendum has been prepared to address the environmental effects of the changes to the project.

PROPOSED CHANGES TO THE PROJECT

The project involves the rehabilitation and wet weather diversion of existing gravity sewer mains owned by the District. This Addendum addresses the following changes to the PD, summarized below and in Attachment A. The project, inclusive of the revised PD, is herein referred to as the "Modified Project."

- Change in construction methods for the Butterfield/Meadowcroft-Arroyo alignment:
  - The Butterfield/Meadowcroft-Arroyo alignment will include open cut and pilot tube guided boring (PGTB; see Figure 1). (The IS/MND included open cut, cured in place pipe and pilot tube guided boring.)

- Addition of the Environmental Alternatives Analysis for Butterfield/Arroyo-Kenrick alignment to comply with the SRF application requirements. An alternative route for the Butterfield/Arroyo-Kenrick alignment is considered under Alternative 2 (Alternative 1 was evaluated in the IS/MND):
  - Under the No Project Alternative, the District would not meet the requirements of the cease and desist order (CDO) in response to instances where sewer system overflows reached waters of the state. In addition, the deficient existing gravity sewer mains located along the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments would not be rehabilitated and sewer overflow events will continue to occur.
  - Alternative 1 (Figure 1) would involve rehabilitation of the Butterfield/Arroyo-Kenrick alignment with the installation of a new diversion pipe by open cut on Butterfield Road between Arroyo Avenue and Kenrick Avenue. The Modified Project includes construction of approximately 1,441 linear feet of pipe along the route. This project route is expected to be constructed by open cut. Additionally, approximately 1,000 linear feet of laterals would be replaced or extended by open cut. The majority of these pipelines fall either within public right-of-way or in designated easements running through private property. Approximately 10 manholes would be replaced or installed, each requiring an excavation of approximately 8 feet by 8 feet.
  - Alternative 2 (Figure 2) would only involve the rehabilitation of the Butterfield/ Arroyo-Kenrick alignment with the replacement of the sewer mains and associated lower laterals located near the back of the curb/sidewalk on both sides of Butterfield Road and on the west side of Butterfield Road as it runs northerly from Arroyo Avenue within the current footprint/locations. This rehabilitation involves approximately 450 lineal feet of 6-inch sewer main replacement and the upsizing of 1,450 lineal feet of 6-inch sewer to 12-inch sewer. This work would be conducted through open-cut trenching and include

the replacement of all associated lower sewer laterals. The majority of the pipelines are located along the curb/sidewalk, which would necessitate the removal of the curb, gutter, and sidewalks along stretches of the roadway. In addition, portions of the sewer replacements would require the removal of landscaping and up to 20 trees, some of which could be considered heritage trees [2].

ENVIRONMENTAL ANALYSIS

The Modified Project described in the PD (Attachment A) does not significantly alter the findings within the IS/MND or require major revisions to the IS/MND. Therefore, the analysis of construction impacts has not changed from the information adopted in the IS/MND.

There are no changes to the impact analysis or findings in the IS/MND for any of the following, based on the changes to the PD described above:

- Agriculture and forestry; geology and soils; greenhouse gas emissions; hydrology and water quality; land use and planning; mineral resources; noise; population and housing; public services; recreation; transportation/traffic; hazards and hazardous materials; and utilities and service systems.

Minor technical changes and revisions to the impact analyses in the IS/MND are necessary for aesthetics, air quality, biological resources, and cultural and tribal resources to address the changes to the PD described above, including the addition of the alternatives analysis, as follows:

Aesthetics: The IS/MND identified less than significant or no impacts to aesthetics under Alternative 1; the change in construction method would have no impact on the evaluation of aesthetics.

With the addition of Alternative 2 in the Butterfield/Arroyo-Kenrick alignment, the significance criteria were re-evaluated. The following regional and local plans, polices and regulations are relevant to the Modified Project:

- Town of San Anselmo, Town Code. Chapter 13—Private Trees

[2] Town of San Anselmo, Town Code. Chapter 13. Section 4-13.02. "Heritage tree" shall mean a tree which has a trunk with a diameter at breast height (four and one-half (4.5′) feet of twenty-two inches (22″), or a tree which has special significance and is of a species and size designated in a resolution adopted by the Council, but "heritage tree" shall not mean an acacia tree or any other tree designated as a "nuisance" tree by resolution of the Council.

  - Section 4-14.02—Purpose: A large proportion of residential property within the town is on hillside and sloping terrain. The uncontrolled removal or destruction of trees destroys the scenic beauty, contributes to erosion, increases flood hazards, reduces property values, increases the costs of the construction and maintenance of drainage systems through the increased flow and diversion of surface waters, and adversely affects the local economy by reducing the attractiveness and desirability of the area as a place to live, work, and visit.
  - Section 4-13.-4—Developed Parcels: On any developed parcel of property, public or private, it shall be unlawful, unless a permit has been issued pursuant to the provisions of Section 4-13.05 of this chapter, to remove or destroy any heritage tree, or to cut or prune a heritage tree or its roots in such a way as to endanger or shorten its life, or to raise the soil level around any heritage tree.

- The Town of San Anselmo *General Plan*[3] Conservation Element (Conservation and Environmental Policy Guidelines) discusses aesthetic resources and their importance to the town's character. The following policy is relevant to the protection of visual resources in the Modified Project area.
  - Visual qualities and view potential of both natural and man-made settings shall be an equal consideration with other factors in any project review. Tree cutting and other activity detrimental to trees that enhance the character of the town or neighborhood shall be avoided wherever possible.

No Project Alternative: Under the No Project Alternative, the District would not meet the requirements of the CDO in response to instances where sewer system overflows reached waters of the state. In addition, the deficient existing gravity sewer mains located along the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments would not be rehabilitated and sewer overflow events will continue to occur. The No Project Alternative would not require any construction and would not affect aesthetics.

Alternative 2: Alternative 2 would require the removal of up to 19 trees (Table 1) on the east side and 1 tree on the west side of Butterfield Road for the replacement of sewer mains from Arroyo Avenue to Kenrick Avenue, which may be considered heritage trees per the Town of San Anselmo Municipal Code.

[3] Town of San Anselmo. No date. General Plan. Las amended February 12, 2019. Available at: https://www.townofsananselmo.org/DocumentCenter/View/5210/General-Plan-includes-Feb-2019-amendment?bidId=. Town of Anselmo, CA.

Table 1. Trees Required for Removal in the Modified Project Area

Species	Diameter at Breast Height (DBH) (inches)
Oak Tree (Native)	50
	48
	33
	28
	27
	26
	24
	24
	20
	20
	18
	18
	15
	15
Bay Tree (Native)	21
	14
	14
	12
	11
	11
Number of Trees	**20**

Notes:
Shaded cells are trees that may potentially be considered heritage trees.

As part of significance criteria, would the project:

- Have a substantial adverse effect on a scenic vista?
  - See Aesthetics discussion in the IS/MND. The Modified Project under Alternative 2 is a short-term construction activity that will not affect a scenic vista. The Modified Project is not located on a scenic vista, therefore there would be **no impact**.

- Substantially damage scenic resources, including, but not limited to trees, rocks, outcroppings, and historic buildings within a state or County scenic highway or County-designated scenic road?
  - The Modified Project under Alternative 2 requires the removal of trees along the roadway that would disturb the visual character and quality of the site. The Town of San Anselmo could consider the up to 8 oak trees flagged for removal as heritage trees. Under Alternative 2, the Modified Project would result in

potentially significant impacts to the existing visual character of the Modified Project area because there would be changes to the physical environment that would impact the visual composition, including the tree removal.

- If Alternative 2 were selected as the preferred alternative for the Modified Project, the implementation of the following mitigation measure would reduce the impact to a **less than significant** level.

VIS 1: Prior to construction activities, the District shall obtain tree removal permits from the Town of San Anselmo Public Works Department for any heritage tree removal. Tree removal will be performed in conformance with Chapter 9 (Section 4-9.06 Maintenance, injury, and removal of trees) of the Town of San Anselmo Municipal Code.

- Substantially degrade the existing visual character or quality of the site and its surroundings that are open to public view?
  - See Aesthetics discussion in the IS/MND. The Modified Project under Alternative 2 is a short-term construction activity that is not located on a designated scenic roadway; therefore, there would be **no impact**.

- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?
  - See Aesthetics discussion in the IS/MND. The Modified Project under Alternative 2 would not create a new source of substantial light or glare. As a result, potential lighting or glare impacts **are less than significant**.

Under Alternative 2, the impact determinations would remain consistent with those presented in the IS/MND.

Air quality: The IS/MND identified less than significant or no impacts. However, due to the change in construction methods to only include open cut for Butterfield/Meadowcroft-Arroyo and addition of Alternative 2 for Butterfield/Arroyo-Kenrick, the significance criteria for air quality impacts were re-evaluated.

No Project Alternative: Under the No Project Alternative, the District would not meet the requirements of the CDO in response to instances where sewer system overflows reached waters of the state. In addition, the deficient existing gravity sewer mains located along the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments would not be rehabilitated and sewer overflow events will continue to occur. The No Project Alternative would not require any construction and would be the same as existing conditions.

As part of significance criteria, would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?
  - See Air Quality discussion in the IS/MND. The Modified Project for the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments under Alternative 2 would not conflict with or obstruct with implementation of the Bay Area 2017 Clean Air Plan, and there would be **no impact**.

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
  - See Air Quality discussion in the IS/MND. Emissions from modified construction activities were estimated for the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments under Alternative 2 with the Roadway Construction Emissions Model Version 9.0 (RoadMod; developed by the Sacramento Metropolitan Air Quality Management District). Table 2 provides a summary of the average daily and annual criteria pollutant emissions from Modified Project construction activities, along with a comparison to the Bay Area Air Quality Management District (BAAQMD) significance thresholds and EPA General Conformity *de minimis* emissions thresholds.

Table 2. Annual and Average Daily Emissions from Sewer Construction Activities

	Annual Emissions (tons/year)					
Construction Activity	**ROG**	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Butterfield/Meadowcroft-Arroyo						
Open Cut and PTGB	0	0.01	0.02	-[a]	0	0
Federal Conformity Threshold	100	100	-	100	-	100
Exceeds Threshold?	No	No	No	No	No	No
Butterfield/Arroyo-Kenrick						
Alternative 2						
Open Cut	0	0.01	0.01	-[a]	0	0
Federal Conformity Threshold	100	100	-	100	-	100
Exceeds Threshold?	No	No	No	No	No	No

Table 2. Annual and Average Daily Emissions from Sewer Construction Activities

Construction Activity	Average Daily Emissions (pounds/day)[b]					
	ROG	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Butterfield/Meadowcroft-Arroyo						
Open Cut and PTGB	0.15	0.91	2.33	-[a]	0.09	0.04
BAAQMD Threshold	54	54	-	-	82	54
Exceeds Threshold?	No	No	No	No	No	No
Butterfield/Arroyo-Kenrick						
Alternative 2						
Open Cut	0.14	0.86	2.33	-[a]	0.09	0.04
BAAQMD Threshold	54	54	-	-	82	54
Exceeds Threshold?	No	No	No	No	No	No

Notes:

Source: Input parameters obtained through Coastland Civil Engineering, May 2019

[a] SO2 emissions are expected to be negligible due to the use of ultra-low sulfur diesel fuel.

[b] Average daily emissions calculated from annual emissions and 50 (Alternative 1) and 60 (Alternative 2) working days

Due to the very low level of annual emissions from the Modified Project, less than one ton per year, the Modified Project's annual emissions would be well below 10 percent of the San Francisco Bay Area Air Basin's annual emissions. Therefore, the Modified Project emissions would be below the *de minimis* level and less than 10 percent of the emissions inventory for nonattainment pollutants in the Air Basin, and further General Conformity analysis is not required. Accordingly, pursuant to CEQA-Plus requirements, the Modified Project for the Butterfield/Meadowcroft-Arroyo alignment and the Butterfield/Arroyo-Kenrick alignment under Alternative 2 complies with the federal Clean Air Act. The Modified Project would result in **less than significant** impacts as it would not violate an air quality standard or contribute significantly to an existing or projected air quality violation.

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
  - As noted above, the Modified Project activities for the Butterfield/Meadowcroft-Arroyo alignment and the Butterfield/Arroyo-Kenrick alignment under Alternative 2 that have the potential to impact air quality can be characterized as construction activities because of the short duration of the Modified Project and use of construction equipment. As demonstrated above, estimated

emissions are below significance thresholds listed in the EPA General Conformity and BAAQMD guidelines.

  - Since emissions from gasoline- and diesel-fueled vehicles and equipment are below significance thresholds, and fugitive dust emissions would be controlled with best management practices, the Modified Project would result in **less than significant** impacts as it would not violate an air quality standard or contribute significantly to an existing or projected air quality violation.

- Expose sensitive receptors to substantial pollutant concentrations?
  - See Air Quality discussion in the IS/MND. The Modified Project for the Butterfield/Meadowcroft-Arroyo alignment and the Butterfield/Arroyo-Kenrick alignment under and Alternative 2 would not expose sensitive receptors to substantial pollutant concentrations from diesel particulate matter (DPM), and exposure would be very low and localized. As a result, the cancer risks from the Modified Project's associated diesel emissions over a 30-year exposure period would be very small. Therefore, the impacts related to DPM would be **less than significant**.

