

BIOLOGICAL RESOURCE ASSESSMENT

Peters Creek Bridge Project

San Mateo County, California



Prepared for

PlaceWorks

2040 Bancroft Way, Suite 400
Berkeley, California 94704
(510) 848-3815

Prepared by

Environmental Collaborative

41 Jeanette Court
Walnut Creek, CA 94596
(510) 393-0770

December 2021

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION AND SUMMARY	1
SETTING.....	2
Background and Methods.....	2
Existing Vegetation and Wildlife Habitat Conditions.....	3
Special-Status Species.....	4
Jurisdictional Waters.....	10
REGULATORY CONTEXT	11
Endangered Species Act.....	11
Clean Water Act	12
Migratory Bird Treaty Act	12
California Endangered Species Act	13
California Environmental Quality Act	13
California Fish and Wildlife Code.....	13
Porter-Cologne Water Quality Control Act.....	14
Other CDFW Statutes, Codes, and Policies Affording Species Protection.....	14
San Mateo County General Plan.....	15
San Mateo County Significant and Heritage Tree Ordinances	15
IMPACT ANALYSIS	17
Project Controls	17
Significance Criteria	23
PERSONS RESPONSIBLE FOR REPORT PREPARATION	32

LIST OF FIGURES

Figure 1. Special-Status Plants and Sensitive Natural Communities	33
Figure 2. Special-Status Animals and Critical Habitat.....	34
Figure 3. Murrelet Detections at Peters Creek Old-Growth Forest in 2020 and 2021.....	35
Tree Removal and Project Plans	36

TABLES

Table 1. General Plan Goals and Policies Relevant to Biological Resources	16
---	----

APPENDIX

Appendix A. Project Description	37
Appendix B. Species Lists from CNDDDB Record Search and IPac Report.....	45
Appendix C. Representative Photographs of Study Area.	72

INTRODUCTION AND SUMMARY

This Biological Resource Assessment (BRA) has been prepared to address the potential effects of the proposed Peter's Creek Bridge Construction Project (Project) along Peter's Creek in San Mateo County, California (**Figure 1**). The Study Area for the Project consists of an existing access road and two bridge crossing locations over Peter's Creek. The goal of the Project is to rebuild an existing bridge and construct a new bridge over Peter's Creek on property that is owned and managed by Save the Redwoods League. These bridges would be part of an access improvement program that allows for safe and low impact access to the property as well as the adjacent State Park lands and trails. The bridges would be clear span structures that are 50 feet and 100 feet in span, respectively. Bridge 1 is the shorter of the bridges and entails replacing a rusting railroad flat car bridge at the downstream end of the study area. It is currently unsafe to support movement of construction equipment across it. Bridge 2 would be a new suspension bridge placed between two high banks about 800 feet upstream of the first bridge. A detailed project description, map of the bridge locations and project plans are contained in **Appendix A**.

The access route to Bridge 2 would be along a historic road that was likely constructed in the early 1900's as part of logging operations in the area. The road is generally wider than 15 feet, but slight improvements would be needed in some locations to make it safe for construction access. Several large downed tree trunks would have to be moved. A short area of the roadway has been narrowed by bank erosion and temporary access improvements would be necessary to provide a minimum width of 12 feet to allow safe equipment and material access.

Construction would be timed during the dry period when stream flows are lowest and is estimated to take two years to complete. Replacing Bridge 1 the first year and constructing Bridge 2 the second year after construction access is possible. Temporary coffer dams would be installed, and any stream flows diverted into a gravity diversion pipe to allow dewatering of the construction reaches at both bridge locations. A third smaller creek diversion/exclusion dam would be needed at the base of the bank where the access road would be temporarily widened. Design for this feature would ultimately be the responsibility of the building contractor but it is likely that some shoring would be needed along the toe of the creek bank within ordinary high water to support the road extension. This area would be isolated from the active creek flow to avoid affecting water quality and aquatic habitat.

Project construction would utilize a variety light trucks and heavy equipment. Workers would likely have ½ ton pickups or greater for vehicle access to the site. Heavy equipment may include a 130 excavator or larger, backhoe/skip loaders, small dozer (D3 or less), truck or track mounted drilling rigs, and small compact front end loaders. A small crane maybe needed briefly. Portable generators would be used to supply electric power during construction. Construction of each bridge is estimated to take 2-3 months to complete. Construction would presumably start no later than August 1st and would be completed and/or winterized by October 15th of that construction season, unless additional restrictions are imposed to avoid sensitive habitat and meet permit conditions from regulatory agencies.

Project improvements would require modifications to the regulated waters associated with the Peter's Creek and has a potential to affect several special-status species and disrupt nesting birds during construction. Appropriate measures would be taken by the construction contractor as part of the proposed Project (see discussion of Project Controls below under Impacts) to prevent erosion and sedimentation, degradation of downgradient waters, minimize potential impacts on special-status species and avoid any bird nests in active use. Implementation of these Project Controls

would collectively serve to avoid or minimize potential most adverse effects. However, some potential impacts would remain significant given the need to secure agency authorizations for impacts to regulated waters and temporary construction impacts on special-status species. These would require implementation of recommended mitigation measures to reduce potential impacts of the proposed Project to a less than significant level, as discussed below.

SETTING

Background and Methods

Biological resources associated with the Study Area were identified through a review of available background information and conduct of a field reconnaissance survey. Available documentation was reviewed to provide information on general resources in the Peters Creek area of San Mateo County, presence of sensitive natural communities, and the distribution and habitat requirements of special-status species which have been recorded from or are suspected to occur in the Project vicinity. Literature reviewed included: the occurrence records of the California Natural Diversity Data Base (CNDDDB) of the California Department of Fish and Wildlife (CDFW); and the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants*; a list of federally-listed and candidate species prepared as part of Information for Planning and Consultation (IPac) report by the U.S. Fish and Wildlife Service (USFWS) for the Project vicinity; and assessments on possible presence of marbled murrelet (*Brachyramphus marmoratus*) in the Study Area, among other sources. Marbled murrelet is listed as a threatened species under the federal Endangered Species Act and an endangered species under the California Endangered Species Act, and their possible presence was considered a major issue of concern with regard to the Project. In 2020 Save the Redwoods League retained Alex Rinkert to conduct a *Habitat Assessment* (HA) for possible presence of the marbled murrelet in the Study Area in 2020.¹ Mr. Rinkert subsequently conduct protocol surveys in 2020 and 2021 to determine presence of nesting activity in the Study Area, the results of which were reported in the survey report *Marbled Murrelet Surveys at Peters Creek Old-Growth Forest* (SR).² Ms. Hannah Ormshaw, Natural Resource Manager for San Mateo County Parks, was consulted regarding mitigation strategies and the regulatory agency permitting process utilized by San Mateo County for improvements to County Park facilities within known occupied nesting habitat for marbled murrelet, including Memorial Park.³ Lists from the CNDDDB records search and IPac Report for the Study Area are contained in **Appendix B**.

A field reconnaissance survey of the Study Area was conducted by James Martin, biologist and principal of Environmental Collaborative, on September 4, 2019, to provide an overview of conditions, extent of regulated waters and suitability for possible presence of special-status species. During the field reconnaissance all plant species were identified to the degree necessary to determine rarity. Wildlife species observed during the field reconnaissance were also noted. No protocol surveys were conducted by Mr. Martin, but the HA and SR prepared by Mr. Rinkert were reviewed and used in assessing potential impacts on marbled murrelet. The following provides a summary of existing biological and wetland resources in the Study Area, an assessment of potential impacts of the Project, and recommended mitigation where significant impacts have been identified.

¹ Rinkert, Alex, 2020, *Habitat Assessment and Mitigation Recommendation for Marbled Murrelets at Peters Creek*, prepared for Save The Redwoods League, 13 June.

² Rinkert, Alex, 2021, *Marbled Murrelet Surveys at Peters Creek Old-Growth Forest, Final Report*, prepared for Save the Redwoods League, October.

³ Ormshaw, Hannah, Natural Resource Manager, San Mateo County Parks, 2021, personal communication with James Martin, Environmental Collaborative, on August 13.

Existing Vegetation and Wildlife Habitat Conditions

The Study Area is part of the intercoastal watershed lands along Peters Creek dominated by redwood forest. The redwood forest in the Study Area forms a dense overstory composed of coast redwood (*Sequoia sempervirens*) with other secondary species such as Douglas fir (*Pseudotsuga menziesii* var. *menziesii*), coast live oak (*Quercus agrifolia*), tanoak (*Notholithocarpus densiflorus*), madrone (*Arbutus menziesii*), and interior live oak (*Quercus wislizeni*). Much of the redwood forest understory is sparsely vegetated with a thick duff layer. Understory species are largely perennial forbs, shrubs and vines, including sword fern (*Polystichum munitum*), California wood fern (*Dryopteris arguta*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), California huckleberry (*Vaccinium ovatum*), trillium (*Trillium chloropetalum*), redwood sorrel (*Oxalis oregana*), elk clover (*Aralia californica*), and snowberry (*Symphoricarpos mollis*), among others. A narrow broken band of deciduous riparian woodland occurs along the banks of Peters Creek and tributary drainages. Riparian trees, such as big leaf maple (*Acer macrophyllum*), California bay (*Umbellularia californica*), white alder (*Alnus rhombifolia*), and red willow (*Salix laevigata*) grow as scattered individuals along the creek banks where sufficient sunlight and available water allow for their establishment and survival. Representative photographs of the Study Area are contained in **Appendix C**.

Sensitive natural communities are natural community types that The CDFW maintains a California Natural Community List⁴ based on the National Vegetation Classification Standard hierarchical classification system. Natural community types are ranked using NatureServe's Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the CNDDDB. Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities by the CDFW and are to be addressed in the CEQA environmental review process. Old growth redwood and Douglas fir forests, including those in the Study Area, are recognized by the CDFW as sensitive natural community types given their rarity in the State.

The Peters Creek watershed provides high quality forest and riparian habitat for a wide range of wildlife, including a number of highly sensitive species with legal protective status. Areas of old-growth forest trees provide essential nesting habitat for the marbled murrelet (MAMU), a federally-threatened and State-endangered seabird that typically nests high in the trees. Black-tailed deer, raccoon, gray squirrel, deer mouse, San Francisco dusky-footed woodrat, coyote, black bear, and mountain lion occur in the forest and mosaic of grassland and scrub in the watershed. The forest and riparian habitats support a wide variety of resident and migratory birds, including: white-breasted nuthatch, Steller's jay, Oregon junco, northern flicker, acorn woodpecker, common raven, great-horned owl, and Northern saw-whet owl, among many others. Amphibians and reptiles found on the forest floor and creek corridor include: California newt, slender salamander, western toad, Pacific chorus frog, aquatic garter snake, and western rattlesnake. Occurrences of the federally-threatened California red-legged frog (*Rana aurora*) have been reported from the Peters Creek watershed and may disperse along the Project reach.

Riparian corridors serve as critical linkages for aquatic and terrestrial wildlife movement. When surface water is available, it provides seasonal habitat for aquatic-dependent organisms and serves as a source of drinking water for terrestrial mammals and birds. The channel serves as movement corridors for aquatic and terrestrial species that use the protective cover found along the creek banks. Coho salmon (*Oncorhynchus kisutch*) and steelhead (*Oncorhynchus mykiss irideus*), both listed special-status species, were historically known from the upper reaches of Peters Creek and

⁴ California Department of Fish and Wildlife, Biogeographic Data Branch, 2021, *California Natural Community List*, August 18.

tributaries, but major downstream barriers now reportedly prevent successful migration into the Project reach.

Special-Status Species

Special-status species are plants and animals that are legally protected under the State and/or federal Endangered Species Acts⁵ or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the Endangered Species Acts often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" ⁶ of these species.

A record search conducted by the CNDDDB, together with review of lists from the USFWS and CNPS indicates that occurrences of numerous plant and animal species with special-status have been recorded from or are suspected to occur in the Peters Creek area of San Mateo County. **Figures 1 and 2** show the known occurrences of special-status plants and animals, respectively, as mapped by the CNDDDB within about three miles of the Study Area. Designated critical habitat mapped by the USFWS for the federally-threatened California red-legged frog and the federally-threatened and State-endangered MAMU are also shown in **Figure 2**. Designated critical habitat for California red-legged frog extends throughout the Study Area. The designated critical habitat for MAMU follows the boundary of Portola Redwoods State Park just upstream of the Study Area. A summary of CNDDDB data for each of the species with occurrences mapped in **Figures 1 and 2** is contained in **Appendix B**, including species name, status and occurrence data. The following provides a summary of the special-status plant and animal species considered to have the highest potential for occurrence in the Study Area vicinity.

Plant Species. Based on the review of CNDDDB data, the CNPS *Inventory* and other information, numerous special-status plant species were suspected to possibly occur in the vicinity of the Study Area. **Figure 1** shows the distribution of the 10 special-status plant species with known occurrences within about five miles of the Study Area. The status of each of these and other special-status plant species known from the south San Mateo vicinity is provided in the CNDDDB Summary Table in **Appendix B**. Most of these species are considered rare (list 1B) by the CNPS in their electronic *Inventory of Rare and Endangered Plants of California*. A few have legal protective status under the ESAs, including the State and federal-endangered San Mateo thorn-mint (*Acanthomintha duttonii*), the State-endangered Ben Lomand spineflower (*Chorizanthe pungens* var. *hartwegiana*), and the State and federally-endangered Crystal Springs fountain thistle (*Cirsium fontinale* var. *fontinales*). However, suitable habitat for these listed species and most other special-status plant species is absent from the Study Area or would have been detected during the field

⁵ The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

⁶ "Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further defined by the U.S. Fish and Wildlife Service (USFWS) to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFW also considers the loss of listed species habitat as take, although this policy lacks statutory authority and case law support under the CESA.

reconnaissance survey in 2019. All plants encountered during the field survey were identified to the degree necessary to determine rarity, in accordance with CDFW protocols for rare plant surveys. Groundcover species is generally absent or common perennial species characteristic of forest understories.