- Create objectionable odors affecting a substantial number of people?
  - See Air Quality discussion in the IS/MND. Control Measures C10 and C11 will serve to minimize dispersal of odor and provide for control. Control Measure C12 provides a procedure to address odor complaints if received. The Modified Project for the Butterfield/Meadowcroft-Arroyo alignment and the Butterfield/ Arroyo-Kenrick alignment under and Alternative 2 would be **less than significant**.

Biological resources: With the addition of Alternative 2 in the Butterfield/Arroyo-Kenrick alignment, the significance criteria were re-evaluated. The following regional and local plans, polices, and regulations are relevant to the Modified Project:

- Town of San Anselmo, Town Code. Chapter 13—Private Trees
  - Section 4-13.-4—Developed Parcels: On any developed parcel of property, public or private, it shall be unlawful, unless a permit has been issued pursuant to the provisions of Section 4-13.05 of this chapter, to remove or destroy any heritage tree, or to cut or prune a heritage tree or its roots in such a way as to endanger or shorten its life, or to raise the soil level around any heritage tree.

Alternative 2 would require the removal of up to 20 trees on the east and west sides of Butterfield Road from Arroyo Avenue to Kenrick Avenue that may be considered heritage trees per the Town of San Anselmo Municipal Code for the replacement of sewer mains. See discussion in Aesthetics above.

As part of significance criteria evaluated, would the Modified Project:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Game or U.S. Fish and Wildlife Services?
  - See Biological Resources discussion in the IS/MND. Due to the extent of past development and absence of suitable habitat, no special-status species are believed to occur within the construction area in the area of potential effect (APE), and no adverse effects are anticipated; therefore, there would be **less than significant** impacts.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
  - See Biological Resources discussion in the IS/MND. The APE does not contain any riparian habitat or other sensitive natural community types, and **no impacts** are anticipated.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
  - See Biological Resources discussion in the IS/MND. The Sleepy Hollow Creek channel is the only federally protected water near the APE. All improvements near the Sleepy Hollow Creek corridor would be contained within Butterfield Road, with no disturbance within the creek channel; therefore, there would be **less than significant impacts.**

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
  - See Biological Resources discussion in the IS/MND. The Modified Project would not have any significant adverse impacts on wildlife movement opportunities or adversely impact native wildlife nursery sites; therefore, there would be **less than significant impacts.**

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
  - The Modified Project under Alternative 2 requires the removal of trees along the roadway that would conflict with the Town of San Anselmo tree removal policy

for heritage trees as the Town of San Anselmo could consider the oak trees flagged for removal as heritage trees. Under Alternative 2, the Modified Project would result in **potentially significant impacts** because there would be changes to the physical environment that require the removal of trees that could be classified as heritage trees.

  - If Alternative 2 were selected as the preferred alternative for the Modified Project, implementing mitigation measure VIS 1 would reduce the impact to a **less than significant** level.

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

  - See Biological Resources discussion in the IS/MND. No habitat conservation plans have been prepared addressing the APE, and the Modified Project would therefore not conflict with any adopted habitat conservation plans. The Modified Project would have **no impacts.** The overall project footprint (horizontal extent of excavation) is unlikely to change and, if it did change, would only expand to a minimal extent. Any expansion of the footprint is not expected to extend into any sensitive biological habitat areas (i.e., wetland jurisdictional features).
  - Pursuant to the SRF application requirements for the biological assessment/report that meets Endangered Species Act, Section 7 requirements, a current biological field survey (Attachment B) was performed in the Modified Project area. As such, the impact determinations would remain consistent with those presented in the IS/MND.

Cultural resources and tribal cultural resources: The overall project footprint (horizontal/vertical extent of excavation) did not change and, if it did change, would only expand to a minimal extent. The District will implement the mitigation measures for cultural resources presented in the Mitigation Monitoring and Reporting Plan.

Pursuant to the SRF application requirements for the National Historical Preservation Act, Section 106–Historic Properties Identification Report, a current records search from the California Historical Resources Information System extending to a half-mile beyond the Modified Project's APE was performed. No cultural resources were identified within the APE. As such, the impact determinations would remain consistent with those presented in the IS/MND.

Preferred Alternative

The District has identified Alternative 1 as the Environmentally Superior Alternative for CEQA because it balances the ability to achieve the Modified Project's objectives with environmental effects. Under the No Project Alternative, the District would not meet the requirements of the CDO in response to instances where sewer system overflows reached waters of the state and the sewer overflow events would continue to occur. Alternative 1 and Alternative 2 have comparable effects for potential impacts evaluated in this Addendum for Air Quality and Cultural Resources. However, Alternative 2 would have greater environment effects related to Aesthetics and Biological Resources, whereas Alternative 1 would have no impact. In addition, overall, Alternative 1 would minimize the environmental effects compared to Alternative 2 in this analysis.

CONCLUSIONS

The minor technical changes and additions described above do not affect the mandatory findings of significance presented in the IS/MND. The District will implement the mitigation measures for cultural resources presented in the Mitigation Monitoring and Reporting Plan to ensure that the project's impacts remain below levels considered significant. The impact determinations would remain consistent with those presented in the IS/MND. None of the factors listed in CEQA Guidelines Section 15162(a) are present; therefore, this addendum to the IS/MND is an appropriate level of environmental review for the proposed project changes, as identified in CEQA Guidelines Section 15164.

FIGURES

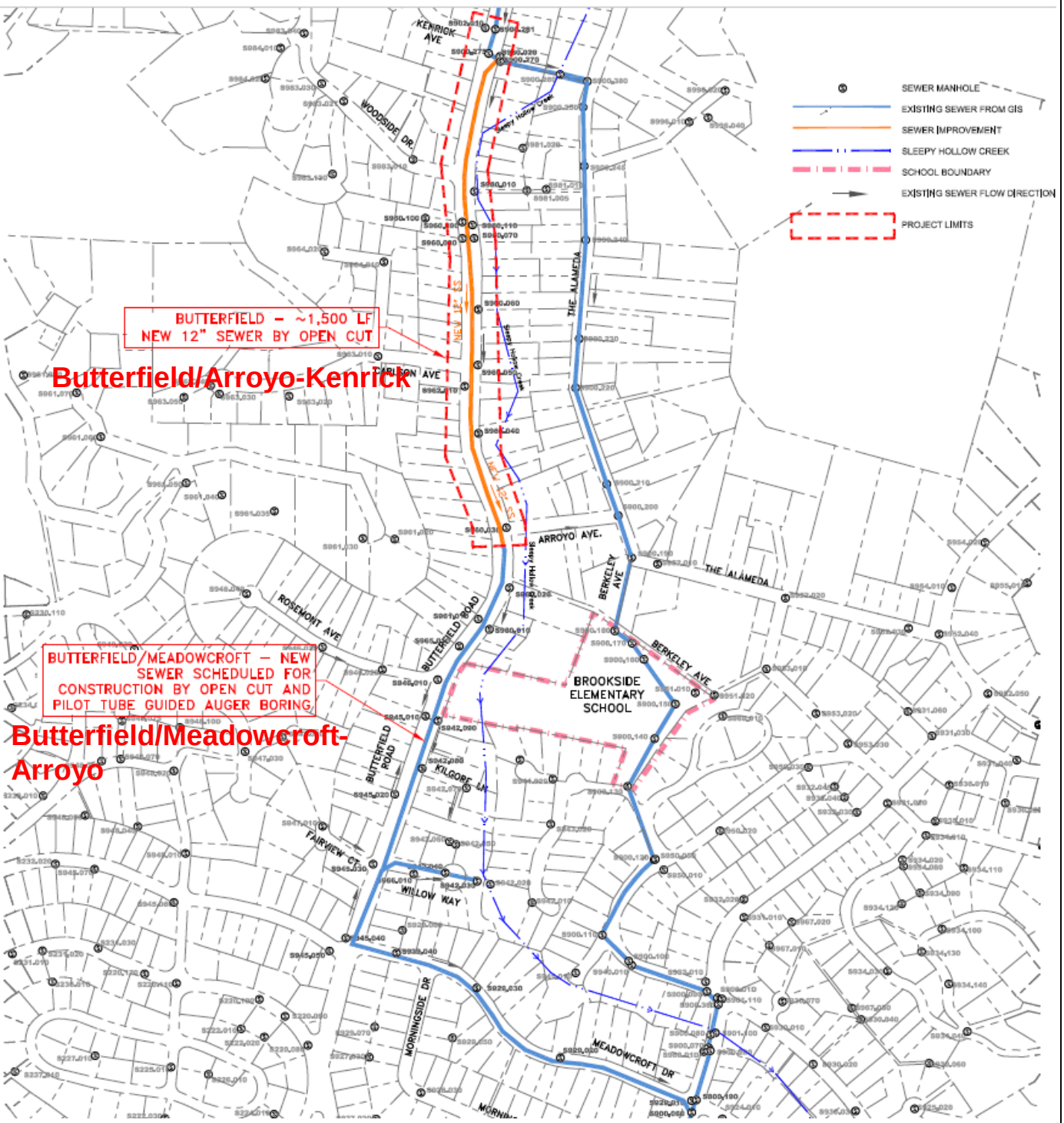

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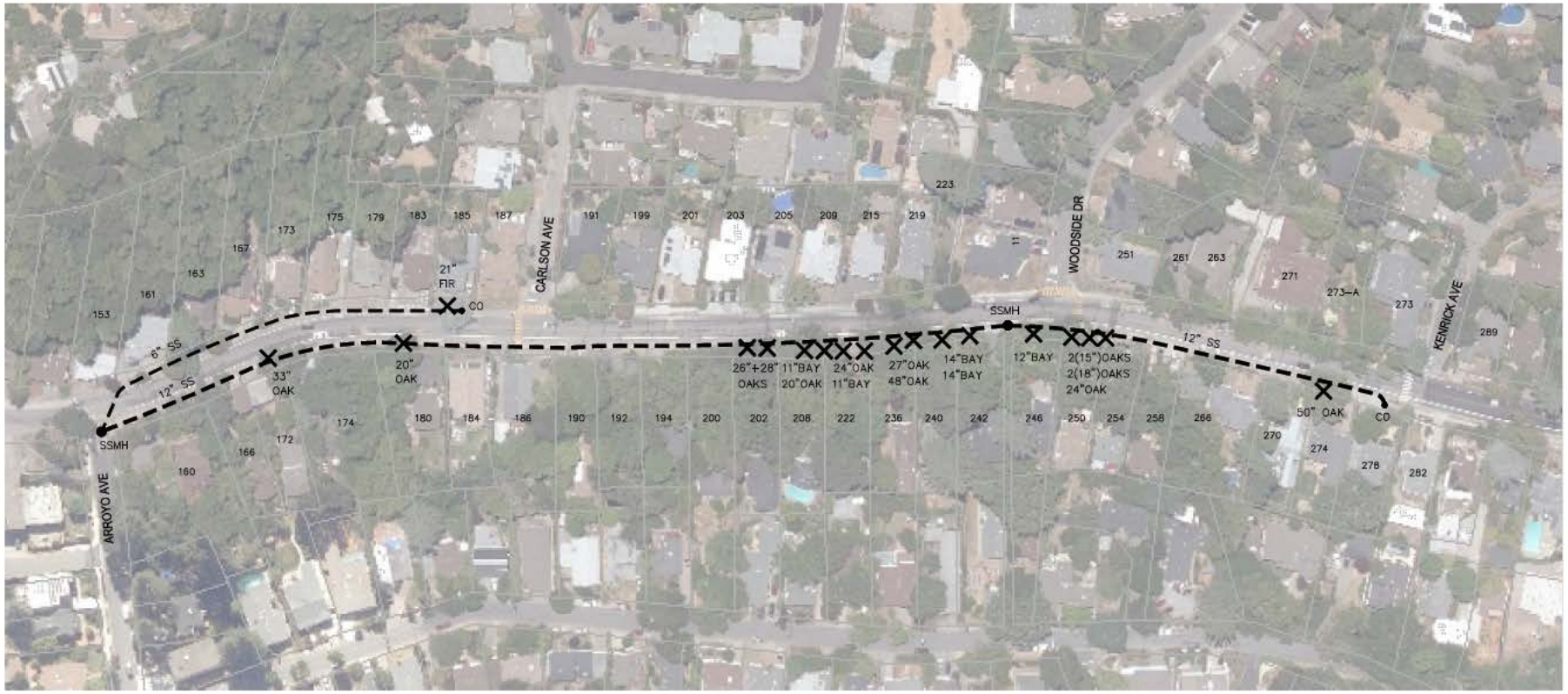
Figure 1.
Characteristics for the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick (Alternative 1) alignments

NOT TO SCALE



BUTTERFIELD ROAD

LEGEND

- EXISTING SEWER TO BE REMOVED
- 21" FIR — TREE SIZE AND TYPE TO BE REMOVED
- CO — EXISTING CLEANOUT
- SSMH — EXISTING SANITARY SEWER MANHOLE

Coastland Civil Engineering, Inc.
1400 Neotomas Avenue, Santa Rosa, CA 95405
707.571.8005 707.571.8037 Fax

ROSS VALLEY SANITATION DISTRICT
UPPER BUTTERFIELD
ALTERNATIVE 2

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Figure 2.
Characteristics for the Butterfield/Arroyo-Kenrick (Alternative 2) alignment

ATTACHMENT A

UPDATED PROJECT DESCRIPTION, GRAVITY SEWER IMPROVEMENTS PROJECT: BUTTERFIELD/ MEADOWCROFT - ARROYO AND BUTTERFIELD/ ARROYO - KENRICK GRAVITY REHABILITATION PROJECT

ATTACHMENT A

UPDATED PROJECT DESCRIPTION
Gravity Sewer Improvements Project: Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-KenrickSewer Rehabilitation Project

Chapter 1

INTRODUCTION AND PROJECT DESCRIPTION

1. **Project Title:** FY 2016/2017 Gravity Sewer Improvements Project—Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick Gravity Sewer Rehabilitation Project (Project)

2. **Lead Agency Name and Address:** Ross Valley Sanitary District
2960 Kerner Blvd.
San Rafael, CA 94901

3. **Contact Person and Phone Number:** Steve Moore
(415) 870-9764
(415) 460-2149 (Fax)

Paul Scheidegger
Scheidegger & Associates
(925) 210-2271
(925) 937-9026 (Fax)

Addendum Prepared by Integral Consulting Inc.
(415) 393-4750

4. **Project Location:**

Figures 1 and 2 show the location of the Project within the Ross Valley Sanitary District (RVSD or the District) service area. The Project is located within the Town of San Anselmo (Town) in central Marin County. The Town has a land area of about 2.75 square miles and is situated in a series of small valleys bordered by moderate to steep hillside slopes and ridge tops. The Town is flanked by the City of San Rafael to the east, the Town of Ross to the south, the Town of Fairfax to the west, and the County of Marin unincorporated area to the north.

5. Project Sponsor's Name and Address: Ross Valley Sanitary District
2960 Kerner Blvd.
San Rafael, CA 94901

6. General Plan Designation: Residential [1]

7. Zoning: Residential [2]

8. Description of Project:

Background

The RVSD was established in 1899. It is located approximately 15 miles north of San Francisco and directly south of the City of San Rafael. The service area is bounded on the east by the San Francisco Bay and on the west by the coastal hills. The District, formerly known as Sanitary District No. 1 of Marin County, is one of three wastewater collection agencies that form the Central Marin Sanitation Agency (CMSA). The District serves the wastewater collection needs of approximately 56,000 customers in Fairfax, San Anselmo, Ross, Larkspur, Bon Air, Sleepy Hollow, Kentfield, Kent Woodlands, Oak Manor, Greenbrae, and Murray Park.

Planning for the proposed Project began in 2005 as part of the District's Sanitary Sewer Hydraulic Evaluation and Capacity Assurance Plan.[3] Between 2008 and 2013, the District experienced an increase in the number and severity of sewer system overflows (SSOs). On May 13, 2013, the California Regional Water Quality Control Board (RWQCB) issued cease and desist order (CDO) No. R2-2013-0020 in response to instances where SSOs reached waters of the state.[4] The CDO required the District to develop and implement an Infrastructure Asset Management Plan (IAMP).[5] The IAMP presents projects to rehabilitate and replace the District's deficient wastewater facilities through the year 2020. The proposed Project is one of those projects.

Overview of Construction Methods

The proposed Project includes the replacement of existing sewer pipes and the installation of new pipes by open cut and pilot tube guided boring. The construction methods are described below:

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[1] Town of San Anselmo General Plan Land Use Map.
[2] Town of San Anselmo Zoning Map.
[3] MWH. 2006. Sanitary District No. 1 of Marin County (Ross Valley Sanitary District), Sanitary Sewer Hydraulic Evaluation and Capacity Assurance Plan. Final Report. August.
[4] San Francisco Bay Regional Water Quality Control Board. Order No. R2-2013-0020. May 13, 2013.

- *Open Cut*: Existing sewer line would be exposed and removed by means of construction excavation equipment. A new pipe would then be installed, and the trench would be backfilled.
- *Pilot Tube Guided Boring (PTGB)*: PTGB is a trenchless method of pipe installation employing a pilot tube, temporary auger casing, and jacking system for pushing the product pipe. First, an insertion pit (roughly 12-foot diameter) and a receiving pit (roughly 8 feet wide by 8 feet long) are excavated at each end of a pipe segment. The pipe is then installed in three passes. In the first pass, a 4-inch-diameter pilot tube sets the line and grade of the proposed pipe via a steering head and theodolite guidance system. In the second pass, a reaming head and auger tube casing are installed behind the pilot tube. In the third pass, the product pipe is connected to the auger casing and jacked into place, thereby removing the auger tube casing.

Project Summary

This Project involves the rehabilitation of existing gravity sewer mains along Butterfield Road in San Anselmo, California. The Project consists of two areas: 1) the Butterfield/ Meadowcroft-Arroyo alignment located between Meadowcroft Drive and Arroyo Avenue, and 2) the Butterfield/Arroyo-Kenrick alignment located between Arroyo Avenue and Kenrick Avenue. The primary objective of this Project is to relieve hydraulic and structural deficiencies in the area. RVSD's engineer, Harris Associates, has prepared several engineering documents for the Project alternatives including a Basis of Design Report, and 90% Plans and specifications. Figures 1 and 2 show the location of the Project and characteristics for the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments.

The Project will consist of the following components for the Butterfield/Meadowcroft-Arroyo alignment:

- Installation of a new 16-inch diameter sewer in Butterfield Road between Meadowcroft Drive and Arroyo Avenue. The new sewer would generally follow the same alignment as the existing sewer main. All connecting lower laterals would be replaced. The existing inverted siphon at Willow Way would be abandoned. Existing sewer pipes along Butterfield Road would be replaced through open cut installation. A new diversion sewer would be installed on Butterfield Road between Willow Way and Meadowcroft Drive, and on Meadowcroft Drive between Butterfield Road and Morningside Drive utilizing PTGB methods.

For the Butterfield/Arroyo-Kenrick alignment, the following alternatives will be considered:

- No Project Alternative: Under the No Project Alternative, the District would not meet the requirements of the CDO in response to instances where sewer system overflows reached waters of the state. In addition, the deficient existing gravity sewer mains along Butterfield Road would not be rehabilitated and sewer overflow events will continue to occur.

- Alternative 1: Under Alternative 1, the following activities will occur:
    - Installation of a new diversion pipe by open cut on Butterfield Road between Arroyo Avenue and Kenrick Avenue. Existing 6-inch sewer mains along the edges of the right-of-way would be abandoned in place and replaced with a new 12-inch sewer main located in Butterfield Road with flows and laterals re-routed to the new diversion sewer.
    - The construction route includes approximately 1,441 linear feet of pipe. The entire route is expected to be constructed by open cut. Additionally, approximately 1,000 linear feet of laterals would be replaced or extended by open cut. The majority of these pipelines fall either within public right-of-way or in designated easements running through private property. Approximately 10 manholes would be replaced or installed, each requiring an excavation of approximately 8 feet by 8 feet. This is the preferred alternative.

- Alternative 2: Under Alternative 2, the following activities would occur:
    - Replacement of the sewer mains and associated lower laterals located near the back of the curb/sidewalk on both sides of Butterfield Road and on the west side of Butterfield Road as it runs northerly from Arroyo Avenue within the current locations. This rehabilitation involves approximately 450 lineal feet of 6-inch sewer main replacement and the upsizing of 1,450 lineal feet of 6-inch sewer to 12-inch sewer.
    - This work would be conducted through open-cut trenching and include the replacement of all associated lower sewer laterals.
    - The majority of the pipelines are located along the curb/sidewalk, which would necessitate the removal of the curb, gutter, and sidewalks along stretches of the roadway. In addition, portions of the sewer replacements would require the removal of landscaping and trees.

In general, under both alternatives, excavated soil will be hauled away and trenches will be replaced with suitable material from offsite on a daily basis, minimizing the need for soil stockpiling. However, there will likely be stockpiles for a day or two at a time, both for offhaul (waiting for a truck to take it away) and for imported material (waiting for deposition to a trench).

Working Hour Limitations

Working hours will be generally limited to 8 a.m. to 5 p.m. on weekdays and 9 a.m. to 6 p.m. on weekends and holidays. Work hours beyond these referenced limits must be approved by RVSD and the Town. More specific work hour limitations by street location and season are listed below. The Contractor will verify school schedules prior to construction.

Location / Season	Potential Work Hours
Butterfield Road / Summer	6:30 a.m. to 4:00 p.m.
Butterfield Road / During School	9:00 a.m. to 3:00 p.m.

Construction Staging

Prior to the start of construction, the Contractor would determine appropriate staging areas. It is anticipated that the Contractor would stage in paved areas. However, the Contract Documents would require that any staging that takes place in un-paved areas would include proper stormwater control measures.

Bypass Pumping

Bypass pumping would be required. It is anticipated the Contractor would pump the sewage flow from a manhole upstream of the work area to a manhole downstream of the work area. Residents who have sewer lateral connections within the work area would be asked to minimize water use during work in their area. The Contractor would notify residents to not use washing machines or dishwashers, not to perform swimming pool discharges into the sanitary sewer system, and to limit the use of sinks, showers, and toilets during the period determined by the Contractor. The Contractor would be required to submit a bypass pumping plan adequate to bypass all flows around the work site.

Cleanup and Restoration

The Contractor will, at all times, keep property on which work is in progress and the adjacent property free from the accumulation of waste material or rubbish caused by employees or by the work. Upon completion of the construction, the Contractor will remove all surplus materials, temporary structures, rubbish, and waste materials resulting from their operation.

Overview of Environmental Control Measures

Numerous control measures would be incorporated into the Project's Contract Documents by RVSD to address environmental and public health and safety issues. Control measures are procedures known to further reduce the potential for impacts based on regulatory agency requirements, standards in the industry, and construction/operating experiences of RVSD and the design engineer.

Regulatory agency requirements would be contained in the permits for the Project. The Contractor would be required to obtain encroachment permits from the Town. These permits would contain specific requirements for traffic control and parking, emergency access, pavement restoration, noise control, and allowable work hours, and would provide for the safety of residents, pedestrians, and motorists. The Contractor would be required to comply with all conditions set forth in the encroachment permits and corresponding RVSD standards.

Coordination would be established and maintained with local residents and businesses along the alignment, and a mechanism for monitoring construction activities and addressing any complaints would be implemented. Any damaged landscaped and/or hardscaped areas would be restored, and a series of best management practices would be enforced to maintain site appearance; control dust, erosion, and stormwater discharge; and provide noise attenuation if needed. Biological and cultural resources technical reports have been completed that identify measures that would be included in the Contract Documents to address potential impacts. Deep excavations would be

needed in some areas to support the open cut construction methods. A variety of geotechnical and regulatory agency control measures would be included to provide for the constructability of the Project and its environmental compatibility, and to ensure the protection of workers' and the public's health and safety.

State Revolving Fund and CEQA Approach

RVSD is in the process of securing funding for the Butterfield/Arroyo-Kenrick alignment from the State Water Resources Control Board (SWRCB) State Revolving Fund (SRF) Loan Program. The SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (EPA) and, by agreement, is administered by the SWRCB. Because of partial federal funding, the loan program is subject to federal environmental regulations, most notably the federal Endangered Species Act, the National Historic Preservation Act, and the General Conformity Rule for the Clean Air Act, among others. Instead of the National Environmental Policy Act, EPA has chosen to use the California Environmental Quality Act (CEQA) as the compliance base for California's SRF Loan Program. To comply with applicable federal statutes and authorities, EPA established specific "CEQA-Plus" requirements in the Operating Agreement with the SWRCB for administering the SRF Loan Program. The appropriate document for CEQA compliance for the proposed Project is an Initial Study/Mitigated Negative Declaration (IS/MND) pursuant to Section 15162 of the 2015 CEQA Guidelines. CEQA-Plus requirements are addressed in this document.

Schedule

Construction on the Butterfield/Meadowcroft-Arroyo alignment would be completed by January 2020. Construction on the Butterfield/Arroyo-Kenrick alignment would be completed by summer 2021 (seeking SRF funding).

9. Surrounding Land Use and Setting

Land use characteristics near the Butterfield sewer alignments are shown on Figures 5 and 6 of the Final IS/MND. As shown, residential land use predominates in the areas. Sleepy Hollow Creek border the Project alignments. Sir Francis Drake Boulevard is a major east-west arterial in the area which transverses San Anselmo and provides access from U.S. 101 to West Marin. Butterfield Road is the principal vehicular access for the entire Sleepy Hollow neighborhood.

10. Other Permits and Project Approvals:

- Town (for encroachment permit)
- SWRCB, Division of Financial Assistance (funding through the SRF Loan Program)
- Town (for tree removal permit)

11. Consultation with Native American Tribes

The Federated Indians of Graton Rancheria (FIGR) submitted a notification request to RVSD on December 14, 2015, in accordance with Public Resources Code Section 21080.3.1, subd. (b), for formal notice and information on projects that the District serves

as Lead Agency under CEQA. For the proposed Project, RVSD sent a letter to FIGR on November 8, 2017, requesting information on tribal cultural resources within the Project area and whether FIGR would like to consult on this Project. No response was received.

12. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist in the Final IS/MND and Addendum.