There remains a remote potential for presence of three special-status plant species in the limits of construction which could have been indiscernible at the time of the field reconnaissance in September 2019. None have any legal protective status under the Endangered Species Acts but have a California Rare Plant Rank (CRPR) of 1B (rare and endangered in California and elsewhere in the CNPS *Inventory* and warrant further consideration under CEQA. Information on each of these species is summarized as follows.

Minute pocket moss. Minute pocket moss (*Fisidens pauperculus*) has a CRPR of 1B.2. This moss species is found in north coast coniferous forest communities with damp coastal soil. The closest occurrence reported by the CNDDDB less than a mile south of the Study Area in Portola State Park on hard moist soil within redwood forest (see **Figure 1**). Suitable habitat for this species occurs throughout the Study Area in the moist forest understory along Peters Creek.

Dudley's lousewort. Dudley's lousewort (*Pedicularis dudleyi*) has a CRPR of 1B.2. It is a perennial herb which blooms from April to June. This species occurs in maritime chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland communities. Numerous occurrences of Dudley's lousewort have been reported within Portola State Park along Peters Creek less than a half mile downstream of the Project reach (see **Figure 1**). Suitable habitat for this species occurs throughout the Study Area in the moist forest understory along Peters Creek.

White-flowered rein orchid. White-flowered rein orchid (*Piperia candida*) has a CRPR of 1B.2. It is a perennial herb which blooms from May to September, sometimes as early as March. This species is sometimes found in serpentine-derived soils within broadleafed upland forest, lower montane coniferous forest, and north coast coniferous forest communities. The nearest occurrence is documented in Portola State Park about two miles downstream of the Project reach near the confluence of Peters and Pescadero creeks (see **Figure 1**). Suitable habitat for this species occurs throughout the Study Area in the moist forest understory along Peters Creek.

Animal Species. Based on the review of CNDDDB data and the USFWS IPac Report species list a number of special-status mammal, birds, reptiles, amphibians, fish, and invertebrate species are known or suspected to occur in the Peters Creek vicinity of San Mateo County. **Figure 2** shows the occurrences of the nine special-status reported by the CNDDDB within about three miles of the Study Area. The Peters Creek corridor through the Study Area reach have been mapped as presumed occupied habitat for steelhead and California giant salamander (*Dicamptodon ensatus*). An occurrence of California red-legged frog and MAMU occurs about a quarter mile upstream of the Study Area in Portola State Park. Designated critical habitat for these two species encompasses the Study Area vicinity as indicated in **Figure 2**. The following provides information on special-status animal species considered to have some potential for occurrence in the Study Area.

Marbled murrelet. Marbled murrelet (MAMU) is federally-listed as threatened and State-listed as endangered. It occurs in North America, from Alaska south to Santa Cruz, California, and wintering as far south as Baja California, Mexico. It is closely associated with old-growth and mature forests for nesting, and population declines have been attributed in part to loss or modification of forest habitat. It is federally-listed as threatened and State-listed as endangered. Critical habitat has been

mapped over Portola State Park and lands to the west of the Study Area. Occurrences have been observed in the forests along Peters Creek, upstream and downstream of the Study Area.

The HA conducted for the Study Area in 2020 included an inspection of suitable nesting habitat within about 400 meters of the proposed construction areas for the Project. Numerous platforms suitable for nesting were observed on mature trees along the existing access road, along Peters Creek, and the surrounding hillsides. Nests are typically established in mature redwood and Douglas fir trees, where a flat platform at least four inches in diameter is present on branches or burls. The presence of epiphytic growth (lichens and mosses), duff mats, and old unused squirrel or bird nests are all features that can contribute to the suitability of a tree platform for nesting, together with protective cover and access for flight to and from the nest location.

Protocol level surveys were conducted for MAMU for the Study Area in 2020 and 2021, as summarized in the SR. The survey effort followed the standardized protocol for dawn MAMU surveys in California,⁷ and were conducted between April 15 and August 5, with surveys beginning 45 minutes before local sunrise and continued at least 75 minutes after sunrise. During each survey, all detections of MAMU were recorded, together with the maximum number of Steller's jays (*Cyanocitta stelleri*) and common ravens (*Corvus corax*) detected at one time, and all other birds detected. The average and maximum decibels of ambient noise during the survey were also recorded during each survey. A total of 30 dawn murrelet surveys were conducted for two sites in the Study Area, 18 in 2020 and 12 in 2021. MAMU were detected on 7 of 18 (39%) surveys in 2020, and on 7 of 12 (58%) surveys in 2021. There was a total of 158 detections over the course of the 30 surveys, with most (70%) detections of MAMU being auditory. The 48 visual detections consisted of 43 (90%) flights above the canopy and 5 (10%) flights below the canopy. Flights below the canopy is considered behavior that indicates a stand as being occupied for nesting by MAMU. The results of the protocol level surveys clearly indicate nesting behaviors along the Peters Creek corridor through the Study Area, with the majority of observations made from stations closest to the creek (see **Figure 3** from SR).

In the MAMU recover plan,⁸ the USFWS identifies two primary constituent elements which are considered essential to provide and support suitable nesting habitat for successful reproduction within designated critical habitat. These consist of: 1) individual trees with potential nesting platforms, and 2) forested areas within 0.5 mile of individual trees with potential nesting platforms and a canopy height of at least one-half the site potential tree height. Potential nest trees are typically greater than 32 inches diameter at breast height (DBH) with potential platforms or deformities (broken tops, forked limbs) that could support adult MAMU and overhead protection from weather and predation. Forests with a canopy height of at least one-half the height of the potential nest site tree height may reduce microclimate differences such as windthrow during storms and generally provide a more attractive landscape for nesting. As evidence by the critical habitat designation of the adjacent parklands, and results of the HA and SR, these primary constituent elements have been determined to be present within the Study Area.

Other Bird Species. Numerous other bird species with special-status have varying potential for occurrence in the Study Area vicinity. Most of these are recognized as California Species of Special

⁷ Evans Mack D, Ritchie WP, Nelson SK, Kuo-Harrison E, Harrison P, Hamer TE, 2003, *Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research*, Pacific Seabird Group unpublished document available at <http://www.pacificseabirdgroup.org>.

⁸ USFWS, 1997, *Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California*, Portland, Oregon.

Concern (SSC) by CDFW, and others are protected under Fish and Game Code and other regulations. These include golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), loggerhead shrike (*Lanius ludovicianus*), long-eared owl (*Asio otus*), and burrowing owl (*Athene cunicularia*), among others. Additional birds of concern have been identified in the IPac Report by the USFS (see **Appendix B**) as possible occurring in the Study Area vicinity. These include: Allen's hummingbird (*Selasphorus sasin*), rufous hummingbird (*Selasphorus rufus*), black swift (*Cypseloides niger*), Nuttall's woodpecker (*Picoides nuttallii*), spotted towhee (*Pipilo maculatus clementae*), and wrentit (*Chamaea fasciata*), among others. Individual birds and nests in active use are also protected under the Migratory Bird Treaty Act and State Fish and Game Code. Nests of golden eagle are also protected under the Bald and Golden Eagle Protection Act. Peregrine falcon has been delisted under the California and federal Endangered Species Acts but remains a Fully Protected species under State Fish and Game Code.

As described above, no nests of any bird species were observed in the immediate vicinity of proposed construction during the field reconnaissance survey. As described above, nests of MAMU are presumed to be present in the Study Area and other locations along the Peters Creek corridor. In addition, there remains a possibility that new nests of other non-listed bird species could be established in the future or that nests occur in the nearby area that could be affected by construction-related disturbance, warranting preconstruction surveys as called for under the Project controls.

Central California Coast steelhead. The central California coast steelhead distinct population segment (DPS) is federally-listed as threatened. Steelhead may follow a variety of life history patterns that range from resident fish (non-migratory) to individuals that seasonally migrate to the open ocean (anadromous). Steelhead are unique among Pacific salmon in that ocean migrating individuals may return to the ocean after spawning and return to freshwater to spawn one or more times. Freshwater habitats support eggs (laid in gravel nests called redds), alevins (gravel dwelling hatchlings), fry (juveniles newly emerged from stream gravels), and young juveniles until individuals become large enough to migrate to the ocean to finish rearing and maturing to adults. Steelhead fry generally rear in edgewater habitats and move gradually into pools and riffles as they grow larger. Cover tends to be an important habitat component for juvenile steelhead, both as a velocity refuge and as a means of avoiding predation. Steelhead, however, tend to use riffles and other habitats not strongly associated with cover during summer rearing more than other salmonids. Young steelhead feed on a wide variety of aquatic and terrestrial insects, and emerging fry are sometimes preyed upon by older juveniles. In coastal California, steelhead usually live in freshwater for one to two years, then spend an additional two or three years in the ocean before returning to their natal stream to spawn. Adult steelhead are generally not present in streams between May and October.

Peters Creek is mapped by the CNDDDB as habitat occupied by steelhead (**Figure 2**) through the Study Area based on survey work conducted in 1962. Downstream barriers along Peters Creek in Portola State Park reportedly now preclude upward migration to the upper reaches of Peters Creek. However, no in-stream surveys have been conducted through the Project reach and upstream watershed and there remains a possibility that resident individuals may be present. Pescadero Creek, both upstream and downstream of its confluence with Peters Creek, is mapped by the CNDDDB as a North Central Coast California Road/Stickleback/Steelhead Stream and is recognized as a Sensitive Aquatic Community.

Central California Coast coho salmon. The Central California Coast Evolutionarily Significant Unit (ESU) of coho salmon (*Oncorhynchus kisutch*) are listed as endangered under both the federal and California Endangered Species Acts. Coho salmon are anadromous fish, rearing at least partially in freshwater, migrating to the ocean as smolts, spending their adult lives in the ocean, and then

migrating back into freshwater streams to spawn. Most coho salmon return to their natal streams to spawn in their third year, after which they die. Within freshwater streams, coho salmon require adequate, year-round stream flows, cold water, streamside shade, instream and off-stream shelter and pools, and access to spawning gravels with a low fine sediment component. Spawning typically occurs at the tail of pools, or head of riffles, where substrate, depths, velocities, and streamside cover is adequate.

The Central California Coast ESU of coho salmon extends from Punta Gorda in southern coastal Humboldt County south to Aptos Creek in Santa Cruz County. In a status review of the ESU based on all available biological information, it was concluded that the Pescadero coho salmon population is currently at extreme risk of extirpation and there have only been sparse reports of the species in the watershed over the past two decades.⁹ Three adult coho salmon carcasses were found in Pescadero Creek during the 2014/2015 spawning season, but subsequent surveys found no young-of-the-year coho salmon, suggesting that reproduction may have been unsuccessful.¹⁰ Barriers between the confluence with Pescadero Creek and the Project reach of Peters Creek currently prevent upward migration of coho salmon and this species is not suspected to occur in the Study Area.

California red-Legged frog. California red-legged frog (CRLF) is federally-listed as threatened and is recognized as a California Species of Special Concern (SSC) by the CDFW. It has been extirpated or nearly extirpated from 70 percent of its former range. Population declines have been attributed to a variety of factors, with habitat loss and predation by non-native Aquatic predators (e.g., bullfrogs, crayfish, other non-native fishes) typically implicated as primary factors. CRLF occur in and along freshwater marshes, streams, ponds, and other semi-permanent water sources. Optimal habitat contains dense emergent or shoreline riparian vegetation closely associated with deep (i.e., greater than 2.3 feet), still, or slow-moving water. Cattails, bulrushes, and willows provide the habitat structure that seems to be most suitable for CRLF. Although the species can occur in intermittent streams and ponds, they are unlikely to persist in streams in which all surface water disappears. Suitable breeding ponds and pools usually have a minimum depth of 20 inches, but CRLF do sometimes breed successfully in pools as shallow as 10 inches.¹¹ Regardless of water depth, suitable breeding habitat must contain water during the entire development period for eggs and tadpoles.

According to the CNDDDB records, an occurrence of CRLF have been reported from Portola State Park about a quarter mile upstream of the Study Area along Peters Creek (see **Figure 2**). The lack of deep pools and emergent vegetation along the Project reach in the Study Area makes it unsuitable as breeding habitat for CRLF, or even for long-term foraging due to the high risk of predation. However, there remains a remote potential for an individual frog to disperse along the creek corridor in search of suitable habitat. There are no impenetrable barriers preventing such movement which is why some level of caution in implementing the Project improvements is still warranted and would be implemented as part of the project controls (see Project Controls below).

⁹ Spence, B and T. H. Williams, 2011, *Status Review Update for Pacific Salmon and Steelhead Listed Under the Endangered Species Act: Central California Coast Coho Salmon ESU*, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southwest Fisheries Science Center, NOAA-TMNMFSSWFSC-47.

¹⁰ NMFS, 2016. *Viability Assessment for Pacific Salmon and Steelhead Listed Under the Endangered Species Act: Southwest*. NOAA Technical Memorandum NMFS, July 2016.

¹¹ Fellers, G.M., 2005. *California red-legged frog*. In M. Lannoo, editor. *Amphibian Declines: The Conservation Status of United States Species*.

Foothill yellow-legged frog. Foothill yellow-legged frog (*Rana boylei*) populations in the coastal area of San Mateo County are now listed as endangered under the California Endangered Species Act. It is an aquatic species found in or near rocky streams in a variety of habitats. Foothill yellow-legged frogs hunt aquatic, terrestrial, and flying invertebrates, seeking refuge in between rocks or leaf litter at the bottom of stream or creek bed when threatened. Breeding and egg laying usually begin at the end of spring flood flows, commencing sometime between mid-March to May, depending on local conditions. The historic range of this species extends along the Coast Range from the Oregon border south to the Transverse Mountains in Los Angeles County, in most of northern California west of the Cascade crest, and along the western flank of the Sierra south to Kern County. A general occurrence of foothill yellow-legged frog was reported from Portola Redwood State Park in 1960 (see **Figure 2**). However, the CDFW indicates that several authorities believe this species has likely been extirpated from the upper watershed of Pescadero Creek, which would include the Project reach of Peters Creek.