☒ Aesthetics	☐ Agriculture & Forest Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service System	☒ Mandatory Findings of Significance

Mitigation Measures

The following mitigation measures shall be implemented to reduce the impact to less than significant levels for the Butterfield/Meadowcroft-Arroyo and Butterfield/Arroyo-Kenrick alignments:

ARCH 1. All ground disturbance excavation shall be monitored by a qualified archaeologist. The archaeologist shall develop a monitoring plan that provides for full-time monitoring of open cut pipe segments, insertion and extraction pits, and construction of new manholes, as well as spot-checking of specific areas when archaeological resources are less likely to be impacted. If resources are encountered, ARCH 2 shall be implemented.

ARCH 2. If resources are encountered, their potential significance will be evaluated and data can be recovered accordingly. Areas in proximity to shell mounds often have redeposited pockets or sparse shell middens resulting from removal/transport of shell materials. If such shell is found in the absence of any other cultural materials or human remains, or other cultural materials are present but deemed not historically significant, such materials shall be photographed and recorded. If the archaeologist identifies an intact and potentially significant archaeological resource, he or she shall develop a treatment plan in consultation with the RVSD, the SWRCB, the FIGR (in the event of a prehistoric site), and the State Historic Preservation Officer. This plan would likely entail a program of systematic data recovery in which cultural materials are documented and removed.

If Alternative 2 were selected as the preferred alternative for the Modified Project, the following mitigation measures would be implemented to reduce Aesthetic and Biological Resource impacts to less than significant:

VIS 1. Prior to construction activities, the District shall obtain tree removal permits from the Town of San Anselmo Public Works Department for any heritage tree removal. Tree removal will be performed in conformance with Chapter 9 (Section 4-9.06 Maintenance, injury, and removal of trees) of the Town of San Anselmo Municipal Code.

ATTACHMENT B

BIOLOGICAL RESOURCES ASSESSMENT

BIOLOGICAL RESOURCES ASSESSMENT

Ross Valley Sanitary District Upper Butterfield – Arroyo to Kendrick Gravity Sewer Improvement Project, Marin County, CA

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May 31, 2019

SOL ECOLOGY

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LIST OF ACRONYMS AND ABBREVIATIONS

CDFG/CDFW	California Department of Fish and Game/Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CRLF	California Red-Legged Frog
CWHR	California Wildlife Habitat Relationships
ESA	Federal Endangered Species Act
FYLF	Foothill Yellow-Legged Frog
Inventory	CNPS Inventory of Rare and Endangered Plants
PPT	Pacific Pond Turtle
Rank	California Rare Plant Rank
RWQCB	Regional Water Quality Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

On May 29, 2019 Sol Ecology, Inc. performed a biological resource assessment of the Ross Valley Sanitary District (RVSD) Large Diameter Gravity Sewer Improvement Project (Project) Upper Butterfield Road component – Arroyo Avenue to Kendrick Avenue. The proposed project includes the construction of approximately 1,500 linear feet of new sewer line within the existing roadway (Butterfield Road) between Arroyo Avenue and Kendrick Avenue, in San Anselmo, California (Area of Potential Effect or APE; Appendix A – Figure 1).

The purpose of the assessment is to review the Project in sufficient detail to determine to what extent the proposed action may affect any endangered or threatened species, jurisdictional features, and/or designated critical habitats with the APE as required for the Clean Water State Revolving Fund program and as necessary to ensure compliance with the federal Endangered Species Act (ESA), California Endangered Species Act (CESA), the Clean Water Act and other relevant federal and state regulations. It is also to gather information necessary to complete a review of potential biological resource effects from development of the proposed Project, under the guidelines of the California Environmental Quality Act (CEQA) for the Town of San Anselmo.

This report has been prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (ESA) 50 CFR 402; 16 U.S.C. 1536 (c) and follows the standards established in the National Environmental Policy Act (NEPA) guidance and ESA guidance provided by the United States Fish and Wildlife Service (USFWS). This report describes the results of the site survey and assessment of the APE for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential effects to sensitive biological resources that may occur from the proposed project and potential mitigation measures to compensate for those effects as warranted. This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visit. Photographs of the Project Site are provided in Appendix C.

The proposed project will have **no effect** on any federal or state listed plant or animal species nor designated critical habitat; furthermore, the project will not result in fill or modification of any wetlands, waters, or riparian features under the jurisdiction of any federal or state regulatory agency.

1.1 Project Setting

The APE consists of Butterfield Road and the adjacent right-of-ways (up to 75 feet on either side of the centerline), which includes adjacent sidewalks, landscaping, planted street trees, roadside ditches, and neighboring driveways. Sleepy Hollow Creek runs mostly parallel to Butterfield and intersects with the APE near Woodside Drive. Vegetation along the creek banks is dominated by invasive Algerian and English ivy (*Hedera canariensis and H. helix*), California wild rose (*Rosa californica*), common snowberry (*Symphoricarpos albus*), buckeye (*Aesculus californica*), Oregon

ash (*Fraxinus latifolia*), coast redwood (*Sequoia sempervirens*), California bay laurel (*Umbellularia californica*), valley oak (*Quercus lobata*), and coast live oak (*Q. agrifolia*). While many of these species are native, others appeared to be planted. Other landscaping along the roadway consists of native and non-native trees and shrubs including mostly ornamental plans such sweetgum (*Liquidambar styraciflua*), pyracantha (*Pyracantha ssp.*), privet (*Ligustrum ssp*), and oleander (*Nerium oleander*), etc. Where the creek intersects with the APE, a retaining wall is present that provides protection to the bank as it comes within close proximity to the roadway.

1.2 Project Description

The proposed project includes the construction of approximately 1,500 linear feet of open cut new sewer line along upper Butterfield Road between Arroyo Avenue and Kendrick Avenue, in San Anselmo, California. The new 12-inch sewer main consists of a trenchless CIPP, pipe bursting, and pilot tube guided boring (PTGB) along the Butterfield Road component. In addition, 15 new manholes will be installed within the existing roadway. All work will be performed within the existing roadway and/or shoulder.

2.0 METHODS

On May 29, 2019, the APE was traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, and (3) presence of essential habitat elements for any special-status plant or wildlife species.

2.1 Literature Review

Prior to the site visit, the Soil Survey of Marin County, California [U.S. Department of Agriculture (USDA) Web Soil Survey], Google Earth aerial images, USGS topographic quadrangle maps, the National Wetlands Inventory (NWI), and the Marin County Resource Conservation District watershed map for Sleepy Hollow Creek watershed were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the APE. *A Manual of California Vegetation, Online Edition* (CNPS 2019a) were reviewed to assess the potential for sensitive biological communities to occur in the APE. All alliances within the APE with a ranking of 1 through 3 were considered sensitive biological communities and mapped if present.

Potential occurrence of special-status species in the APE was evaluated by first determining which special-status species occur near the APE through a literature and database search. Database searches for known occurrences of special-status species focused on the San Rafael 7.5-minute USGS quadrangle and the eight surrounding USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the surrounding vicinity of the APE. Additional resources are provided in Section 6.0.:

- California Natural Diversity Database (CNDDB) records (CDFW 2019)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2019; Appendix B)
- CNPS Inventory records (CNPS 2019b)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)

2.2 Field Survey

The APE was evaluated for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, County-mapped riparian corridors, habitat connectivity corridors, and scenic corridors. Sensitive communities were identified

following A Manual of California Vegetation, Online Edition and includes California Wildlife Habitat Relationships (CWHR) habitat classifications.

The APE was also surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the U.S Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), or CDFW are present. This preliminary assessment was based primarily on the presence of wetland plant indicators, hydrology or wetland soils. A preliminary waters assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course.

Sol Ecology biologists also performed a site assessment to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present in the APE or not and whether the project would have the potential to result in effects to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special-status species was observed during the site visit, its presence is recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

3.0 RESULTS

3.1 Biological Communities and General Wildlife Use

Biological communities present in the APE were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2019). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations and are described below. Photographs of the APE are provided in Appendix C.

The majority of the APE is dominated by hardscape and/or developed areas including roadways, sidewalks, road shoulders, driveways, and landscaped areas. These areas typically do not support special status plants or plant communities due to their highly disturbed nature. However, a number of urban wildlife species may occur in the developed landscape including many migratory songbirds, smaller raptors such as Cooper's hawk (*Accipter cooperi*), mammals including racoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*), as well as a few amphibians such as California slender salamander (*Batrachoseps attenuates*), and Pacific tree frog (*Pseudacris regilla*) in moister landscaped areas. Additionally, Sleepy Hollow Creek and its associated habitat provides a movement corridor for many of these species as well as a number of fish and amphibian species including listed species described in Section 3.3.

A small amount of riparian habitat associated with Sleepy Hollow Creek intersects the APE. This habitat type is sensitive under California Fish and Game Code Section 1600 and work within this habitat requires notification to California Fish and Wildlife (CDFW) to determine whether a permit is necessary or not. Such work typically involves vegetation removal but may include encroachment onto creek banks as well. This habitat is characterized by California bay laurel and oak woodland habitat intermixed with other riparian species that depend on proximity to aquatic habitat in order to persist including Oregon ash, buckeye, wild rose, snowberry and ivy (invasive). As described previously, a large retaining wall with a height of approximately 30 feet or more extends along the western bank of the creek at this location. Sleepy Hollow Creek is also a Waters of the U.S. and state and activities within the creek are subject to regulation under the Clean Water Act.

3.2 Special-Status Plants

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with

California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA.

Based upon a review of the resources and databases given in Section 2.1, 38 special-status plant species have been documented within a five-mile radius of the APE (Appendix A, Figure 2). Based on the presence of biological communities described above as well as existing developed or hardscaped areas present, the APE has the potential to support none of these species. While there are a few rare plants that may occur in riparian habitats, none are likely to occur within the APE due to the very disturbed nature of the habitat where it comes into close proximity with the roadway. Species documented in the area are unlikely or have no potential to occur on the APE for one or more of the following reasons:

- Hydrologic conditions (e.g. marsh habitat, seeps, pond habitat) necessary to support the special-status plants do not exist on site;
- Edaphic (soil) conditions (e.g. rocky or clay soils) necessary to support the special-status plants do not exist on site;
- Topographic conditions (e.g. slopes) necessary to support the special-status plants do not exist on site;
- Unique pH conditions (e.g. serpentine) necessary to support the special-status plant species are not present on the APE;
- Associated vegetation communities (e.g. cismontane woodland, chaparral, coastal prairie) necessary to support the special-status plants do not exist on site.

3.3 Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, federal and state candidate species, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status and also considered under CEQA; bat roosts are protected under CDFW Fish and Game Code. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the California Fish and Game Code (CFGC), i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

A total of 24 special-status wildlife species have been documented within five miles of the APE (Appendix A, Figure 3). Based on the primarily developed nature of the APE, only five species

have potential to occur within the APE; these species are described in more detail below. all of these species are only potentially present in the adjacent riparian habitat and/or aquatic habitat of Sleepy Hollow Creek and are otherwise not likely to occur within the project footprint.

The remaining species found in the review of background literature were also determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the APE. A full list of special status wildlife species evaluated is provided in Appendix D, Table 1. Habitat elements that were evaluated but found to be absent from the immediate area of the APE or surrounding habitats subject to potential indirect effects include the following:

- Suitable vegetation communities such as savannah, chaparral, old growth and/or coniferous forest, mesic forest, grasslands and dense woodland habitats are absent;
- No wetland habitat, marshes, seeps, estuary habitat are present on or immediately adjacent to the APE;
- Suitable topographical features and/or soil types (e.g. friable soils, beaches etc.) including slopes and/or cliffs are not present;

Species with Potential to Occur within the APE:

Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a variety of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including bridges and both vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. There are multiple occurrences of pallid bat within five miles. Suitable maternity habitat is not available in the APE. However, night roost habitat is present on the underside of several vehicle and foot bridges located in the APE where the creek intersects with the APE.

Pacific (Western) pond turtle (*Actinemys marmorata*), CDFW Species of Special Concern. The Pacific pond turtle (PPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. Pacific pond turtle inhabits annual and perennial aquatic habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. Pond turtle also occupies man-made habitats such as stock ponds, wastewater storage, percolation ponds, canals, and reservoirs. This species requires low-flowing or stagnant

freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks and sand. To escape periods of high-water flow, high salinity, or prolonged dry conditions, PPT may move upstream and/or take refuge in vegetated, upland habitat for up to four months (Rathbun et al. 2002). Although upland habitat is utilized for refuging and nesting, this species preferentially utilizes aquatic and riparian corridors for movement and dispersal. This species is not documented within 5 miles; however, suitable habitat is present in Sleepy Hollow Creek and as such PPT may potentially be present. Suitable upland habitat is not present and PPT presence is limited to the creek channel only and would otherwise not be present within proposed activity areas.

California Red-legged Frog (*Rana draytonii*), Federal Threatened Species, CDFW Species of Special Concern. The California red-legged frog is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. Following breeding during the wet season, adult frogs may disperse into upland habitats which include areas up to 300 feet from aquatic and riparian habitat and are comprised of grasslands, woodlands, and/or vegetation that provide shelter, forage, and predator avoidance. At the end of the wet season, CRLF may disperse up to one-mile overland from upland or breeding habitats (often via riparian corridors) to aquatic non-breeding habitats (Bulger 2003, Fellers and Kleeman 2007). There are no occurrences of CRLF within five miles. However, suitable habitat is present in Sleepy Hollow Creek and its associated riparian habitat. It is presumed that while there is a low potential for CRLF to be present based on the lack of occurrences despite documented surveys of the entire channel; however, its presence cannot be ruled out. The presence of a retaining wall and deeply incised banks likely precludes this species from proposed activity areas. The APE is not within designated critical habitat for this species.

Foothill Yellow-legged Frog (*Rana boylii*), State Candidate. This species is found in woodland and forest streams and rivers and prefers flowing water with a rocky substrate (including at least some cobble-sized substrate), to which egg masses are attached. The foothill yellow-legged frog (FYLF) does not aestivate and is rarely found far from a source of permanent water. Recent studies have found that FYLF are rarely found more than 12 meters from the stream channel but may move upstream or downstream as far as 7 km in response to water availability (Thomson, Wright, and Shaffer 2016). The average distance adults were found outside the stream channel was 3 meters in all seasons with a maximum distance of 40 meters. Studies also found that metamorphosed FYLF's diet is comprised of terrestrial insects primarily including spiders, beetles, and flies. Populations have declined due to siltation and the introduction of bullfrogs and exotic fish. FYLF is documented in San Anselmo Creek which is hydrologically connected to Sleepy Hollow Creek. This species may potentially be present in the section of creek that intersects with the APE; however, it is not likely to occur outside the channel due to its steeply incised banks.

Steelhead - Central California Coast DPS (*Oncorhynchus mykiss irideus*), Federal Threatened. The Central California Coast DPS includes all naturally spawned populations of steelhead (and their progeny) in California streams from the Russian River to Aptos Creek, and the drainages of San Francisco and San Pablo Bays eastward to the Napa River (inclusive), excluding the Sacramento-San Joaquin River Basin. Steelhead typically migrate to marine waters after spending two years in freshwater, though they may stay up to seven. They then reside in marine waters for 2 or 3 years prior to returning to their natal stream to spawn as 4-or 5-year-olds. Steelhead adults typically spawn between December and June. In California, females typically spawn two times before they die. Preferred spawning habitat for steelhead is in perennial streams with cool to cold water temperatures, high dissolved oxygen levels and fast flowing water. Abundant riffle areas (shallow areas with gravel or cobble substrate) for spawning and deeper pools with sufficient riparian cover for rearing are necessary for successful breeding.

Marin Hesperian (*Vespericola marinensis*), Species of Local Concern. Marin Hesperian is a terrestrial mollusk or snail that is a species of local concern in Marin County. It commonly occurs in mesic habitats including riparian forest. There is a single documented occurrence within five miles of the APE. This species may be present in riparian habitat associated with Sleepy Hollow Creek but is not likely to occur in proposed areas of activity.

4.0 EFFECTS ANALYSIS AND RECOMMENDED MITIGATION MEASURES

The assessment of effects under CEQA is based on the change caused by the Project relative to the existing conditions at the proposed APE. In applying CEQA Appendix G, the terms "substantial" and "substantially" are used as the basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area. The CEQA and State CEQA Guidelines defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Pursuant to Appendix G, Section IV of the State CEQA Guidelines, the proposed Project would have a significant impact on biological resources if it would:

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

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

C. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

E. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Likewise, any potential effect to listed plants and animals must also be analyzed to determine if the project would adversely affect listed species and/or destruction of their designated critical habitat as defined under ESA or CESA.

4.1 Potentially Significant/Adverse Effects and Recommended Avoidance and Minimization Measures

Sensitive Biological Communities/Jurisdictional Habitats

A small amount of riparian habitat associated with Sleepy Hollow Creek intersects the APE. This habitat type is sensitive under California Fish and Game Code Section 1600 and work within this habitat requires notification to California Fish and Wildlife (CDFW) to determine whether a permit is necessary or not. Such work typically involves vegetation removal but may include encroachment onto creek banks as well. Sleepy Hollow Creek is also a Waters of the U.S. and State and activities within the creek are subject to regulation under the Clean Water Act.

BIO-1. *Potential adverse effects to either riparian habitat and/or Waters of the U.S. and/or State would also be considered a potentially significant impact under CEQA*. Because all proposed improvements will occur within the existing roadway and road shoulders, no effects to Sleepy Hollow Creek and/or its associated riparian habitat are anticipated. Best management practices would be implemented to prevent discharge of debris or roadway materials into storm drains and/or directly into the adjacent habitat. This would include temporary installation of filter fabric over storm drain inlets, use of fiber rolls, and other measures as needed to prevent accidental discharge. Additionally, any tree removal and/or tree trimming would be performed in conformance with Chapter 9 of the Town of San Anselmo Municipal Code. If tree removal is to occur within the section of Sleepy Hollow Creek where it intersects with the APE, CDFW will be notified to determine whether a Section 1602 Streambed Alteration Agreement is needed.

MM-1A. Implementation of best management practices would ensure potential effects to riparian habitat and/or Waters of the U.S. and State as a result of potential discharge of roadway debris are less than significant.

MM-1B. Notification to CDFW under Section 1602 of the California Fish and Game Code would ensure potential effects to riparian habitat as a result of tree trimming or removal are less than significant.

Special-Status Plant Species

No special status plants have potential to occur in the APE. As such there is no potential for adverse effects and no further recommendations are provided.

Special-Status Wildlife Species

The proposed Project would not have any significant adverse effects on wildlife movement opportunities. Wildlife in the vicinity of the APE are already acclimated to human activity, and construction-related disturbance would not cause any significant effects on wildlife movement

in the surrounding area. Species common to the area would continue to utilize the surrounding area, even during construction.

No essential fish habitat would be affected by the Proposed Project. The proposed open cut segment of the Project near Sleepy Hollow Creek would be constructed outside the active channel. Best management practices described above would be taken to prevent accidental discharge into aquatic habitat which could potentially impact special status species including PPT, CRLF, FYLF, steelhead, and Marin hesperian. Implementation of MM-1 would ensure effects to special status species listed above are less than significant.

Pallid bat, as well as other common bat species may potentially roost during the night under vehicular and/or foot bridges located along Sleepy Hollow Creek within the APE. Because proposed activities will occur at least 50 feet away from these structures and primarily occur during the daytime, no significant effects are anticipated and thus, no additional mitigation is proposed. Additionally, migratory birds acclimated to urban areas may potentially nest in trees located within the APE, including landscaped areas as well as riparian habitat associated with Sleepy Hollow Creek. Effects to nesting birds is considered significant under CEQA.

BIO-2. *Effects to nesting birds (both migratory and special status species) that result in direct mortality to eggs and/or chicks, nest failure, or nest abandonment are considered significant effects under CEQA*.

MM-2. To the extent practical, all construction activities should be performed outside the nesting season (between September 1 and February 1). If work must be performed during the nesting season, a pre-construction nesting bird survey should be performed in all areas within the proposed APE. If nests are found, an appropriately sized no-disturbance buffer should be placed around the nest at the direction of the qualified biologist conducting the survey. Buffers should remain in place until all young have fledged, or the biologist has confirmed that the nest has been naturally predated. Implementation of this measure will ensure impacts to nesting birds are less than significant.

6.0 REFERENCES

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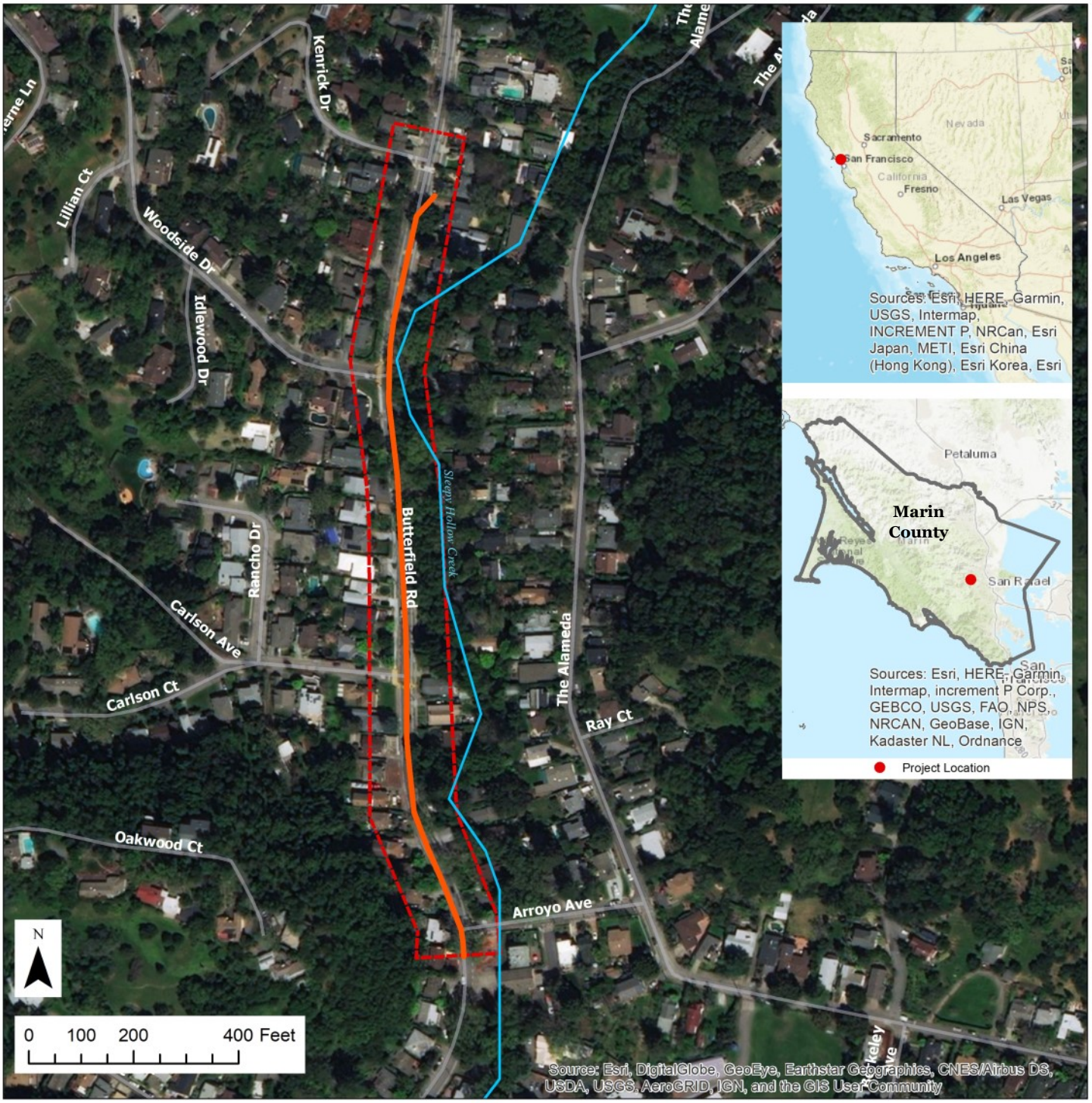
APPENDIX A

PROJECT FIGURES: SITE LOCATION MAP AND CNDDB DATABASE RESULTS

Figure 1: Location of Project Area

RVSD Upper Butterfield-Arroyo to Kendrick Project #947

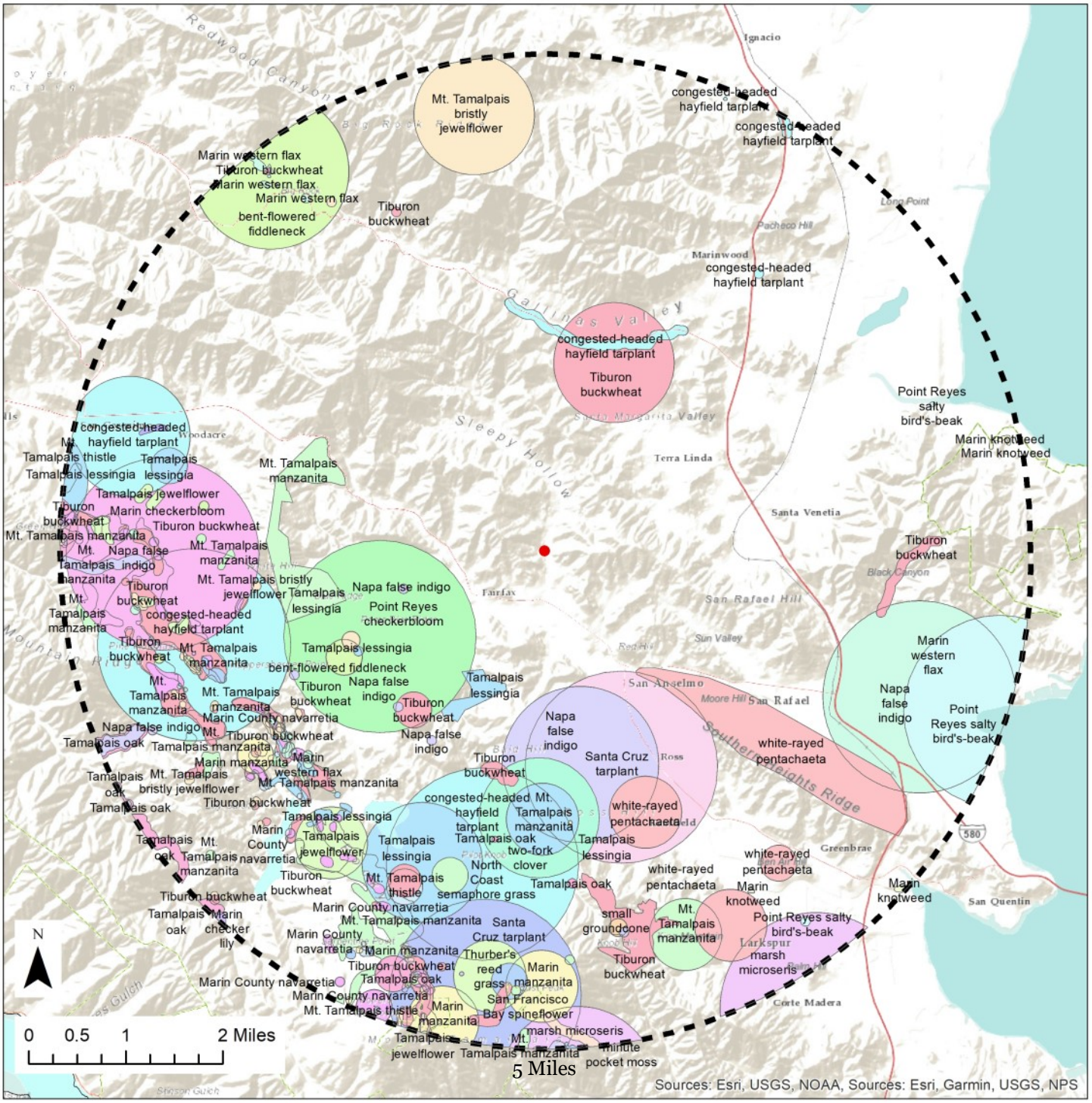


Date: 5-29-2019
Data: Sol Ecology Inc., Marin Co., Ross Valley Sanitary Dist., National Hydrography Dataset (NHD)