California giant salamander. California giant salamander (*Dicamptodon ensatus*) is considered a SSC by CDFW but has no listing under the State or federal Endangered Species Acts. It occurs in and around cold, semi-permeant and permanent streams and seepages in mesic forests from Sonoma and Napa counties to Santa Cruz County. Adults are elusive and seek cover under rocks, logs and other substrate and forage on the forest floor during wet weather. During breeding season, adults can be found under rocks within small to medium-sized streams and will create subterranean nests for eggs. Several occurrences are documented within 5 miles of the Study Area and larvae of California giant salamander were encountered along Peters Creek during electrofishing surveys conducted in 1995, both upstream and downstream of the Project reach. This species is assumed to be present within areas of suitable habitat along Peters Creek in the Study Area.

Santa Cruz black salamander. Santa Cruz black salamander (*Aneides niger*) is recognized as a SSC by the CDFW but has no listing under the State or federal Endangered Species Acts. This subspecies is endemic to California, with a limited range west of the San Francisco Bay and south of the San Francisco Peninsula from Santa Cruz County and western Santa Clara County, north to southern San Mateo County. It occurs in mixed deciduous woodland, coniferous forests, and coastal grasslands, and is typically found under rocks near streams, in talus, under damp logs, and other objects. The closest occurrence to the Study Area reported by the CNDDDB is about three miles to the southeast (see **Figure 2**), although suitable habitat is present along the Peters Creek corridor.

Red-bellied newt. The red-bellied newt (*Taricha rivularis*) is considered a SCC by CDFW. It is a stream or river dwelling newt of coastal woodlands that breed from late February to May in flowing water of rocky rivers and creeks. Eggs are laid in clusters on the underside of rocks or branches in the fast-moving sections of streams. Once eggs are laid, adult newts retreat from the water to the banks and upland areas. This species occurs along the coast from Bodega in Sonoma County north to Humboldt County and east to Lower Lake and Kelsey Creek in Lake County. An isolated population of red-bellied newt occurs within the Stevens Creek watershed in Santa Clara County. The Stevens Creek watershed population is not genetically divergent from northern populations, and it is undetermined if the population is naturally occurring or introduced. This population is considered to be of conservation significance and warrants management protection due to the overall limited geographic range of the species, lack of genetic diversity, and high levels of habitat disturbance, until more is understood about the origin of the Stevens Creek population.¹² Red-

¹² Reilly, Sean B., D.M. Portik, M.S. Koo, and D.B. Wake, 2014, *Discovery of a New, Disjunct Population of a Narrowly Distributed Salamander (Taricha rivularis) in California Presents Conservation Challenges*, Journal of Herpetology, Vol. 48, No. 2, University of California, Berkeley.

bellied newt has not been documented within Portola Redwood State Park, and it seems unlikely it has expanded over the crest of the coast range from the Stevens Creek watershed into the Peters Creek drainage and Study Area.

Western pond turtle. Western pond turtle (*Actinemys marmorata*) is considered a SSC by CDFW. This species inhabits rivers, streams, natural and artificial ponds, lakes, marshes and irrigation ditches with abundant vegetation and either rocky or muddy bottoms. Basking sites are necessary for western pond turtle and may include exposed logs, rocks, or banks. Adjacent terrestrial habitat is typically woodland, forest or grassland with pliable soils for nesting and egg laying, winter refuge, and dispersal. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks. Suitable habitat for western pond turtle is absent through the Study Area due to an absence of deep pools along Peters Creek in the Project reach necessary as refugia, although individuals may disperse through the watershed in search of suitable habitat.

Mammal Species. Several special-status mammal species are known or suspected from the south San Mateo County area, including San Francisco dusky-footed woodrat (*Neotoma fuscipes*) and American badger (*Taxidea taxus*), both of which are considered SSC by CDFW, several bat species, and mountain lion (*Puma concolor*). American badger is typically found in grassland and savannah habitat not found in the Study Area vicinity. San Francisco dusky-footed woodrat is found in woodland and forest habitat typical of the Study Area vicinity, but no evidence of any conspicuous stick nests was observed in the immediate vicinity of proposed construction. Occurrences of pallid bat (*Antrozous pallidus*) and Townsend's western big-eared bat (*Corynorhinus townsendii*), both of which are recognized as SSCs by CDFW, are known to occur in redwood forests of San Mateo County and may forage through the Study Area vicinity, but no suitable cavities were observed in the trees in the immediate vicinity of proposed construction that would serve as important maternity roosting locations for these or other special-status bat species. Mountain lion is protected under State regulations and likely forages through the Study Area vicinity, but essential denning habitat is absent in the vicinity of proposed construction.

Jurisdictional Waters

Although definitions vary, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration and purification functions. Jurisdiction of the U.S. Army Corps of Engineers (Corps) is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters of the U.S." without a permit. The Regional Water Quality Control Board (RWQCB) jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver to control discharges in water quality whenever a Corps permit is required under Section 404 of the Clean Water Act, and State waters as regulated under the Porter-Cologne Act. Jurisdictional authority of the CDFW over wetland areas is established under Sections 1600-1607 of the State Fish and Wildlife Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed or bank of any lake, river or stream. The Regulatory Setting discuss below provides additional information on regulations related to wetlands and waters.

A preliminary wetland assessment of the Study Area was conducted during the field survey in 2019 and the extent of assumed regulated waters were mapped (see attached **Project Tree Removal and Construction Site Plans**). Regulated waters in the Study Area consist of the Peters Creek channel and possibly a narrow ephemeral drainage that crosses the existing road alignment that will

be modified for construction vehicle access as part of the Project. Federally regulated waters are limited to the active channel of Peters Creek and possibly the ephemeral drainage below the Ordinary High Water Mark (OHWM). The width of Peters Creek between the OHWM varies but is generally about 20 feet. The width of the ephemeral drainage between the OHWM is about three feet at the existing roadway crossing. State regulated waters extend to the top of bank (TOB) or beyond to the edge of riparian canopy where it extends beyond the TOB. Scattered alders and other riparian indicator species occur along the banks of Peters Creek but are absent along the ephemeral drainage. No indications of seasonal wetland, seeps of other regulated waters were observed away from the Peters Creek and ephemeral drainage channel.

REGULATORY CONTEXT

The following provides a summary of federal, State, and local regulatory jurisdiction over biological and wetland resources. Although most of these regulations do not directly apply to the site, given the general lack of sensitive resource, they provide important background information.

Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (ESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. ESA defines “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Federal regulation 50CFR17.3 defines the term “harass” as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering (50CFR17.3). Furthermore, federal regulation 50CFR17.3 defines “harm” as an act that either kills or injures a listed species. By definition, “harm” includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (50CFR217.12).

Section 10(a) of the ESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by ESA as take that is “incidental to, and not the purpose of, the carrying out of another wise lawful activity.” Preparation of a habitat conservation plan, generally referred to as an HCP, is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the ESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance or permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (ESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will

adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, the Section 9 of the ESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other “take” that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act.

Clean Water Act

The Corps is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the U.S. These waters, and their lateral limit, are defined in 33 CFR Part 328.3(a) and include streams that are tributaries to navigable waters and their adjacent wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the OHWM (33 CFR Part 328.3[e]) or the limit of adjacent wetlands (33 CFR Part 328.3[b]). Any permanent extension of the limits of an existing water of the U.S., whether natural or man-made, results in a similar extension of Corps jurisdiction (33 CFR Part 328.5).

Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated waterbodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the U.S.

Waters and wetlands that cannot trace a continuous hydrologic connection to navigable water of the U.S. are not tributary to waters of the U.S. These are termed “isolated wetlands.” Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce (33 CFR Part 328.3[a]). The Corps may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the Corps before placing fill or grading in wetlands or other waters of the U.S. Prior to issuing the permit, the Corps is required to consult with the USFWS under Section 7 of the ESA if the project may affect federally listed species.

All Corps permits require water quality certification under Section 401 of the Clean Water Act. In the San Francisco Bay Area, this regulatory program is administered by the San Francisco Bay RWQCB. Project proponents who propose to fill wetlands or other waters of the U.S. must apply for water quality certification from the RWQCB. The RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act. In December 2017, the Department of the

Interior (DOI) issued a memorandum reversing the incidental take interpretation of the MBTA. Under the latest determination of the DOI, the take of a migratory bird or its active nest (i.e., with eggs or young) that is incidental to a lawful activity does not violate the MBTA. However, this opinion from the DOI is only the latest interpretation from the current Administration of the MBTA. This legal opinion is contrary to the long-standing interpretation for over 40 years that held the MBTA strictly prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

California Endangered Species Act

The CDFW has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under the California Endangered Species Act (CESA). CESA is similar to the federal ESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Wildlife Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA. An Incidental Take Permit is required where a State-listed species is affected by proposed activities, in accordance with Section 2081 of the State Fish and Game Code.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to “projects” proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of CEQA, a species not included on any formal list “shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria” for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a “de facto” rare or endangered species.

California Fish and Wildlife Code

The CDFW is also responsible for enforcing the California Fish and Wildlife Code, which contains several provisions potentially relevant to construction projects. For example, Section 1602 of the Fish and Wildlife Code governs the issuance of Lake and Streambed Alteration Agreements by the CDFW. Lake or Streambed Alteration Agreements are required whenever project activities substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as such by the CDFW.

The Fish and Wildlife Code also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully Protected species are listed in Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the Fish and Wildlife Code, while Protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42.

Section 3503 of the Fish and Wildlife Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, essentially serve to protect nesting

native birds. Non-native species, including European starling, house sparrow, and rock pigeon, are not afforded any protection under the MBTA or California Fish and Wildlife Code.

Porter-Cologne Water Quality Control Act

Under this Act (California Water Code Sections 13000–14920), the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State’s waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the Corps. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that project do not adversely affect the “beneficial uses” associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements (WDRs) into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction Best Management Practices (BMPs).

Other CDFW Statutes, Codes, and Policies Affording Species Protection

The CDFW maintains an administrative list of Species of Special Concern (SSC), defined as a “species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the State, or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally, but not State-, threatened or endangered;
- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (nonscyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for State threatened or endangered status.

The CDFW’s Nongame Wildlife Program is responsible for producing and updating SSC publications for mammals, birds, and reptiles and amphibians. The Fisheries Branch is responsible for updates to the Fish SSC document and list. Section 15380 of the CEQA Guidelines clearly indicates that SSC should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outline therein. In contrast to species listed under the federal ESA or CESA, however, SSC have no formal legal status.

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed a ranking system for plant species of concern in California. Vascular plants included on these lists are defined as follows:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
- Rank 2A: Plants presumed extirpated in California, but common elsewhere
- Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
- Rank 3: Plants about which more information is needed – a review list
- Rank 4: Plants of limited distribution – a watch list

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants with a ranking of 1A through 2B may be considered to meet the definition of

endangered, rare, or threatened species under Section 15380(d) of CEQA (see above) and impacts to these species may be considered “significant.”

In addition, the CDFW recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants with a CNPS ranking of 3 and 4.

San Mateo County General Plan

The County’s General Plan,¹³ adopted in 1986, guides future development and land use decisions within the County. Chapter 1 of the General Plan addresses vegetation, water, fish and wildlife resources. Goals and policies pertaining to biological resources applicable to the proposed Project are listed in **Table 1**.

San Mateo County Significant and Heritage Tree Ordinances

The County’s Heritage Tree Ordinance (Section 11000) acknowledges that the County’s outstanding heritage tree population has been and continues to be an invaluable asset in contributing to the economic, environmental, and aesthetic stability of the County and the welfare of its people and of future generations and, therefore, that the removal of such trees should be regulated. According to the ordinance, a “Heritage Tree” means any of tree that meets the following class criteria:

- 1) Class 1 includes any tree or grove of trees so designated after Board inspection, advertised public hearing and resolution by the Board of Supervisors. The affected property owners shall be given proper written notice between 14 and 30 days prior to inspection and/or hearing by the Board.
- 2) Class 2 includes any of a number of native tree species, healthy and generally free from disease, with a minimum trunk diameter varying based on species and location in the county. These consist of the following species and sizes:
 - (1) Acer macrophyllum - Bigleaf Maple of more than 36 inches in d.b.h. west of Skyline Boulevard or 28 inches east of Skyline Boulevard.
 - (2) Arbutus menziesii - Madrone with a single stem or multiple stems touching each other 4 1/2 feet above the ground of more than 48 inches in d.b.h., or clumps visibly connected above ground with a basal area greater than 20 square feet measured 4 1/2 feet above average ground level.
 - (3) Chrysolepis chrysophylla - Golden Chinquapin of more than 20 inches in d.b.h.
 - (4) Cupressus abramsiana - All Santa Cruz Cypress trees.
 - (5) Fraxinus latifolia - Oregon Ash of more than 12 inches in d.b.h.
 - (6) Lithocarpus densiflorus - Tan Oak of more than 48 inches in d.b.h.
 - (7) Pseudotsuga menziesii - Douglas Fir of more than 60 inches in d.b.h. east of Skyline Boulevard and north of Highway 92.
 - (8) Quercus agrifolia - Coast Live Oak of more than 48 inches in d.b.h.
 - (9) Quercus chrysolepis - Canyon Live Oak of more than 40 inches in d.b.h.
 - (10) Quercus garryana - All Oregon White Oak trees.
 - (11) Quercus kelloggii - Black Oak of more than 32 inches in d.b.h.
 - (12) Quercus wislizenii - Interior Live Oak of more than 40 inches in d.b.h.
 - (13) Quercus lobata - Valley Oak of more than 48 inches in d.b.h.
 - (14) Quercus douglasii - Blue Oak of more than 30 inches in d.b.h.