Base: ESRI
GIS: AJG

SOL ECOLOGY
solecology.com

Figure 2: Special Status Plant Species within 5 Miles of the Project Site
RVSD Upper Butterfield-Arroyo to Kendrick Project #947



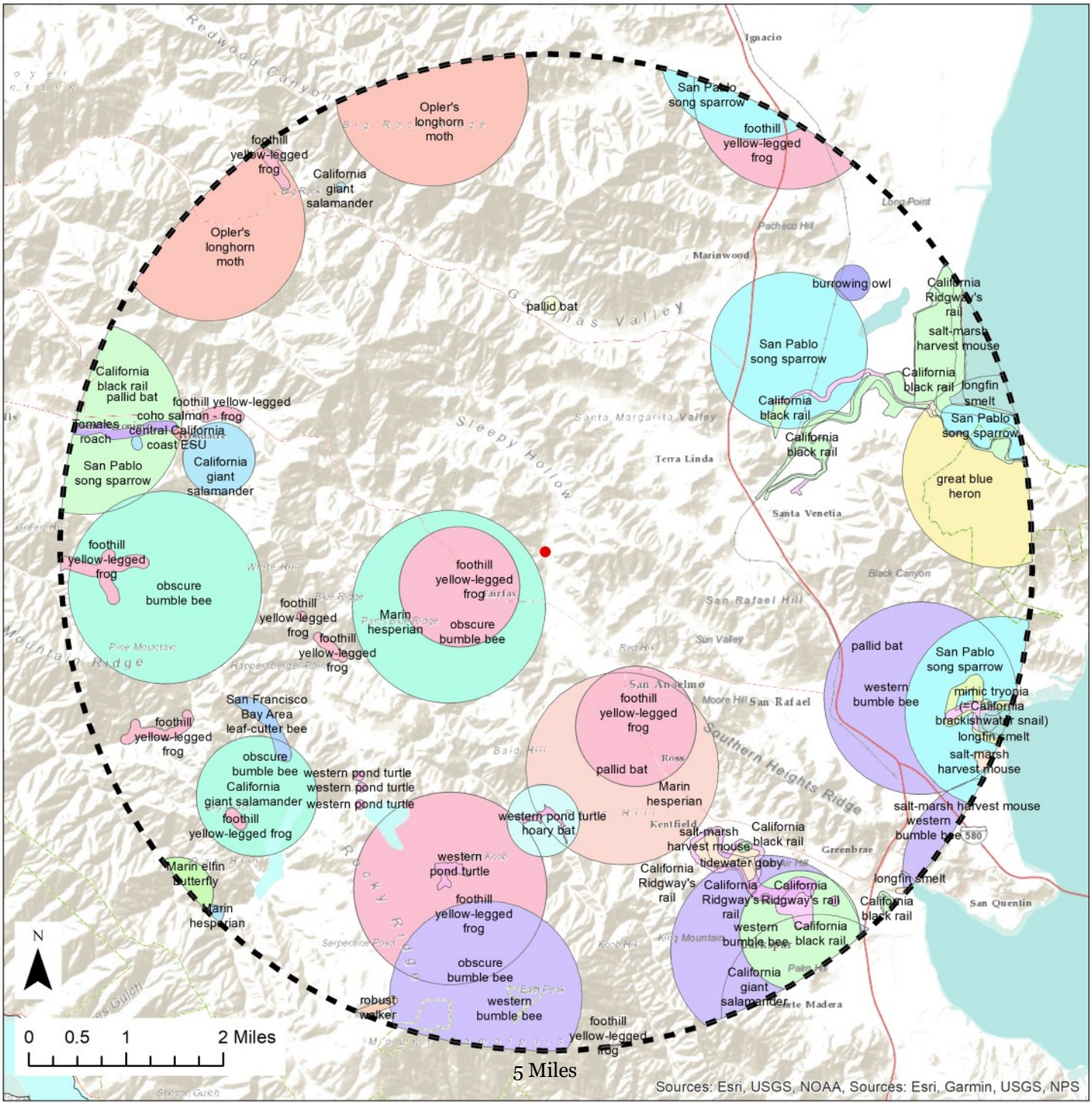
- Project Location
- 5-Mile Buffer
- Marin County navarretia (10)
- Marin checker lily (1)
- Marin checkerbloom (1)
- Marin knotweed (3)
- Marin manzanita (6)
- Marin western flax (6)
- Mason's ceanothus (1)
- Mt. Tamalpais bristly jewelflower (13)
- Mt. Tamalpais manzanita (11)
- Mt. Tamalpais thistle (10)
- Napa false indigo (11)
- North Coast semaphore grass (2)
- Point Reyes checkerbloom (1)
- Point Reyes salty bird's-beak (3)
- San Francisco Bay spineflower (1)
- Santa Cruz microseris (1)
- Santa Cruz tarplant (2)
- Tamalpais jewelflower (7)
- Tamalpais lessingia (8)
- Tamalpais oak (6)
- Thurber's reed grass (1)
- Tiburon buckwheat (13)
- bent-flowered fiddleneck (4)
- congested-headed hayfield tarplant (7)
- marsh microseris (2)
- minute pocket moss (1)
- small groundcone (1)
- thin-lobed horkelia (4)
- two-fork clover (1)
- white-rayed pentachaeta (4)

Date: 5-29-2019
Data: Sol Ecology Inc., CDFW
Base: ESRI
GIS: AJG

SOL ECOLOGY
solecology.com

Figure 3: Special Status Animal Species within 5 Miles of the Project Site

RVSD Upper Butterfield-Arroyo to Kendrick Project #947



- Project Location
- 5-Mile Buffer
- California Ridgway's rail (4)
- California black rail (8)
- California giant salamander (6)
- Marin elfin butterfly (1)
- Marin hesperian (3)
- Opler's longhorn moth (2)
- San Francisco Bay Area leaf-cutter bee (1)
- San Pablo song sparrow (5)
- Tomales roach (1)
- burrowing owl (1)
- coho salmon - central California coast ESU (1)
- foothill yellow-legged frog (12)
- great blue heron (1)
- hoary bat (1)
- longfin smelt (2)
- mimic tryonia (=California brackishwater snail) (1)
- obscure bumble bee (4)
- pallid bat (4)
- robust walker (1)
- salt-marsh harvest mouse (6)
- steelhead - central California coast DPS (1)
- tidewater goby (1)
- western bumble bee (4)
- western pond turtle (3)

Date: 5-29-2019
Data: Sol Ecology Inc., CDFW

Base: ESRI
GIS: AJG

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APPENDIX B

CNDDB RESULTS AND USFWS IPAC WITHIN 5 MILES OF THE APE

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (San Rafael (3712285) OR Bolinas (3712286) OR Point Bonita (3712275) OR San Geronimo (3812216) OR Novato (3812215) OR Petaluma Point (3812214) OR San Quentin (3712284) OR San Francisco North (3712274))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	90 90	117 S:1	0	1	0	0	0	0	0	1	1	0	0
Adela oplerella Opler's longhorn moth	G2 S2	None None		400 1,300	14 S:3	0	0	0	0	0	3	3	0	3	0	0
Alopecurus aequalis var. sonomensis Sonoma alopecurus	G5T1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	300 300	21 S:1	0	0	0	1	0	0	1	0	1	0	0
Amorpha californica var. napensis Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	200 2,000	76 S:18	1	0	1	0	1	15	4	14	17	1	0
Amsinckia lunaris bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	795 1,967	93 S:5	0	0	0	0	0	5	1	4	5	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	40 225	419 S:6	0	0	0	0	2	4	4	2	4	2	0
Aplodontia rufa phaea Point Reyes mountain beaver	G5T2 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	240 240	9 S:1	0	0	0	0	1	0	1	0	0	1	0
Arctostaphylos franciscana Franciscan manzanita	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	100 325	4 S:3	0	0	0	0	2	1	2	1	1	0	2

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Arctostaphylos montana ssp. montana Mt. Tamalpais manzanita	G3T3 S3	None None	Rare Plant Rank - 1B.3	500 2,220	15 S:15	0	1	0	0	0	14	11	4	15	0	0
Arctostaphylos montana ssp. ravenii Presidio manzanita	G3T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	75 325	7 S:6	0	1	0	0	4	1	5	1	2	1	3
Arctostaphylos virgata Marin manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	200 2,625	32 S:21	0	2	1	2	0	16	13	8	21	0	0
Ardea alba great egret	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	18 100	43 S:3	0	1	0	0	0	2	2	1	3	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	18 250	155 S:5	0	1	0	0	0	4	4	1	5	0	0
Arenaria paludicola marsh sandwort	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_SBBG-Santa Barbara Botanic Garden		16 S:1	0	0	0	0	1	0	1	0	0	0	1
Asio flammeus short-eared owl	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2 2	11 S:1	0	1	0	0	0	0	1	0	1	0	0
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden		25 S:1	0	0	0	0	1	0	1	0	0	1	0
Astragalus tener var. tener alkali milk-vetch	G2T1 S1	None None	Rare Plant Rank - 1B.2	50 50	65 S:1	0	0	0	0	1	0	1	0	0	1	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	-1 1,720	1984 S:3	1	0	1	0	0	1	1	2	3	0	0
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	20 2,500	181 S:15	0	0	0	0	0	15	12	3	15	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Bombus occidentalis western bumble bee	G2G3 S1	None None	USFS_S-Sensitive XERCES_IM-Imperiled	20 2,000	282 S:17	0	0	0	0	0	17	17	0	17	0	0
Caecidotea tomalensis Tomales isopod	G2 S2S3	None None		100 100	6 S:1	0	1	0	0	0	0	1	0	1	0	0
Calamagrostis crassiglumis Thurber's reed grass	G3Q S2	None None	Rare Plant Rank - 2B.1		15 S:1	0	0	0	0	0	1	1	0	1	0	0
Calicina diminua Marin blind harvestman	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Callophrys mossii marinensis Marin elfin butterfly	G4T1 S1	None None		200 510	3 S:2	0	0	0	0	0	2	0	2	2	0	0
Calochortus tiburonensis Tiburon mariposa-lily	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1	460 460	1 S:1	1	0	0	0	0	0	0	1	1	0	0
Calystegia purpurata ssp. saxicola coastal bluff morning-glory	G4T2T3 S2S3	None None	Rare Plant Rank - 1B.2	340 340	42 S:1	0	0	0	0	0	1	0	1	1	0	0
Cardamine angulata seaside bittercress	G4G5 S3	None None	Rare Plant Rank - 2B.1		32 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex comosa bristly sedge	G5 S2	None None	Rare Plant Rank - 2B.1	0 0	29 S:1	0	0	0	0	1	0	1	0	0	1	0
Carex lyngbyei Lyngbye's sedge	G5 S3	None None	Rare Plant Rank - 2B.2	100 100	29 S:1	0	0	0	0	0	1	1	0	1	0	0
Carex praticola northern meadow sedge	G5 S2	None None	Rare Plant Rank - 2B.2	125 125	14 S:1	0	0	0	0	0	1	1	0	1	0	0
Castilleja affinis var. neglecta Tiburon paintbrush	G4G5T1T2 S1S2	Endangered Threatened	Rare Plant Rank - 1B.2 SB_UCBBG-UC Berkeley Botanical Garden	400 900	7 S:4	1	2	1	0	0	0	0	4	4	0	0
Ceanothus decornutus Nicasio ceanothus	G1 S1	None None	Rare Plant Rank - 1B.2	800 950	2 S:2	0	0	0	0	0	2	0	2	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Ceanothus masonii Mason's ceanothus	G1 S1	None Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	780 1,500	8 S:5	1	1	1	0	0	2	2	3	5	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	0 10	138 S:2	0	1	0	0	0	1	1	1	2	0	0
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	0 370	68 S:15	0	2	2	0	2	9	10	5	13	2	0
Chorizanthe cuspidata var. cuspidata San Francisco Bay spineflower	G2T1 S1	None None	Rare Plant Rank - 1B.2	8 1,800	17 S:8	0	0	1	0	1	6	4	4	7	1	0
Cicindela hirticollis gravida sandy beach tiger beetle	G5T2 S2	None None		10 10	34 S:2	0	0	0	0	2	0	2	0	0	0	2
Circus hudsonius northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2 2	53 S:1	1	0	0	0	0	0	1	0	1	0	0
Cirsium andrewsii Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2	50 550	31 S:11	1	5	2	0	0	3	2	9	11	0	0
Cirsium hydrophilum var. vaseyi Mt. Tamalpais thistle	G2T1 S1	None None	Rare Plant Rank - 1B.2	600 2,000	14 S:14	2	6	0	0	1	5	9	5	13	0	1
Clarkia franciscana Presidio clarkia	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	75 300	4 S:3	0	1	1	0	1	0	1	2	2	1	0
Collinsia corymbosa round-headed Chinese-houses	G1 S1	None None	Rare Plant Rank - 1B.2	100 100	13 S:2	0	0	0	0	1	1	2	0	1	0	1
Collinsia multicolor San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	300 900	36 S:3	0	0	0	0	0	3	3	0	3	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	80 700	628 S:8	0	2	0	0	1	5	2	6	7	1	0
Cypseloides niger black swift	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFWS_BCC-Birds of Conservation Concern	600 600	46 S:1	0	0	0	0	0	1	1	0	1	0	0
Danaus plexippus pop. 1 monarch - California overwintering population	G4T2T3 S2S3	None None	USFS_S-Sensitive	10 250	383 S:27	0	9	9	1	6	2	17	10	21	2	4
Dicamptodon ensatus California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	25 1,300	234 S:26	5	4	0	1	0	16	10	16	26	0	0
Dirca occidentalis western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	350 2,000	71 S:4	0	0	0	0	0	4	1	3	4	0	0
Egretta thula snowy egret	G5 S4	None None	IUCN_LC-Least Concern	18 50	20 S:2	0	1	0	0	0	1	1	1	2	0	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	5 75	180 S:2	0	0	1	0	0	1	2	0	2	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	9 784	1367 S:13	1	4	2	1	0	5	2	11	13	0	0
Enhydra lutris nereis southern sea otter	G4T2 S2	Threatened None	CDFW_FP-Fully Protected IUCN_EN-Endangered MMC_SSC-Species of Special Concern	0 0	2 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Entosthodon kochii Koch's cord moss	G1 S1	None None	Rare Plant Rank - 1B.3		4 S:1	0	0	0	0	0	1	1	0	1	0	0
Erethizon dorsatum North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	210 210	508 S:1	0	0	0	0	1	0	1	0	0	1	0
Eriogonum luteolum var. caninum Tiburon buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.2	200 2,100	26 S:21	1	0	2	0	0	18	11	10	21	0	0
Eucyclogobius newberryi tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	10 10	127 S:3	0	0	0	0	2	1	3	0	1	0	2
Euphydryas editha bayensis Bay checkerspot butterfly	G5T1 S1	Threatened None	XERCES_CI-Critically Imperiled	650 650	30 S:1	0	0	0	0	1	0	1	0	0	0	1
Falco peregrinus anatum American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	12 12	57 S:1	0	1	0	0	0	0	0	1	1	0	0
Fissidens pauperculus minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	1,000 1,000	22 S:2	0	0	0	0	0	2	2	0	2	0	0
Fritillaria lanceolata var. tristulis Marin checker lily	G5T2 S2	None None	Rare Plant Rank - 1B.1	100 1,000	32 S:9	0	0	3	0	0	6	6	3	9	0	0
Fritillaria liliacea fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	10 900	82 S:9	0	3	3	0	2	1	3	6	7	1	1
Geothlypis trichas sinuosa saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	6 170	112 S:8	1	2	0	0	0	5	4	4	8	0	0
Gilia capitata ssp. chamissonis blue coast gilia	G5T2 S2	None None	Rare Plant Rank - 1B.1	10 600	37 S:9	0	0	0	0	2	7	5	4	7	0	2
Gilia capitata ssp. tomentosa woolly-headed gilia	G5T1 S1	None None	Rare Plant Rank - 1B.1	400 400	11 S:1	0	0	0	0	0	1	1	0	1	0	0
Gilia millefoliata dark-eyed gilia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	150 150	54 S:4	0	0	0	0	3	1	4	0	1	2	1

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Grindelia hirsutula var. maritima San Francisco gumplant	G5T1Q S1	None None	Rare Plant Rank - 3.2	100 700	15 S:6	0	4	1	0	0	1	6	0	6	0	0
Helianthella castanea Diablo helianthella	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		107 S:1	0	0	0	0	0	1	1	0	1	0	0
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	G5T2 S2	None None	Rare Plant Rank - 1B.2	20 1,400	52 S:11	0	1	2	0	0	8	9	2	11	0	0
Hesperolinon congestum Marin western flax	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	200 1,315	27 S:14	2	4	2	1	1	4	4	10	13	0	1
Heteranthera dubia water star-grass	G5 S2	None None	Rare Plant Rank - 2B.2		9 S:1	0	0	0	0	0	1	1	0	1	0	0
Holocarpha macradenia Santa Cruz tarplant	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	120 120	37 S:2	0	0	0	0	1	1	2	0	1	1	0
Horkelia cuneata var. sericea Kellogg's horkelia	G4T1? S1?	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	50 100	58 S:2	0	0	1	0	0	1	1	1	2	0	0
Horkelia marinensis Point Reyes horkelia	G2 S2	None None	Rare Plant Rank - 1B.2	500 500	36 S:1	0	0	0	0	0	1	1	0	1	0	0
Horkelia tenuiloba thin-lobed horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	1,100 2,100	27 S:5	1	2	0	0	0	2	3	2	5	0	0
Hydrochara ricksecker Ricksecker's water scavenger beetle	G2? S2?	None None		160 160	13 S:1	0	0	0	0	0	1	1	0	1	0	0
Hypogymnia schizidiata island tube lichen	G2 S1	None None	Rare Plant Rank - 1B.3	890 890	10 S:1	0	0	0	0	0	1	0	1	1	0	0
Kopsiopsis hookeri small groundcone	G4? S1S2	None None	Rare Plant Rank - 2B.3	400 1,785	21 S:4	0	0	1	0	0	3	3	1	4	0	0

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Lasiurus blossevillii western red bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	200 200	128 S:1	0	0	0	0	0	1	0	1	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority	180 1,215	238 S:5	0	0	0	0	0	5	5	0	5	0	0
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	0 375	303 S:23	5	7	0	2	2	7	9	14	21	2	0
Lavinia symmetricus ssp. 2 Tomales roach	G4T2T3 S2	None None	CDFW_SSC-Species of Special Concern	20 20	4 S:1	1	0	0	0	0	0	0	1	1	0	0
Layia carnosa beach layia	G2 S2	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	40 40	25 S:1	0	0	0	0	1	0	1	0	0	0	1
Leptosiphon rosaceus rose leptosiphon	G1 S1	None None	Rare Plant Rank - 1B.1		31 S:1	0	0	0	0	1	0	1	0	0	1	0
Lessingia germanorum San Francisco lessingia	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	10 300	5 S:3	0	1	0	0	1	1	1	2	2	0	1
Lessingia micradenia var. micradenia Tamalpais lessingia	G2T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	200 1,000	9 S:9	0	1	0	0	0	8	6	3	9	0	0
Lichnanthe ursina bumblebee scarab beetle	G2 S2	None None		20 20	8 S:1	0	0	0	0	0	1	1	0	1	0	0
Melospiza melodia pusillula Alameda song sparrow	G5T2? S2S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	10 10	38 S:1	0	0	0	0	0	1	1	0	1	0	0

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Melospiza melodia samuelis San Pablo song sparrow	G5T2 S2	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	0 20	41 S:17	3	4	0	0	0	10	10	7	17	0	0
Microcina tiburona Tiburon micro-blind harvestman	G1 S1	None None		500 575	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Microseris paludosa marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2	300 500	38 S:4	0	0	0	0	1	3	4	0	3	0	1
Microtus californicus sanpabloensis San Pablo vole	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern	2 10	8 S:4	0	0	0	0	0	4	4	0	4	0	0
Mielichhoferia elongata elongate copper moss	G5 S4	None None	Rare Plant Rank - 4.3 USFS_S-Sensitive	100 100	20 S:1	0	0	0	0	0	1	0	1	1	0	0
Navarretia rosulata Marin County navarretia	G2 S2	None None	Rare Plant Rank - 1B.2	900 2,100	15 S:12	1	2	0	0	0	9	6	6	12	0	0
Nycticorax nycticorax black-crowned night heron	G5 S4	None None	IUCN_LC-Least Concern	50 50	37 S:1	0	0	0	0	0	1	1	0	1	0	0
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	G4 S2?	Endangered Endangered	AFS_EN-Endangered	130 180	23 S:2	0	1	0	0	0	1	1	1	2	0	0
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	120 120	44 S:1	0	0	1	0	0	0	0	1	1	0	0
Pentachaeta bellidiflora white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	120 400	14 S:6	0	0	0	0	5	1	6	0	1	0	5
Phalacrocorax auritus double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	30 30	39 S:2	0	0	0	0	0	2	2	0	2	0	0
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2	200 200	42 S:2	0	0	0	0	0	2	2	0	2	0	0
Plagiobothrys diffusus San Francisco popcornflower	G1Q S1	None Endangered	Rare Plant Rank - 1B.1	200 200	17 S:1	0	0	0	0	1	0	1	0	0	0	1
Plagiobothrys glaber hairless popcornflower	GH SH	None None	Rare Plant Rank - 1A		9 S:1	0	0	0	0	1	0	1	0	0	1	0

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Plebejus icarioides missionensis Mission blue butterfly	G5T1 S1	Endangered None	XERCES_CI-Critically Imperiled	400 700	14 S:2	0	0	0	0	1	1	1	1	2	0	0
Pleuropogon hooverianus North Coast semaphore grass	G2 S2	None Threatened	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden	350 500	27 S:4	0	0	0	1	2	1	3	1	2	2	0
Pogonichthys macrolepidotus Sacramento splittail	GNR S3	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	0 0	15 S:1	1	0	0	0	0	0	0	1	1	0	0
Polemonium carneum Oregon polemonium	G3G4 S2	None None	Rare Plant Rank - 2B.2		16 S:3	0	0	0	0	0	3	3	0	3	0	0
Polygonum marinense Marin knotweed	G2Q S2	None None	Rare Plant Rank - 3.1	5 5	32 S:3	1	0	2	0	0	0	2	1	3	0	0
Pomatiopsis binneyi robust walker	G1 S1	None None		150 2,040	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Quercus parvula var. tamalpaisensis Tamalpais oak	G4T2 S2	None None	Rare Plant Rank - 1B.3	500 2,000	9 S:9	0	1	0	1	0	7	9	0	9	0	0
Rallus obsoletus obsoletus California Ridgway's rail	G5T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	2 18	99 S:14	2	5	0	0	1	6	6	8	13	1	0
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	18 1,975	2379 S:29	0	5	0	0	14	10	24	5	15	6	8
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	3 965	1519 S:29	2	5	1	0	0	21	9	20	29	0	0
Reithrodontomys raviventris salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	0 4	144 S:11	0	2	1	2	1	5	9	2	10	1	0

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Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	10 10	298 S:1	0	0	0	0	0	1	1	0	1	0	0
Sanicula maritima adobe sanicle	G2 S2	None Rare	Rare Plant Rank - 1B.1 USFS_S-Sensitive	250 250	17 S:1	0	0	0	0	1	0	1	0	0	0	1
Scapanus latimanus insularis Angel Island mole	G5THQ SH	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Sidalcea calycosa ssp. rhizomata Point Reyes checkerbloom	G5T2 S2	None None	Rare Plant Rank - 1B.2	300 300	34 S:1	0	0	0	0	0	1	1	0	1	0	0
Sidalcea hickmanii ssp. viridis Marin checkerbloom	G3TH SH	None None	Rare Plant Rank - 1B.1	500 1,390	4 S:2	0	0	0	0	0	2	2	0	2	0	0
Silene scouleri ssp. scouleri Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2		23 S:1	0	0	0	0	0	1	1	0	1	0	0
Silene verecunda ssp. verecunda San Francisco campion	G5T1 S1	None None	Rare Plant Rank - 1B.2	10 680	20 S:7	0	0	1	0	4	2	3	4	3	2	2
Sorex ornatus sinuosus Suisun shrew	G5T1T2Q S1S2	None None	CDFW_SSC-Species of Special Concern		15 S:1	0	1	0	0	0	0	0	1	1	0	0
Sorex vagrans halicoetes salt-marsh wandering shrew	G5T1 S1	None None	CDFW_SSC-Species of Special Concern	2 2	12 S:1	0	0	0	0	0	1	1	0	1	0	0
Spergularia macrotheca var. longistyla long-styled sand-spurrey	G5T2 S2	None None	Rare Plant Rank - 1B.2		22 S:1	0	0	0	0	0	1	1	0	1	0	0
Speyeria callippe callippe callippe silverspot butterfly	G5T1 S1	Endangered None	XERCES_CI-Critically Imperiled	900 900	12 S:1	0	0	0	0	1	0	1	0	0	0	1
Spirinchus thaleichthys longfin smelt	G5 S1	Candidate Threatened		0 0	46 S:2	0	0	0	0	0	2	0	2	2	0	0
Stebbinsoseris decipiens Santa Cruz microseris	G2 S2	None None	Rare Plant Rank - 1B.2	460 2,450	19 S:4	0	0	0	0	1	3	2	2	3	1	0
Streptanthus batrachopus Tamalpais jewelflower	G2 S2	None None	Rare Plant Rank - 1B.3	1,100 2,200	8 S:8	1	2	2	0	0	3	4	4	8	0	0