¹³ County of San Mateo, 1986, San Mateo County General Plan, adopted November 18.

Table 1
General Plan Goals and Policies Relevant to Biological Resources

Number	Goal / Policy
Goal 1.1	Conserve, enhance, protect, maintain, and manage vegetative, water, fish and wildlife resources.
Goal 1.2	Protect sensitive habitats: Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.
Policy 1.21	Importance of sensitive habitats: Consider areas designated as sensitive habitats as a priority resource requiring protection.
Policy 1.23	Regulate Development to Protect Vegetative, Water, Fish and Wildlife Resources: a. Regulate land uses and development activities to prevent, and if infeasible mitigate to the extent possible, significant adverse impacts on vegetative, water, fish and wildlife resources. b. Place a priority on the managed use and protection of vegetative, water, fish and wildlife resources in rural areas of the County.
Policy 1.24	Regulate Location, Density and Design of Development to Protect Vegetative, Water, Fish and Wildlife Resources: Regulate the location, density and design of development to minimize significant adverse impacts and encourage enhancement of vegetative, water, fish and wildlife resources.
Policy 1.25	Protect Vegetative Resources: Ensure that development will: (1) minimize the removal of vegetative resources and/or; (2) protect vegetation which enhances microclimate, stabilizes slopes or reduces surface water runoff, erosion or sedimentation; and/or (3) protect historic and scenic trees.
Policy 1.26	Protect Water Resources: Ensure that development will: (1) minimize the alteration of natural water bodies, (2) maintain adequate stream flows and water quality for vegetative, fish and wildlife habitats; (3) maintain and improve, if possible, the quality of groundwater basins and recharge areas; and (4) prevent to the greatest extent possible the depletion of groundwater resources.
Policy 1.27	Protect Fish and Wildlife Resources: Ensure that development will minimize the disruption of fish and wildlife and their habitats.
Policy 1.28	Regulate Development to Protect Sensitive Habitats: Regulate land uses and development activities within and adjacent to sensitive habitats in order to protect critical vegetative, water, fish and wildlife resources; protect rare, endangered, and unique plants and animals from reduction in their range or degradation of their environment; and protect and maintain the biological productivity of important plant and animal habitats.
Policy 1.29	Establish Buffer Zones a. Establish necessary buffer zones adjacent to sensitive habitats which include areas that directly affect the natural conditions in the habitats and areas expected to experience changing vulnerabilities due to impacts of climate change. b. As part of Countywide efforts to foster resilience and adapt to impacts of climate changes, establish wildlife corridors in appropriate locations to maintain a functional network of connected wildlands, to support native biodiversity, and to encourage movement of wildlife species.
Policy 1.30	Uses Permitted in Sensitive Habitats: Within sensitive habitats, permit only those land uses and development activities that are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks and, at a minimum level, necessary public service and private infrastructure.

Policy 1.31	Uses Permitted in Buffer Zones: Within buffer zones adjacent to sensitive habitats, permit the following land uses and development activities: (1) land uses and activities which are compatible with the protection of sensitive habitats, such as fish and wildlife management activities, nature education and research, trails and scenic overlooks, and at a minimum level, necessary public and private infrastructure; (2) land uses which are compatible with the surrounding land uses and will mitigate their impact by enhancing or replacing sensitive habitats; and (3) if no feasible alternative exists, land uses which are compatible with the surrounding land uses.
Policy 1.32	Regulate the Location, Siting and Design of Development in Sensitive Habitats: Regulate the location, siting and design of development in sensitive habitats and buffer zones to minimize to the greatest extent possible adverse impacts, and enhance positive impacts.
Policy 1.33	Performance Criteria and Development Standards: Establish performance criteria and development standards for development permitted within sensitive habitats and buffer zones, to prevent and if infeasible mitigate to the extent possible significant negative impacts, and to enhance positive impacts.

(15) Umbellularia californica - California Bay or Laurel with a single stem or multiple stems touching each other 4 1/2 feet above the ground of more than 48 inches in d.b.h., or clumps visibly connected above ground with a basal area of 20 square feet measured 4 1/2 feet above average ground level.

(16) Torreya californica - California Nutmeg of more than 30 inches in d.b.h.

17) Sequoia sempervirens - Redwood of more than 84 inches in d.b.h. west of Skyline Boulevard or 72 inches d.b.h. east of Skyline Boulevard.

No trees on the site have been designated a Heritage Tree by the Board of Supervisors under the Class 1 criterion. Numerous trees in the vicinity of proposed construction meet the minimum trunk diameter criterion under Class 2 of the County's Heritage Tree Ordinance. These are mapped in the attached Project Site Plans.

On September 20, 2016, San Mateo County Board of Supervisors adopted additional amendments to the Significant and Heritage Tree Ordinances. The changes include a provision for an Existing Tree Plan and also a Tree Protection Plan for development or grading that has the potential to impact site trees. The proposed Project will need to comply with these newly adopted rules.

IMPACT ANALYSIS

Project Controls

The proposed Project involves rebuilding an existing bridge and construct a new bridge over Peter's Creek, with related roadway and trail access improvements. These bridges would be part of an access improvement program that allows for safe and low impact access to the property as well as the adjacent State Park lands and trails. As summarized above in the Introduction and Summary, the proposed Project would be timed during the dry period when stream flows are lowest and is estimated to take two years to complete. Temporary coffer dams (see attached **Project Tree Removal and Construction Site Plans**) would be installed and any stream flows diverted into a gravity diversion pipe to allow dewatering of the construction reaches at both bridge locations. A third smaller creek diversion/exclusion dam would be needed at the base of the bank where the

access road to Bridge 2 would be temporarily widened. Design for this feature would ultimately be the responsibility of the building contractor but this area would be isolated from the active creek flow to avoid affecting water quality and aquatic habitat.

The Project contractor will implement standard Project Controls to avoid and minimize potential adverse effects of the proposed Project. These Project Controls would serve to minimize disturbance to regulated waters and provide for their protection and enhancement, confirm absence of any special-status species and nesting birds within the construction zone, train works on the presence of regulated waters and other sensitive resources, monitor construction progress to ensure adequate controls are in place, and define methods to minimize potential adverse effects on downstream waters. These consist of the following Project Controls which would collectively serve to avoid or minimize potential adverse effects and reduce most of the potential impacts of the proposed Project to a less than significant level, as discussed in detail below.

Project Control BIO-1: Minimize Disturbance to Regulated Waters and Restore Areas Disturbed by Project. *Appropriate measures shall be taken to minimize impacts on regulated waters and provide for restoration of disturbed areas as part of the Project. This shall include the following:*

- *In-channel construction activities shall be scheduled to minimize disturbance to surface waters and seasonal aquatic habitat. No work shall be performed within 24 hours of projected rainfall events.*
- *A worker training shall be conducted by a qualified biologist prior to starting work on the Project to explain the presence of regulated waters, the need to limit construction-related disturbance, and explain repercussions for violations. A record of all personnel trained during the project shall be maintained for compliance verification.*
- *Once the preconstruction clearance surveys have been performed as called for in **Project Control BIO-3**, the qualified biologist shall train the on-site monitor (such as the construction foreman) in procedures to follow as part of construction monitoring, including supervising the construction crew to ensure compliance. The qualified biologist shall visit the site at least once a week during construction and confer with the trained on-site monitor that the project is in compliance.*
- *Areas disturbed by construction access into the Peters Creek channel shall be restored to predisturbance conditions. All material used as part of the temporary coffer dam system for dewatering shall be removed, cobble reinstalled, and banks seeded with indigenous native grasses and forbs to the Study Area to control erosion.*
- *The qualified biologist or other specialist shall provide post-construction monitoring to confirm that improvements have been successfully installed and maintained, consistent with any conditions specified in the regulatory agency authorizations described in **Project Control BIO-6**.*

Project Control BIO-2: Minimize Damage and Loss to Trees. *Appropriate measures shall be taken to minimize tree removal, protect trees to be retained from construction-related damage, and provide for replacement where avoidance is not feasible. This shall include the following:*

- *A certified arborist shall determine appropriate protective measures to be implemented during construction. This shall include accurately mapping root protection zones and identifying other specific measures that would limit potential indirect impacts on trees to be retained such as installation of protective fencing consistent with the County's tree*

protection measures. Tree protection measures shall be maintained throughout the duration of Project construction.

- Construction drawings shall depict areas to be avoided such as tree trunks and root protection zones and shall indicate the location of protective fencing recommended by the certified arborist.
- If any large roots or large masses of roots need to be cut, the roots shall be inspected by the certified arborist or forester prior to cutting. Any root cutting shall be undertaken by the arborist or forester and documented. Roots to be cut shall be severed cleanly with a saw or topers.
- If pruning is necessary, pruning should be overseen by the certified arborist or forester to clean and raise canopy per International Society of Arboriculture pruning standards.
- If trimming or removal of significant or heritage trees cannot be avoided, a permit shall be secured from the County to trim or remove qualifying trees. The permit application process requires an Existing Tree Plan be prepared and an Arborists Report that assesses tree health and provides tree protection measures which may be incorporated into a Tree Protection Plan for trees that could be indirectly affected by work in their immediate vicinity.
- Trees identified for removal measuring 12 inches DBH or greater shall be replaced at a 3:1 ratio (replacement trees to removed trees) with the same species removed within the immediate vicinity of the removal location using at least a 5-gallon stock. Trees identified for removal measuring less than 12 inches DBH shall be replaced at a ratio of 1:1 (replacement trees to removed trees). Replacement trees shall be monitored at least once a year for at least five years or longer, concurrent with restored areas of riparian habitat or wetlands, if applicable.

Project Control BIO-3: Avoidance of Special-Status Species. Appropriate measures shall be taken to prevent inadvertent take of California red-legged frog (CRLF), foothill yellow-legged frog (FYLF), California giant salamander (CGS), Santa Cruz black salamander (SCBS), western pond turtle (WPT), red-bellied newt (RBN), steelhead, nesting birds and other wildlife during construction. In addition to the avoidance of active nest called for in **Project Control BIO-4**, this shall include the following:

- A qualified biologist shall be retained to oversee construction and ensure that no inadvertent take of special-status species occurs as a result of construction and other habitat modifications to the Study Area.
- The qualified biologist shall oversee construction, conduct preconstruction clearance surveys for nesting birds and focused species, and train workers over the regulations related to wetlands and special-status species, and the possible risk of inadvertent take in advance of construction.
- The worker training shall be conducted prior to starting work on the Project and upon the arrival of any new worker. The training program shall include a brief review of locations of sensitive areas, possible fines for violations, Project Controls to be implemented, and summary of environmental permits and regulatory compliance requirements. In addition, a record of all personnel trained during the project shall be maintained for compliance verification.
- All construction workers shall be instructed that focal special-status are to be avoided, that the foreman must be notified if a suspected species of concern is seen, and that construction shall be halted until the qualified biologist arrives and makes a determination

on possible presence. If any special-status species are encountered within the excluded work zone, construction shall be halted until the individual(s) disperse naturally for State and federally-listed species unless explicitly authorized by the USFWS and CDFW through issuance of an Incidental Take Permit (ITP) or are relocated outside the construction zone for non-listed species. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS and CDFW. The specific methods for handling amphibians or reptiles and decontamination shall follow latest protocols from the USFWS. These protocols describe field equipment maintenance, disinfection, and field hygiene procedures designed to minimize potential spread of pathogens when handling amphibians or reptiles.

- Once preconstruction surveys have been conducted, the qualified biologist shall train the on-site monitor (such as the construction foreman) in how to identify target special-status species and procedures to follow as part of construction monitoring for the duration of construction. The qualified biologist shall visit the site at least once a week during construction and confer with the trained on-site monitor.
- Project work areas will be monitored by a qualified biologist during exclusion fence installation and ground disturbing activities to identify, capture, and relocate non-listed sensitive amphibians (CGS, SCBS, WPT, or RBN) if found, and halt or observe work in the vicinity of CRLF and FYLF if encountered onsite. The qualified biologist shall have the authority to stop construction activities and develop alternative work practices, in consultation with construction personnel and resource agencies (as appropriate), if construction activities are likely to affect special-status species or other sensitive biological resources.
- Temporary exclusion fencing shall be installed around key project boundaries, including areas where ground disturbance will occur adjacent to Peters Creek, segments of the access road to be modified, and around all project staging and laydown areas. Fencing shall be installed immediately prior to the start of construction activities under the supervision of a qualified biologist who will perform monitoring on a daily basis for the first week of construction. After the first week of construction and following training by the qualified biologist, the on-site monitor shall ensure that the temporary exclusion fencing is continuously maintained until all construction activities are completed. The on-site monitor shall perform daily visual inspections of the fence for any amphibians or reptiles that may get stuck by the fence. The fencing shall be of a material that meets CDFW standards for species exclusion, a minimum height of 3 feet above ground surface, with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence and shall include escape funnels to allow species to exit the work areas.
- Dewatering of construction reaches within the Peters Creek channel shall be overseen by the qualified biologist and aquatic life within the dewatered areas shall be relocated to nearby suitable habitat. A second preconstruction survey shall be performed by the qualified biologist before construction equipment is allowed to enter the dewatered reaches of Peters Creek, to confirm absence of any special-status species of concern and other aquatic wildlife.
- All excavations of a depth of 8 inches or greater shall be either backfilled at the end of each workday, covered with heavy metal plates, or escape ramps shall be installed at a 3:1 grade to allow wildlife that fall in a means to escape.
- Use of monofilament plastic for erosion control or other practices shall be prohibited on the site to prevent possible entrapment.

- *The contractor shall provide wildlife-proof (closed) garbage containers for the disposal of all food-related trash items. All food waste shall be removed daily from the site to avoid attracting predators. Construction personnel shall not feed or otherwise attract fish or wildlife to the Study Area.*
- *Subsequent recommendations made by the USFWS and CDFW shall be followed. Only an agency-approved biologist is allowed to handle or otherwise direct movement of listed special-status species, including CRLF, FYLF, and all others shall not handle or otherwise harass the animals. The qualified biologist and the on-site monitor shall be aware of all terms and conditions set by USFWS and CDFW for the Project.*

Project Control BIO-4: Avoidance of Bird Nests in Active Use. *Adequate measures shall be taken to avoid inadvertent take of bird nests protected under the federal Migratory Bird Treaty Act and State Fish and Game Code when in active use. This shall be accomplished by taking the following steps.*

- *If initial grubbing and tree removal is proposed during the nesting season (February 1 to August 31), a focused survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of construction in order to determine whether any active nests are present in the Study Area and surrounding area within 300 feet of proposed construction. The survey shall be reconducted any time construction has been delayed or curtailed for more than 7 days during the nesting season.*
- *Typical credentials for a qualified biologist include a minimum of four years of academic training and professional experience in biological sciences and related resource management activities, and a minimum of two years of experience conducting surveys for each species that may be present within the Study Area.*
- *If no active nests are identified during the construction survey period, or construction is initiated during the non-breeding season (September 1 to January 31), then construction may proceed with no restrictions.*
- *If it is determined that construction may affect an active nest, the qualified biologist shall establish a no-disturbance buffer around the nest(s) and all construction activities restricted within the buffer until a qualified biologist determines the nest is no longer in use. Required setback distances for the no-disturbance buffer zone shall be based on input received from the CDFW, and the setback may vary depending on species and sensitivity to disturbance. As necessary, the no-disturbance zone shall be fenced with temporary orange construction fencing if construction is to be initiated elsewhere in the Study Area. Typically, these buffer distances are 250 feet for passerines and 500 feet for raptors; however, the buffers may be adjusted if topography or other obstructions block the line-of-sight between the nest and the construction area. For bird species that are federally and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), the qualified biologist shall coordinate with CDFW (and USFWS for FESA-protected species nests such as MAMU) regarding modifying nest buffers, prohibiting construction within the buffer, and modifying construction activities.*
- *Modifying nest buffer distances, allowing certain construction activities within the buffer, and/or modifying construction methods in proximity to active nests for non-listed species shall be done at the discretion of the qualified biologist. Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to construction activities within the buffer are observed and could compromise the nest viability, work within the no-disturbance buffer(s)*

shall be modified as directed by the qualified biologist or halt until the nest occupants have fledged if monitoring indicates continued disturbance to the active nest.

- *Any birds that begin nesting within the Project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases; however, should birds nesting nearby begin to show signs of disturbance associated with construction activities, then no-disturbance buffers shall be established as determined by the qualified wildlife biologist.*
- *A report of findings shall be prepared by the qualified biologist and submitted to the County for review and approval prior to initiation of construction during the nesting season (February 1 to August 31). The report shall either confirm absence of any active nests or should confirm that any young are located within a designated no-disturbance zone and construction can proceed. No report of findings is required if construction is initiated during the non-nesting season (September 1 to January 31) and continues uninterrupted according to the above criteria.*

Project Control BIO-5 Construction Restrictions to Protect Wildlife. *The following restrictions shall be implemented to avoid adversely affecting sensitive habitats and harm or harassment to wildlife during construction:*

- *A speed limit of 5 miles per hour (mph) in the Study Area shall be followed by all construction equipment and vehicles.*
- *Access routes and the number and size of staging and work areas shall be limited to the minimum necessary to construct the proposed project. Routes and boundaries of staging areas and access shall be clearly marked prior to initiating construction or installation.*
- *All food and food-related trash items shall be enclosed in sealed trash containers and removed completely from the Study Area at the end of each day.*
- *No pets from project personnel shall be allowed anywhere in the Study Area during construction.*
- *All equipment shall be maintained such that there will be no leaks of automotive fluids such as gasoline, oils or solvents and a Spill Response Plan shall be prepared. Hazardous materials such as fuels, oils, solvents, etc. shall be stored in sealable containers in a designated location that is at least 100 ft from wetlands and aquatic habitats.*
- *Servicing of vehicles and construction equipment including fueling, cleaning, and maintenance shall occur at designated locations away from regulated waters and other sensitive habitats. Staging areas may occur closer to the project activities as required.*
- *The spread of invasive non-native plant species and plant pathogens shall be avoided or minimized. Construction equipment shall arrive at the Project site clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species. Any imported fill material, soil amendments, gravel, or other materials required for construction and/or restoration activities that will be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material. Certified weed-free imported erosion control materials (or rice straw in upland areas) shall be used exclusively, if possible.*

Project Control BIO-6: Obtaining Agency Authorizations. *The applicant shall obtain required authorizations from the Corps, RWQCB and CDFW for modifications to regulated waters associated with the Study Area. This includes a Section 404 Permit from the Corps, a*

Section 401 Certification from the RWQCB, and a Streambed Alteration Agreement from the CDFW. The applicant shall obtain all legally required permits or other authorizations from the USFWS and CDFW for the potential “take” of species protected under the Endangered Species Acts, if required. All conditions and measures contained in the regulatory agency authorizations shall be implemented as part of the Project.

Significance Criteria

The following provides an environmental review of the proposed Project using the California Environmental Quality Act (CEQA) Significance Criteria from Appendix G of the CEQA Guidelines.

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

Resource Category/Significance Criteria	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
---	--------------------------------	--	------------------------------	-----------

1) **Less than Significant Impact with Mitigation Incorporated.**

The proposed Project has the potential to adversely affect a number of special-status species, in particular MAMU which the SR has confirmed nests in the Study Area vicinity. There is also a possibility that individuals of a number of other special-status animal species could be present within the construction zone and could be injured or inadvertently taken during project implementation. This includes the remote potential for presence of individual California red-legged frog, foothill yellow-legged frog, California giant salamander, Santa Cruz black salamander, western pond turtle, red-bellied newt, and steelhead, among others. Finally, there remains a remote possibility that a number of special-status plant species could be adversely affected by construction-related disturbance if present within the limits of grading and vegetation removal. Further assessment of these potential impacts on special-status species are summarized as follows.

MAMU

As indicated by the results in the HA and RA, the Study Area is considered occupied habitat for MAMU, and critical habitat has been designated for the Portola State Parks lands just upstream of the Project site. Up to 20 native trees would be removed to accommodate equipment access and new bridge construction proposed as part of the Project, ranging in diameter from 4 to 35 inches DBH. None of these trees are of large enough size to serve as important roosting or potential nesting locations for MAMU, and due to the density and extent of redwood forest and old growth redwood forest stands in the Study Area vicinity, their removal would not substantially degrade the habitat value of the forest for MAMU. Project impacts on the redwood forest sensitive natural community are further discussed in response to Significance Criterion 2, below.

However, vegetation removal, grading, equipment operation and increased human disturbance could contribute to visual or auditory harassment of MAMU occupied nests. Increased noise and visual disturbance associated with construction could disrupt nesting efforts by MAMU in the forest habitat surrounding the Project construction areas. The loss of an active nest occupied by MAMU and other bird species as a result of Project implementation would be a significant impact. Moreover, disruption of nesting migratory or native birds is not permitted under California Fish and Game Code of the MBTA, as it would constitute unauthorized take, as discussed further below under Other Nesting Birds.

In accordance with the Endangered Species Act, the USFWS published the *Marbled Murrelet Recovery Plan*¹⁴ to promote the survival and recovery of MAMU populations in California, Oregon and Washington. Several procedures have been identified in the Recovery Plan to reduce human-related disturbance in occupied MAMU nesting habitat, including: a) scheduling the timing of human-caused disturbances in nesting habitat to occur outside the breeding season, b) reducing the level of direct disturbance of nests by human presence during the breeding season, c) reducing the numbers of nest predators (i.e., mainly corvids) in areas with human disturbance during the breeding season, and d) reducing the unnatural attraction of predators to specific forest areas (with human disturbance) during the breeding season.

¹⁴ USFWS, 1997, Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon

The USFWS has issued guidance (USFWS Guidance)¹⁵ on estimating effects of auditory and visual disturbance that would be considered harassment and possible take of MAMU and northern spotted owl. The USFWS Guidance was developed to provide consistent and reasonable determinations of effects for activities in or near suitable habitat within Northwestern California north of the Russian River watershed, but provides the most definitive information available regarding anthropomorphic effects on MAMU nesting habitat and remains applicable to populations in San Mateo County as well. The USFWS Guidance describes harassment-induced behavior (e.g., adult flushing from a nest during incubation or abandoning feeding attempts) that are typically observed when a) the project-generated sound level substantially exceeds ambient nesting conditions (i.e., by 20-25 decibel [dB] or more); b) when the total sound level from both ambient and project-generated sources is very high (i.e., exceeds 90 dB); or c) when visual proximity of human activities occurs within a visual line-of-sight of 330 feet or less from a nest.

Project-induced auditory disturbance generated by certain types of construction activities has a greater potential to result in adverse effects on nesting MAMU behavior. Using definitions taken from the USFWS Guidance, a conservative estimate of the ambient noise level for the Study Area is “Very Low” (between 50-60 dB), based on its location in undeveloped forest habitat located a considerable distance from the closest roadways, residences and park facilities expected to generate noise on a regular basis. Noise levels during Project-related construction are expected to reach up to 90 dB or more during use of certain equipment, which the USFWS Guidance classifies as “High” (81-90 dB). An increase of 25 dB or more above ambient noise conditions during construction could influence behavior of individual MAMU to a degree considered harassment depending on distance to the closest nest tree and degree to which dense vegetation and topography could attenuate the Project-generated noise disturbance. The HA and SR did not map nest tree locations in the Study Area, so the distance and conditions between Project construction areas and nests is currently unknown. But these could change in advance of construction, even if past nest trees were identified as part of future surveys. From a conservative standpoint, it is reasonable to assume that noise generated during Project construction could have a significant impact on occupied MAMU nesting habitat.

One of the methods used to address noise disturbance associated with recent construction of facility improvements at San Mateo Memorial Park, located downstream of the Study Area along the Pescadero Creek, was to develop and implement a “noise deterrent system”.¹⁶ As described by the Natural Resource Manager with San Mateo County Parks, the noise deterrent system used at Memorial Park created a temporary artificial source of noise in advance of the MAMU nesting season, so that any individual MAMU establishing nesting territories in the vicinity of construction that year were already exposed to noise levels comparable to those generated by construction, were less likely to be disturbed when construction activities were initiated later in the season, and became acclimated to the higher “ambient” noise levels from the artificial noise source. The artificial noise was generated starting one hour before sunset and continuing until one hour after sunset from March through May, at which time construction of facility improvements at Memorial Park had been initiated. The noise deterrent system reportedly addressed the potential impact of temporary construction-generated noise and allowed the work schedule to proceed during the MAMU nesting season. Used of a similar noise deterrent system for the proposed Project at Peters Creek would require review and approval by USFWS, but appears to be feasible from a technical

¹⁵ USFWS, 2020, Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California, October 1.

¹⁶ Ormshaw, Hannah, 2021, Ormshaw, Hannah, Natural Resource Manager, San Mateo County Parks, 2021, personal communication with James Martin, Environmental Collaborative, on August 13.

standpoint.

With regard to increased use of the trail system along Peters Creek, MAMU individuals nesting in the Study Area are already acclimated to limited human activity associated with trail use in Portola State Park and the existing bridge and roadway through the Project site. Constructing the new bridges and formalizing the trail segment through the Study Area may increase the use of this trail system by humans, as well as public access to the portion of Portola State Park in the upper Peters Creek watershed, which could contribute to an increase in indirect effects on MAMU nesting success. In particular, the increased human activity could increase the numbers of Steller's jay and other bird species known to predate on MAMU. This could be a potentially significant indirect effect on MAMU habitat suitability in the Study Area unless carefully managed and controlled, as called for in the mitigation below.

Recommendation: The potential for significant disturbance or inadvertent take of nesting MAMU as a result of Project implementation could be minimized by adhering to a number of construction restrictions, noise attenuation measures, and adherence to post-construction management strategies. Implementation of **Project Control BIO-4: Avoidance of Bird Nests in Active Use** would ensure compliance State and federal regulations that require avoidance of active bird nests. Additional measures and controls would likely be developed and refined as part of the consultation process with the USFWS. Together with the following measures, these would mitigate potentially significant impacts on MAMU nesting habitat to a level of less-than-significant.

Mitigation Measure BIO-1a: MAMU Nesting Habitat Avoidance. Appropriate measures shall be taken to mitigate potential adverse impacts on MAMU nesting in proximity to the Project improvements. This shall be accomplished through implementation of the following measures:

Restrictions on Tree Removal:

1. Tree removal and trimming required by the Project shall occur outside of the MAMU breeding season (April 1 to September 15) to minimize disturbance to MAMU nesting.
2. Trees identified for removal under the Project shall first be assessed for suitability as MAMU nesting trees by a qualified wildlife biologist. Typical credentials for a qualified biologist include a minimum of four years of academic training and professional experience in biological sciences and related resource management activities, and a minimum of two years of experience conducting surveys for MAMU.
3. Trees determined to have suitable elements for nesting by MAMU will be retained under the Project, if feasible. If a suitable nest tree(s) cannot be retained as part of the Project, the qualified biologist shall coordinate with the USFWS removal of a potential MAMU nest tree from occupied habitat and shall identify additional measures to address this loss. This may include follow-up monitoring of nest activity in the area to provide additional data on MAMU use of the Study Area, or other measures considered appropriate by the USFWS.