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Streptanthus glandulosus ssp. niger Tiburon jewelflower	G4T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	300 350	2 S:2	0	2	0	0	0	0	0	2	2	0	0
Streptanthus glandulosus ssp. pulchellus Mt. Tamalpais bristly jewelflower	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	420 2,200	24 S:24	4	5	0	0	0	15	16	8	24	0	0
Symphyotrichum lentum Suisun Marsh aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	0 0	175 S:1	0	0	0	0	0	1	1	0	1	0	0
Syncaris pacifica California freshwater shrimp	G2 S2	Endangered Endangered	IUCN_EN-Endangered	120 120	20 S:1	0	0	1	0	0	0	1	0	1	0	0
Talanites ubicki Ubick's gnaphosid spider	G1 S1	None None		150 150	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	50 210	589 S:4	0	0	0	0	0	4	4	0	4	0	0
Thaleichthys pacificus eulachon	G5 S3	Threatened None		0 0	10 S:1	0	0	0	0	0	1	0	1	1	0	0
Trachusa gummifera San Francisco Bay Area leaf-cutter bee	G1 S1	None None		200 1,130	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Trifolium amoenum two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	100 100	26 S:3	0	0	0	0	2	1	3	0	1	1	1
Trifolium hydrophilum saline clover	G2 S2	None None	Rare Plant Rank - 1B.2		49 S:1	0	0	0	0	0	1	1	0	1	0	0
Triphysaria floribunda San Francisco owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2	100 300	50 S:5	0	0	1	0	2	2	3	2	3	1	1
Triquetrella californica coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	360 525	13 S:2	0	0	0	0	0	2	0	2	2	0	0

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California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Tryonia imitator	G2	None	IUCN_DD-Data Deficient	0	39	0	0	0	0	1	1	2	0	1	0	1
mimic tryonia (=California brackishwater snail)	S2	None		6	S:2											
Vespericola marinensis	G2	None		25	23	0	0	0	0	0	11	11	0	11	0	0
Marin hesperian	S2	None		600	S:11											
Zapus trinotatus orarius	G5T1T3Q	None	CDFW_SSC-Species of Special Concern	25	5	0	0	0	0	0	2	2	0	2	0	0
Point Reyes jumping mouse	S1S3	None		200	S:2											

IPaC **U.S. Fish & Wildlife Service**

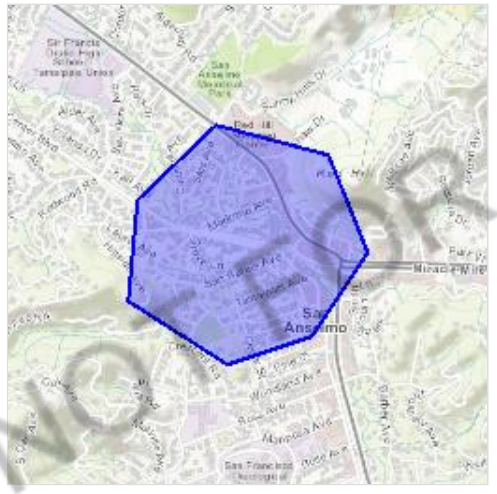
IPaC resource list

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

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

Location

Marin 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

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.

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.
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.

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

Mammals

NAME	STATUS

Salt Marsh Harvest Mouse Reithrodontomys raviventris — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/613

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

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

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

Northern Spotted Owl Strix occidentalis caurina — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1123

Short-tailed Albatross Phoebastria (=Diomedea) albatrus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/433

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

Reptiles

NAME	STATUS

Green Sea Turtle Chelonia mydas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6199

Amphibians

NAME	STATUS

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

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Mission Blue Butterfly Icaricia icarioides missionensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6928	Endangered
Myrtle's Silverspot Butterfly Speyeria zerene myrtleae No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6929	Endangered
San Bruno Elfin Butterfly Callophrys mossii bayensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Flowering Plants

NAME	STATUS
Marin Dwarf-flax Hesperolinon congestum No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5363	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened

Showy Indian Clover Trifolium amoenum — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6459

White-rayed Pentachaeta Pentachaeta bellidiflora — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7782

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

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

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird

species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Rail Laterallus jamaicensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7717	Breeds Mar 1 to Sep 15
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
California Spotted Owl Strix occidentalis occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7266	Breeds Mar 10 to Jun 15

Common Yellowthroat Geothlypis trichas sinuosa 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	Breeds May 20 to Jul 31
Nuttall's Woodpecker Picoides nuttallii 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	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae 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/4243	Breeds Apr 15 to Jul 20
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

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 and understand the FAQ "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.

APPENDIX C

SITE PHOTOGRAPHS

Sleepy Hollow Creek and associated riparian habitat within the APE.

Disturbed roadside habitat adjacent to Sleepy Hollow Creek.

Vehicle and footpath bridges may provide nighttime roost habitat for bats.

Large oak trees provide nesting habitat for migratory songbirds and raptors.

APPENDIX D

SPECIES POTENTIALS TABLE (WILDLIFE ONLY)

Appendix D. Table 1. Special Status Animals Potentials Table

Species	Status	Habitat	Potential for Occurrence
Mammals			
pallid bat *Antrozous pallidus*	SSC, WBWG High	Roost in crevices in rocky outcrops, cliffs, caves, mines, trees, and various human structures including bridges, bars, and buildings (occupied and unoccupied). Found in grasslands, woodlands, and forests most commonly in open edges along river channels.	**Potentially present.** A few vehicle and/or foot bridges over nearby Sleepy Hollow creek may provide nighttime roosting where the creek intersects with the APE near Woodside Rd. No daytime roosts are likely present due to frequent foot traffic.
hoary bat *Lasiurus cinereus*	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
salt-marsh harvest mouse *Reithrodontomys raviventris*	FE, SE, CFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Birds			
California least tern *Sternula antillarum browni*	FE, SE, CFP	Found along the Pacific coast and nests in barren to sparsely vegetated beaches and other shoreline areas.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
California black rail *Laterallus jamaicensis coturniculus*	ST, CFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
California Ridgway's (clapper) rail *Rallus obsoletus obsoletus*	FE, SE, CFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.

Species	Status	Habitat	Potential for Occurrence
Samuels (San Pablo) song sparrow *Melospiza melodia samuelis*	BCC, SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed, with gumplant and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
great blue heron *Ardea herodias*	none	Year-round resident. Nests colonially or semi-colonially in tall trees and on cliffs, also sequestered terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates. Breeding sites are protected by CDFW.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
burrowing owl *Athene cunicularia*	SSC, BCC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
western snowy plover *Charadrius nivosus (alexandrines) nivosus*	FT, SSC, BCC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
marbled murrelet *Brachyramphus marmoratus*	FT, SE	Predominantly coastal marine. Nests in old-growth coniferous forests up to 30 miles inland along the Pacific coast, from Eureka to Oregon border, and in Santa Cruz/San Mateo Counties. Nests are highly cryptic, and typically located on platform-like branches of mature redwoods and Douglas firs. Forages on marine invertebrates and small fishes.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.

Species	Status	Habitat	Potential for Occurrence
short-tailed albatross *Phoebastria albatrus*	FE, SSC	Highly pelagic; comes to land only when breeding. Nests on remote Pacific islands. A rare non-breeding visitor to the eastern Pacific.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
northern spotted owl *Strix occidentalis caurina*	FT, SCT SSC	Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California). Preys on mammals.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE. There are no documented occurrence records of this species within 5 miles.
Amphibians and Reptiles			
Pacific pond turtle *Emys marmorata*	SSC	Aquatic turtle present in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation and basking sites. Nests in uplands within 100 m.	**Potentially present.** This species may be present in Sleepy Hollow Creek which intersects with the APE near Woodside Rd. No suitable nesting habitat is present. Deeply incised banks preclude this species from habitat directly adjacent to Butterfield Road.
California giant salamander *Dicamptodon ensatus*	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
California red-legged frog *Rana draytonii*	FT, SSC, RP	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**Potentially present.** This species may be present in Sleepy Hollow Creek which intersects with the APE near Woodside Rd. However, there are no documented occurrence records of this species within 5 miles. Deeply incised banks preclude this species from

Species	Status	Habitat	Potential for Occurrence
			habitat directly adjacent to Butterfield Road.
foothill yellow-legged frog *Rana boylii*	SCT	This species is found in woodland and forest streams and rivers and prefers flowing water with a rocky substrate (including at least some cobble-sized substrate), to which egg masses are attached. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**Potentially present.** This species is documented in San Anselmo Creek which is hydrologically connected to Sleepy Hollow Creek. Deeply incised banks preclude this species from habitat directly adjacent to Butterfield Road.
Fishes			
tidewater goby *Eucyclogobius newberryi*	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, they need fairly still but not stagnant water and high oxygen levels.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Coho salmon - central CA coast ESU *Oncorhynchus kisutch*	FE, SE, NMFS	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
steelhead - central CA coast DPS *Oncorhynchus mykiss irideus*	FT, NMFS	Occurs from the Russian River south to Soquel Creek and Pajaro River and in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for one or more years before migrating downstream to the ocean.	**Potentially present.** This species is documented in Sleepy Hollow Creek which intersects with the APE near Woodside Drive.
longfin smelt *Spirinchus thaleichthys*	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt but can be found in completely freshwater to almost pure seawater.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.

Species	Status	Habitat	Potential for Occurrence
Invertebrates			
San Bruno elfin butterfly *Incisalia mossii bayensis*	FE	The San Bruno elfin butterfly inhabits coastal mountains near San Francisco Bay, in the fogbelt of steep north-facing slopes that receive little direct sunlight. It lives near prolific growths of the larval food plant, broadleaf stonecrop (Sedum spathulifolium), which is a low growing succulent associated with rocky outcrops (often in the shade) that occur on steep, mainly north- facing slopes in coastal scrub from 200 to 5,000 feet elevation. The San Bruno elfin is restricted to a few small populations, the largest of which occurs on San Bruno Mountain. Its habitat has been diminished by quarrying, off- road recreation, and urban development.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Mission blue butterfly *(Plebujus icarioides missionensis)*	FE	Found in coastal chaparral, scrub, and grassland habitatwhere larval host plant, lupinus spp. Are present.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Myrtle's silverspot butterfly *Speyeria zerene myrtleae*	FE, SSI	Restricted to the fog belt of northern Marin and southernmost Sonoma County, including the Point Reyes peninsula; extirpated from coastal San Mateo County. Occurs in coastal prairie, dunes, and grassland. Larval foodplant is typically *Viola adunca*. Adult flight season may range from late June to early September.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
western bumble bee *Bombus occidentalis*	SSI	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g. mammal burrows). Many plant species are visited and pollinated.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Robust walker *Pomatiopsis binneyi*	SSI	Amphibious snail living in humid habitat along the coast Range, on marshy ground and periodically flooded soil. Typically associated with perennial seeps and rivulets.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.

Species	Status	Habitat	Potential for Occurrence
Marin Hesperian *Vespericola marinensis*	SSI	Found in moist areas in coastal brush fields and chaparral, in riparian and mixed forest habitats.	**Potentially present.** This species may be present in riparian habitat associated with Sleepy Hollow Creek which intersects with the APE near Woodside Rd.
mimic tryonia (=California brackishwater snail) *Tryonia imitator*	SSI	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinity.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
Opler's longhorn moth *Adela oplerella*	SSI	Opler's longhorn moth is known from 18 APEs extending along the west side of San Francisco Bay from five miles southeast of Nicasio in Marin County south to the Gilroy area of Santa Clara County, and from the Oakland area on the inner Coast Ranges. Opler's longhorn moth inhabits serpentine-based soil grasslands and is dependent on their larval food plant cream cups (*Platystemon californicus*).	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.
obscure bumble bee *Bombus caliginosus*	SSI	Obscure bumble bee occurs along the Pacific Coast, from southern California to southern British Columbia, with scattered records from the east side of California's Central Valley. This species inhabits open grassy coastal prairies and Coast Range meadows. Nesting occurs in abandoned rodent nests, as well as above ground in in tufts of grass, old bird nests, rock piles, or cavities in dead trees.	**No potential.** Suitable habitat capable of supporting this species is not present within the APE.

FE/SE – Federal/State Endangered
FT/ST – Federal/State Threatened
SCE/T – State Candidate Endangered/Threatened
CFP – California Fully Protected
SSC – Species of Special Concern
BCC – Bird of Conservation Concern
SSI – Special Status Invertebrate
LC – Species of Local Concern
WBWG – Western Bat Working Group- Medium or High Priority Species