Preconstruction Surveys

4. Prior to initiation of construction during the MAMU nesting season, the qualified biologist shall conduct a preconstruction survey to determine whether any active MAMU nests are located within line-of-sight of proposed Project construction activities. This preconstruction survey may be conducted as part of the larger preconstruction survey for active nests of other bird species called for in **Project Control BIO-4.**

5. If active MAMU nests are discovered where visual disturbance from Project construction activities may result in harassment or take, the qualified biologist shall monitor the nest location and identify any additional construction control measures in consultation with the USFWS as part of the MAMU Nest Avoidance Program called for below. These may include restrictions on the timing of disruptive construction activities within line-of-sight of the active nest until the nest is no longer in use as determined by the qualified biologist, at which time construction may proceed at this location without additional MAMU restrictions. Nest monitoring frequency shall be determined by the qualified biologist on a nest-by-nest basis considering the particular construction activity, duration, and proximity to the nest.
6. The qualified biologist may revise their construction-restriction determinations at any time during the nesting season, including applying additional restrictions if considered necessary to prevent harassment or take.

Project Construction Activities:

7. The qualified biologist shall evaluate the schedule of Project construction, identify any activities associated with the Project that could affect active MAMU nests, and develop a MAMU Nest Avoidance Program (NAP) in consultation with the USFWS that addresses any potential harassment or take.
8. An artificial noise deterrent system shall be developed and implemented as appropriate to acclimate individual MAMU that could be establishing new nests in the Project vicinity to construction activities. The artificial noise deterrent system shall be operating starting one hour before sunset and continuing until one hour after sunset from March through May, or until Project construction activities generating high noise levels have been initiated, whichever is later in the year.
9. Project activities which produce noise levels between 70 dB and 90 dB shall be restricted to between two-hours after sunrise and two-hours before sunset during the MAMU breeding season. Project activities which produce noise levels of 91 dB or greater shall be prohibited during MAMU breeding season.
10. Construction control measures determined necessary during the preconstruction surveys shall also be implemented as part of the MAMU NAP.
11. Construction practices called for in **Project Control BIO-5 Construction Restrictions to Protect Wildlife** shall be implemented to minimize disturbance to MAMU habitat and avoid attracting additional predators.

Post Construction Monitoring and Management

12. Appropriate management practices shall be implemented as part of future trail use to minimize any adverse effects on MAMU habitat in the Study Area. This shall include installation of interpretive signage defining restrictions on visitor behavior during the MAMU breeding season, packing out all trash to avoid attracting additional MAMU predators, and a prohibition of pets on the trail system.
13. Conduct follow-up monitoring of MAMU nest activity in the Study Area by a qualified biologist for a minimum of five years to provide additional data on MAMU use.

Other Nesting Birds

Although no signs of active nests were observed during the field reconnaissance survey, there is a possibility that nests of other native bird species protected under the MBTA and State Fish and Game code could be established in advance of construction and be inadvertently disturbed or lost while eggs or young are present. If construction is initiated during the bird nesting season (February through August 31), vegetation removal, grading, equipment operation, and increased

human activity could lead to destruction or abandonment of the active nest. This includes the loss or disruption of both special-status bird species recognized as SSC by CDFW such as long-eared owl, and more common species great horned owl, Cooper's hawk, sharp-shinned hawk, other raptors and passerine species.

Prevention of impacts to active nests is required under federal and California law. Implementation of **Project Control BIO-4: Avoidance of Bird Nests in Active Use** would ensure compliance State and federal regulations that require avoidance of active bird nests. This compliance would be achieved by limiting removal of vegetation (including trees) to periods outside of the bird nesting season, to the extent feasible, conducting pre-construction nesting bird surveys to identify active nests, and establishing no work buffer zones around active nests identified on or near proposed construction areas. Through adherence to **Project Control BIO-4**, the Project would not have a significant impact on nesting birds. Additional consultation with the USFWS would be necessary to address potential impacts on nesting MAMU as discussed above, which may include additional avoidance measures and monitoring.

Other Special-Status Animal Species

Standard construction avoidance practices to prevent take include conducting preconstruction surveys, training workers over the potential presence of this species, and monitoring the construction zone. **Project Control BIO3: Avoidance of Special-Status Species** calls for a qualified biologist to conduct preconstruction clearance surveys to confirm that special-status species are absent from the construction zone, train workers about the possible presence of their presence, and perform follow-up surveys to confirm no species are present following dewatering of the Peters Creek channel prior to in-water construction activities, and ensure that work is performed in compliance with regulatory agency authorizations. **Project Control BIO-4: Avoidance of Bird Nests in Active Use** would ensure compliance State and federal regulations that require avoidance of active bird nests. **Project Control BIO-6: Obtaining Agency Authorizations** requires that appropriate authorizations from regulatory agencies are secured prior to initiating construction, and that all conditions be complied with as part of the Project. Other Project Controls would address construction-related risks from vehicle collisions, attracting predators from trash left by workers, entrainment on monofilament plastic, and injury or death from pets of workers, among other measures. These Project Controls would serve to ensure that no inadvertent take of most special-status animal species occurs as a result of project implementation and no additional mitigation is considered necessary to address potential impacts on these species.

Special-Status Plant Species

There is a remote potential that several special-status plant species are present in the Study Area and could be affected by vegetation removal, grading and other disturbance associated with the proposed Project, including minute pocket moss, Dudley's lousewort, and white-flowered rein orchid. No populations were observed within the limits of disturbance during late summer field reconnaissance in 2019, but this was conducted outside the flowering period for these three species and they could have been undetectable. If present, individual plants or an entire occurrence could be inadvertently damaged or destroyed during construction. Given the status of each of these species with a CRPR rank of 1B.2, this would be a significant impact under CEQA, if occurrences are present and inadvertently lost.

Recommendation: The potential for inadvertent loss of one or more occurrences of special-status plants could be avoided by conducting confirmation surveys and providing appropriate avoidance or mitigation if present in the vicinity of proposed Project improvements. This could be accomplished

implementing the following mitigation measure, which would mitigate potentially significant impacts to a level of less-than-significant.

Mitigation Measure BIO-1b: Rare Plant Avoidance Measures. *Appropriate measures shall be undertaken to ensure avoidance of any special-status plant species or provide for mitigation where avoidance is not possible. A qualified botanist with a minimum of four years of academic training and professional experience in botanical sciences and a minimum of two years of experience conducting rare plant surveys shall conduct appropriately timed surveys for special-status plant species with a moderate or high potential to occur in the Study Area (i.e., minute pocket moss, Dudley's lousewort, and white-flowered rein orchid) in all suitable habitat that would be potentially disturbed by the Project (i.e., where vegetation removal may occur). Surveys shall be conducted following the most recent CDFW guidelines for rare plant surveys. If no special-status plants are found during focused surveys, the botanist shall document the negative survey results in a report of findings and no further mitigation will be required.*

If special-status plants are found during focused surveys, the following measures shall be implemented:

- 1. Information regarding the special-status plant populations shall be reported to the CNDDDB, mapped, and documented in a technical memorandum provided to the County.*
- 2. If any population can be avoided during project implementation, it shall be clearly marked in the field by a qualified botanist, workers shall be trained to avoid the area(s) and avoided during construction activities. Before vegetation removal, ground clearing or ground disturbance, all on-site construction personnel shall be instructed as to the presence of this special-status species and the importance of avoiding impacts to this species and its habitat as part of the worker training called for in Project Control BIO-3.*
- 3. If special-status plant populations cannot be avoided, the qualified botanist shall coordinate with CDFW on relocation of special-status plants or alternative measures. To the extent feasible, special-status plants that would be impacted by the Project shall be relocated within local suitable habitat nearby. This can be done either through salvage and transplanting or by collection and propagation of seeds or other vegetative material. Any plant relocation shall be done under the supervision of a qualified botanist or restoration ecologist and shall include a monitoring and maintenance program to verify success.*

2) **Less than Significant Impact.**

The Study Area supports a cover a mature redwood and Douglas fir forest, some of which represents old growth stands considered to be a sensitive natural community type by the CDFW. Similarly, areas of deciduous riparian woodland along the banks of Peters Creek are also considered a sensitive natural community type. Although most of the bridge and trail improvements would be located in areas that have been previously disturbed, construction access to install the two new bridges would require the removal of an estimated 20 native trees with trunk diameters of from 4 to 35 inches DBH, three of which qualify as heritage trees under the County's Heritage Tree Ordinance (see attached **Project Tree Removal and Construction Site Plans**). These consist of 13 tan oak, 4 redwood, 1 California bay, 1 big leaf maple, and 1 Douglas fir. None of the trees to be removed are large enough to be considered "old growth" or would substantially degrade the character and value of the surrounding forest habitat. Adherence to **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to minimize damage to native trees during construction and would provide for replacement where avoidance is not feasible. These controls and replacement plantings provided under **Project Control BIO-2: Minimize Damage and Loss to**

Trees would ensure compliance with the County's Significant and Heritage Tree Ordinances.

Implementation of **Project Control BIO-1: Minimize Disturbance to Regulated Waters and Provide for Revegetation** would ensure that unavoidable disturbance to regulated waters is minimized, that necessary authorizations from regulatory agencies are obtained and all conditions met, and that appropriate revegetation and habitat enhancement is implemented as part of the proposed Project. Potential impacts on sensitive natural communities would be less-than-significant.

3) **Less than Significant.**

The proposed Project involves modifications to the existing regulated waters associated with the reach of Peters Creek through the Study Area. Construction would require installation of temporary coffer dams and dewatering of the creek to allow equipment in the channel to construct the two new bridges and reinforce the bank in one location along the access road (see attached **Project Tree Removal and Construction Site Plans**). The existing crossing of the ephemeral drainage would also be modified as part of the access road improvements to Bridge 2. Collectively an estimated 3,000 SF of regulated waters below the OHWM would be temporarily disturbed to accommodate the access road, coffer dams, and other construction activities within federally regulated waters. Bridge abutments would be located above the OHWM, and indirect effects of shading from the bridges would be nominal as the new Bridge 1 would replace an existing structure of similar width and Bridge 2 would be narrow enough and suspended high enough across the creek that it should not disrupt plant growth and aquatic habitat within the active channel.

The potential impacts of the proposed Project are largely temporary in nature and involve a relatively small area, but regulated waters would be affected, and authorizations would be necessary from the Corps, RWQCB and CDFW. Appropriate measures would be taken by the construction contractor as part of the proposed Project to prevent erosion and sedimentation, degradation of downgradient waters as a result of construction activities, controls to minimize disturbance to regulated waters, and successful implementation of habitat enhancements. **Project Control BIO-1: Minimize Disturbance to Regulated Waters** would serve to minimize direct impacts to the regulated waters along Peters Creek and would serve to restore any areas disturbed by temporary construction access. Adherence to **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to minimize damage to native trees during construction and would provide for replacement where avoidance is not feasible. The replacement plantings provided under **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to address the proposed tree removal at the bridge crossings and along the access road. **Project Control BIO-6: Obtaining Agency Authorizations** requires that appropriate authorizations from regulatory agencies are secured prior to initiating construction, and that all conditions be complied with as part of the Project.

Given the small area of affected waters, that disturbance to regulated waters would be limited, and the minimization of adverse effects provided through implementation of Project Controls, potential impacts on regulated waters would be less-than-significant. Collectively, the Project Controls would serve to ensure appropriate authorizations for modifications are obtained and implemented, potential impacts are minimized, and that the habitat enhancements of the proposed Project are successful and avoid any significant adverse impacts on regulated waters or need for compensatory mitigation beyond what is proposed as part of the proposed Project.

4) **Less than Significant Impact.**

The proposed Project will not have any significant adverse impacts on wildlife movement

opportunities or adversely impact native wildlife nursery sites. Wildlife in the vicinity of the Study Area is already acclimated to human activity along the existing trail and construction-related disturbance would not cause any significant impacts on the existing wildlife habitat values. Bridge 2 would separate human disturbance in the active channel of Peters Creek, including aquatic habitat known to support a number of special-status species. Construction-related disturbance would be short-term, and the proposed Project would not substantially alter existing habitat or disrupt wildlife movement opportunities. Construction activities would occur during the dry season thereby minimizing disturbance to the active creek channel when surface flows and water are present and provide seasonal habitat to amphibians and other aquatic-dependent species. **Project Control BIO-5: Construction Restrictions to Protect Wildlife** would serve to avoid the possibility of adverse effects of construction on wildlife. Adherence to **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to minimize damage to native trees during construction and would provide for replacement where avoidance is not feasible. **Project Control BIO-4: Avoidance of Bird Nests in Active Use** defines steps that would be taken to ensure avoidance of any nesting birds if new nests are established in advance of construction. With the appropriate Project Controls, potential impacts on wildlife habitat and movement opportunities would be less-than-significant.

5) **Less than Significant Impact.**

Goals and policies specified in the County General Plan address the protection of sensitive biological and wetland resources. The proposed Project would include controls described above to ensure protection and restoration of any disturbance to areas of sensitive habitat such as regulated waters and bird nests in active use. No substantial conflicts with relevant policies in the County General Plan listed in **Table 1** are anticipated as a result of Project implementation.

Implementation of the proposed Project would require the removal of an estimated 20 native trees with trunk diameters of from 4 to 35 inches DBH, three of which qualify as heritage trees under the County's Heritage Tree Ordinance (see attached **Project Tree Removal and Construction Site Plans**). These consist of 13 tan oak, 4 redwood, 1 California bay, 1 big leaf maple, and 1 Douglas fir. Adherence to **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to minimize damage to native trees during construction and would provide for replacement where avoidance is not feasible. The replacement plantings provided under **Project Control BIO-2: Minimize Damage and Loss to Trees** would serve to address the proposed tree removal and no significant adverse impacts on the forest sensitive natural community types are anticipated. Implementation of **Project Control BIO-2: Minimize Damage and Loss to Trees** would ensure compliance with the County's Significant and Heritage Tree Ordinances.

6) **No Impact.**

No habitat conservation plans have been prepared addressing the Study Area or surrounding lands, and the Project would therefore not conflict with any adopted habitat conservation plans. As a result, no impact would occur.

PERSONS RESPONSIBLE FOR REPORT PREPARATION

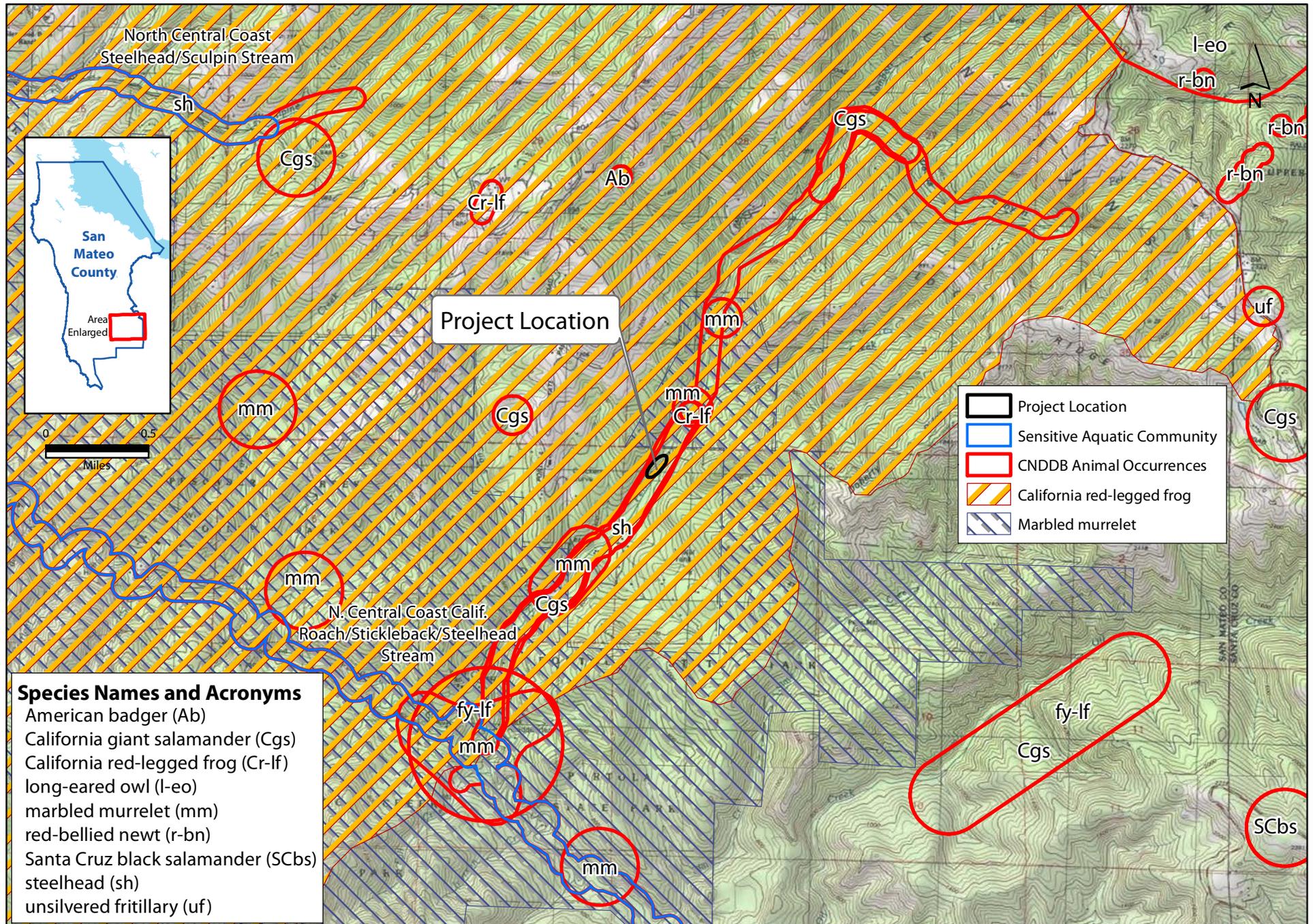
The report was prepared by Environmental Collaborative under contract to PlaceWorks. Persons involved in report preparation include the following:

Environmental Collaborative – Project Biologist
Jim Martin, Principal

Digital Mapping Solutions – GIS Mapping
Esther Mandeno, Principal

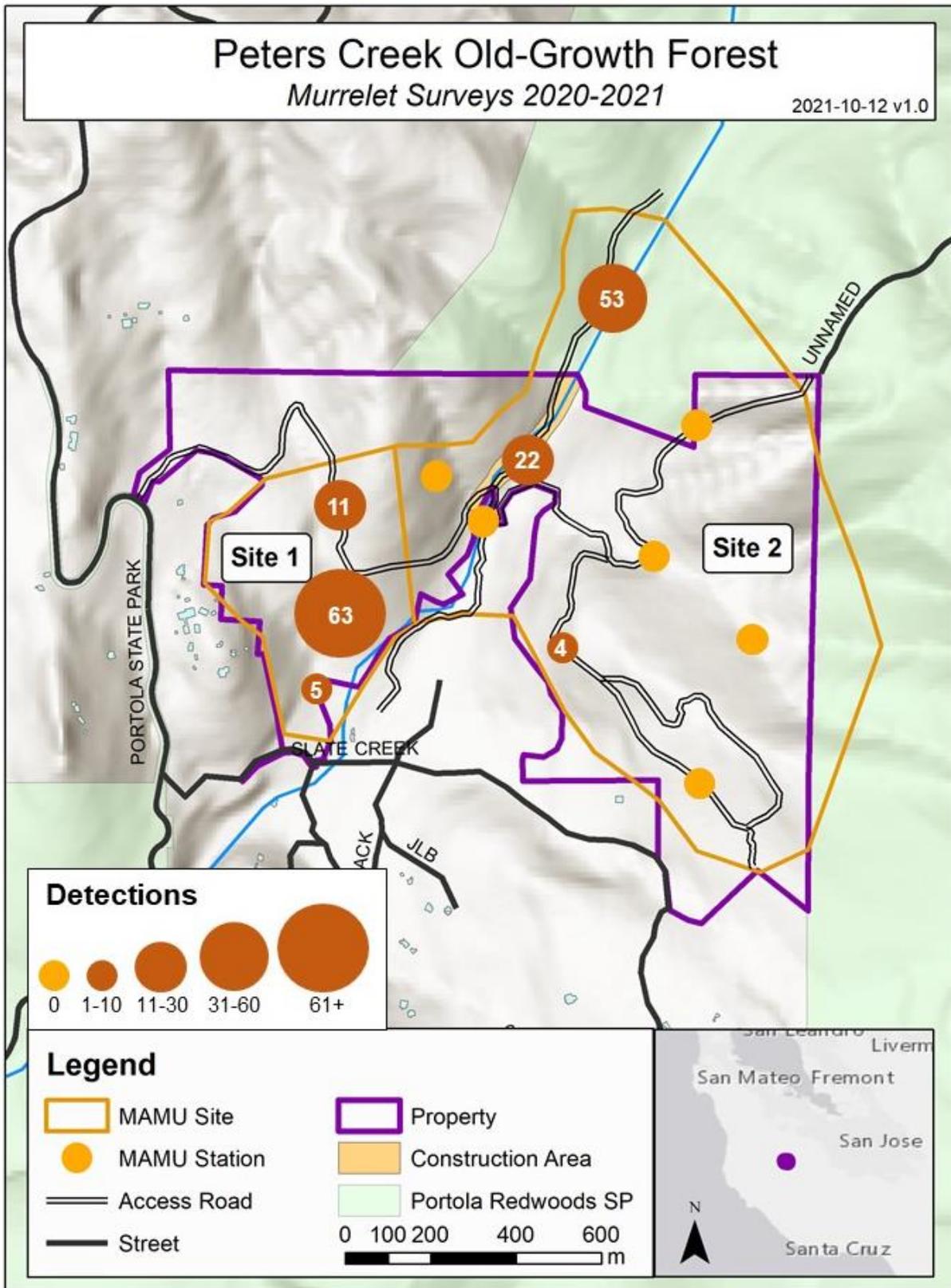
Figure 2: Special-Status Animals and Critical Habitat

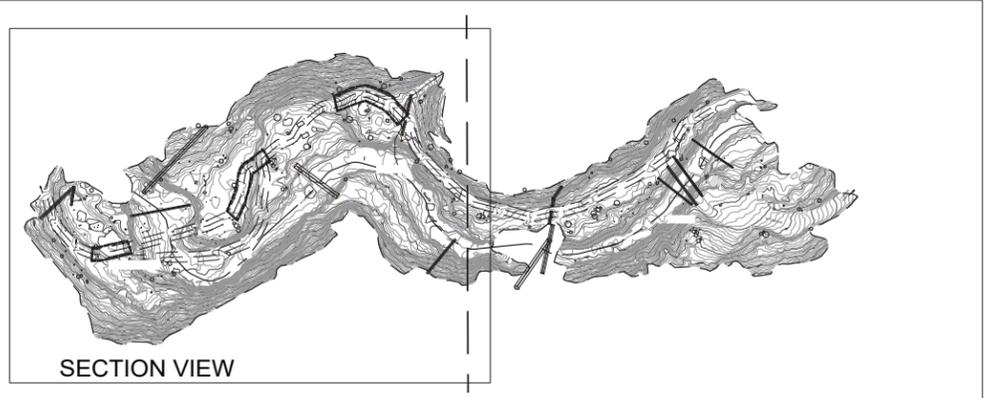
Peters Creek BRA



SOURCES: California Natural Diversity Database accessed on May 30, 2021; USFWS Critical Habitat accessed on May 18th, 2021. Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed. Map produced by www.digitalmappingsolutions.com on 6/30/2021.

Figure 3. Murrelet detections at Peters Creek Old-Growth Forest in 2020 and 2021.

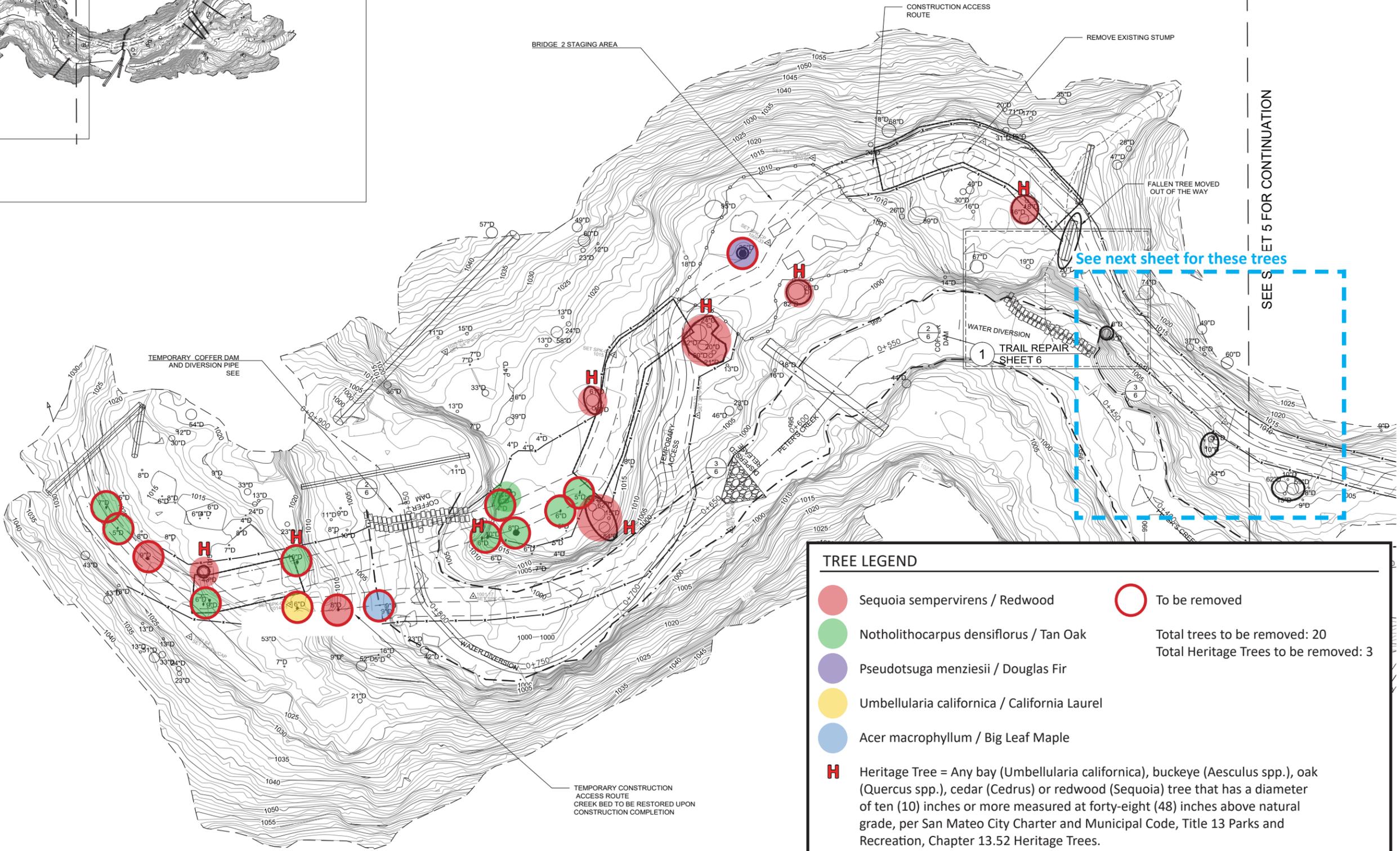
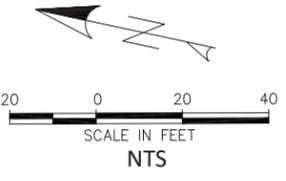




SECTION VIEW

LEGEND

- TREE LOCATION (DBH)
- 43" PROTECTED TREE
- 43" REMOVED TREE LOCATION DIAMETER (DBH)
- EXCLUSION / SILT FENCING
- STAGING AREA



See next sheet for these trees

SEE SHEET 5 FOR CONTINUATION

TREE LEGEND

	Sequoia sempervirens / Redwood		To be removed
	Notholithocarpus densiflorus / Tan Oak	Total trees to be removed: 20 Total Heritage Trees to be removed: 3	
	Pseudotsuga menziesii / Douglas Fir		
	Umbellularia californica / California Laurel		
	Acer macrophyllum / Big Leaf Maple		
H	Heritage Tree = Any bay (Umbellularia californica), buckeye (Aesculus spp.), oak (Quercus spp.), cedar (Cedrus) or redwood (Sequoia) tree that has a diameter of ten (10) inches or more measured at forty-eight (48) inches above natural grade, per San Mateo City Charter and Municipal Code, Title 13 Parks and Recreation, Chapter 13.52 Heritage Trees.		

PETER'S CREEK BRIDGES

SAVE THE REDWOODS LEAGUE
SAN FRANCISCO, CA

Civil Environmental & Water Resources
 (510) 236-6114
 FAX (510) 236-2423
 questa@questaec.com
 P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

Sht.	Rev.	Date:	By:	Description:	App'd:

Design:	ST
Drawn:	FP
Checked:	ST
Appr'd:	ST

PETER'S CREEK BRIDGES STAGING AND ACCESS 1

SAN MATEO COUNTY, CA

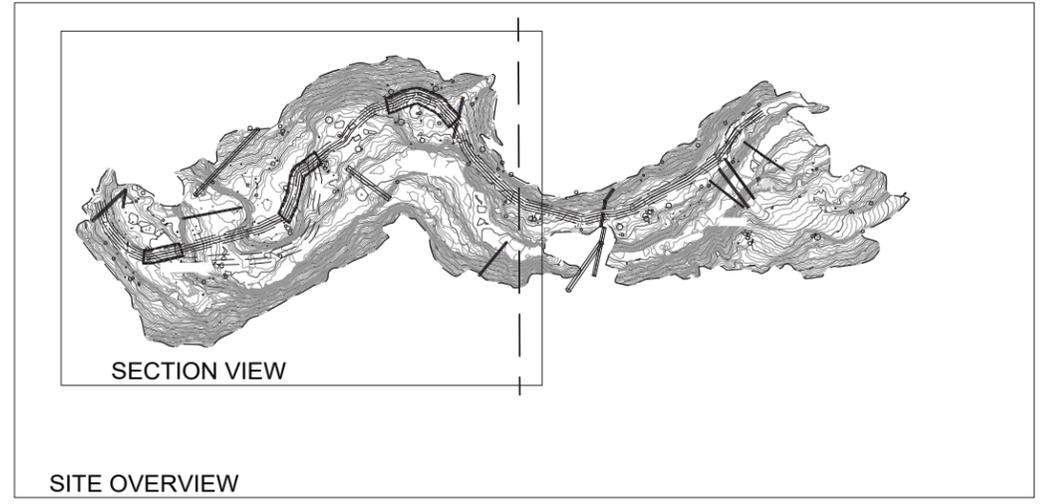
Size	Project
D	1900028
Scale:	NTS
Date:	11/18/2019
Sheet:	4 OF 10

P:\2019\1900028_PORTRAILA_REWOODS_BRIDGE_CAD\MODEL\1900028_MODEL.DWG
 LAST SAVED: 11/18/2019 11:18:2019 PLOT DATE: 11/18/2019 PLOT STYLE: QUESTA-GRayscale-255.ctb
 IF BAW DOES NOT MEASURE, DRAWING IS NOT TO SCALE - ADJUST ACCORDINGLY

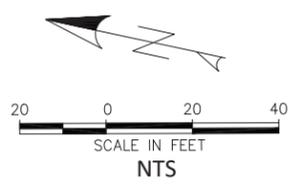
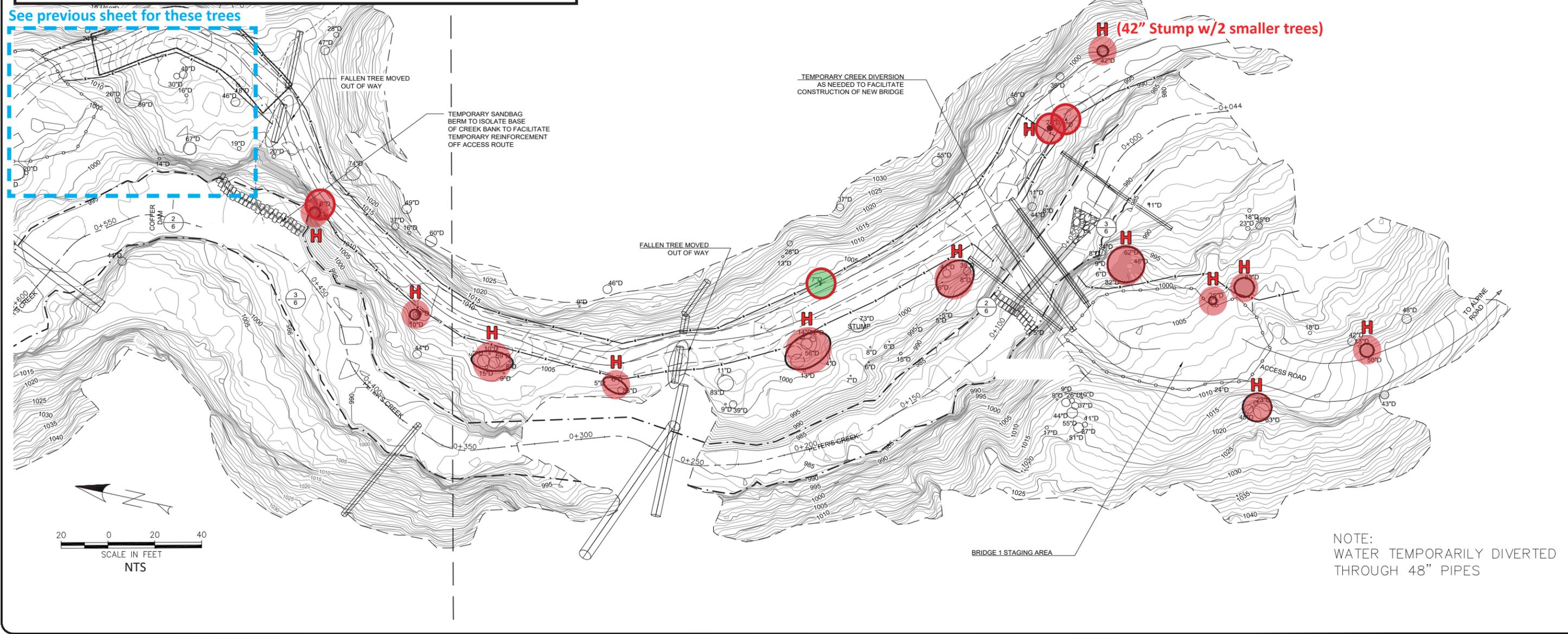
TREE LEGEND

- Sequoia sempervirens / Redwood
 - Notholithocarpus densiflorus / Tan Oak
 - Pseudotsuga menziesii / Douglas Fir
 - Umbellularia californica / California Laurel
 - Acer macrophyllum / Big Leaf Maple
 - H** Heritage Tree = Any bay (Umbellularia californica), buckeye (Aesculus spp.), oak (Quercus spp.), cedar (Cedrus) or redwood (Sequoia) tree that has a diameter of ten (10) inches or more measured at forty-eight (48) inches above natural grade, per San Mateo City Charter and Municipal Code, Title 13 Parks and Recreation, Chapter 13.52 Heritage Trees.
- To be removed
 Total trees to be removed: 20
 Total Heritage Trees to be removed: 3

- LEGEND**
- TREE LOCATION
 - 43" PROTECTED TREE
 - 43" REMOVED TREE LOCATION (DBH)
 - X — EXCLUSION/ SILT FENCING
 - ○ — STAGING AREA



See previous sheet for these trees



NOTE: WATER TEMPORARILY DIVERTED THROUGH 48" PIPES

PETER'S CREEK BRIDGES
 SAVE THE REDWOODS LEAGUE
 SAN FRANCISCO, CA

QUESTA
 ENGINEERING CORP.
 Civil Environmental & Water Resources
 (510) 236-6114
 FAX (510) 236-2423
 P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

Sht.	Rev.	Date:	By:	Description:	App'd:

Design: ST
 Drawn: FP
 Checked: ST
 Appr'd: ST

PETER'S CREEK BRIDGES
STAGING AND ACCESS 2
 SAN MATEO COUNTY, CA

Project: 1900028
 Scale: NTS
 Date: 11/18/2019
 Sheet: 5 OF 10

LAST SAVED: 11/18/2019 11:18:2019 PLOT DATE: 11/18/2019 PLOT STYLE: QUESTA-GRANDSCALE-255.DWT
 P:\2019\1900028_PORTUGAL_REWOODS_BRIDGE_CAD\MODEL\1900028_MODEL.DWG

APPENDIX A
Project Description

PETER'S CREEK PROJECT DESCRIPTION – OCTOBER 25, 2019

The goal of this project is to rebuild an existing bridge and construct a new bridge across Peter's Creek on property that is owned and managed by Save the Redwoods League. These bridges will be a part of an access improvement program that allows safe and low impact access to property as well as adjacent state park lands and trails. The project area is shown on **Figure 1**. The bridges will be clear span structures that are 50 feet and 100 feet in span. Bridge 1 is the shorter of the bridges and entails replacing what appears to be a rusting, old railroad flat car bridge. Bridge 2 is a new bridge will be placed between two high banks about 800 feet upstream of the first bridge. The existing site plans and general project layout is shown in the attached plan set. The existing bridge provides the only possible construction access to the second bridge site. Currently, that bridge is unsafe to carry construction equipment and materials. The bridge will either need to be temporally reinforced or replaced prior to construction of the second bridge.

The access route to the second bridge is a historic road that was likely constructed in the early 1900's as part of logging operations in the area. The road is generally wider than 15 feet but slight improvements will need to be completed in specific areas to make it safe for construction access. Several large downed logs will need to be moved. A short area of the roadway has been narrowed by bank erosion. This area will need a temporary fix to provide a minimum width of 12 feet to allow safe equipment and material access. A second area of the road is narrowed by a very large stump. This stump will need to be removed and the access way re-graded.



Two separate staging areas will be developed at or near each bridge site. These staging areas will be separated from the surrounding area with silt fencing and/or exclusionary fencing. All trees in around active construction zones will be protected by exclusionary fencing or timber trunk wraps whichever is more suitable for the location and application. Vegetation will be cleared within the project area for grading, resulting in the loss of approximately 10 trees of diameters ranging from 6 to 10 inches.

General construction access is good at the first site but is more challenging at the second site. To reach the far bridge abutment location of Bridge 2, a portion of the existing creek bed will need to be used. Cofferdams will be constructed upstream of the proposed bridge to channel summer low flows into a diversion pipe which would be laid on the bed of creek. The coffer dam will be constructed of sand bags filled with clean rock fill. Plastic sheeting will be laid down prior to sandbags to make it water tight and to facilitate clean, easy removal. Where necessary, along the creek bed access route clean fill material will be placed over the pipe to allow equipment and

vehicle movement. A second flow diversion is proposed at the first bridge site as well. This diversion may or may not be necessary depending on how the contractor chooses to construct the first bridge. A third smaller creek diversion/exclusion dam is needed at the area where the access road is to be temporarily widened. The design for this feature will ultimately be the responsibility of the building contractor, but it is likely that some shoring will be needed along the toe of the creek bank within ordinary high water to support the road extension. This area will be isolated from the active creek flow to reduce impacts.

Cut and fills will be limited on the project. Cuts will occur for improvements to access roads and excavations for bridge foundations. The small amounts of fill may be placed to provide smooth trail grades. The largest fill area will be at the north side of the Bridge 2, where an existing depression creates an awkward transition from the bridge landing to the existing trail connection. All cuts and fills are expected to generally balance on the site, but small amounts of unsuitable material maybe off hauled.



AREAS OF IMPACT: Figures 2 and 3 shown in the area of impact on the site. These areas are broken down into several categories.

Total Area of impact: 27,275 square feet or 0.63 acres

Area of Upland impact: 19,736 square feet or 0.45 acres

Area of temporary impacts below Ordinary High Water (OHW) as defined by modeled 2-year creek flow water surface profile: 7,535 square feet; 0.17 acres

The project will permanently affect 12,650 square feet or 0.29 acres.

CONSTRUCTION DURATION:

Construction may occur over two summer construction seasons. The first bridge needs to be able to carry equipment and supplies for the construction of the second bridge. Therefore, it is likely that the first bridge will be constructed and then, the following year the second bridge will be installed. Each bridge

will take 2-3 months to complete. Construction should start no later than August 1 and will be completed and/or winterized by October 15th of that construction season.

CONSTRUCTION EQUIPMENT AND SEQUENCING:

The project is expected to utilize a variety light trucks and heavy equipment. Workers will likely have ½ ton pickups or greater. On site heavy equipment may include a 130 excavator or larger, backhoe/skip loaders, small dozer (D3 or less), Truck or track mounted drilling rigs, and small compact front end loaders. A small crane maybe needed briefly. Portable generators will be used to supply electric power on the site.

First season, first bridge construction sequencing

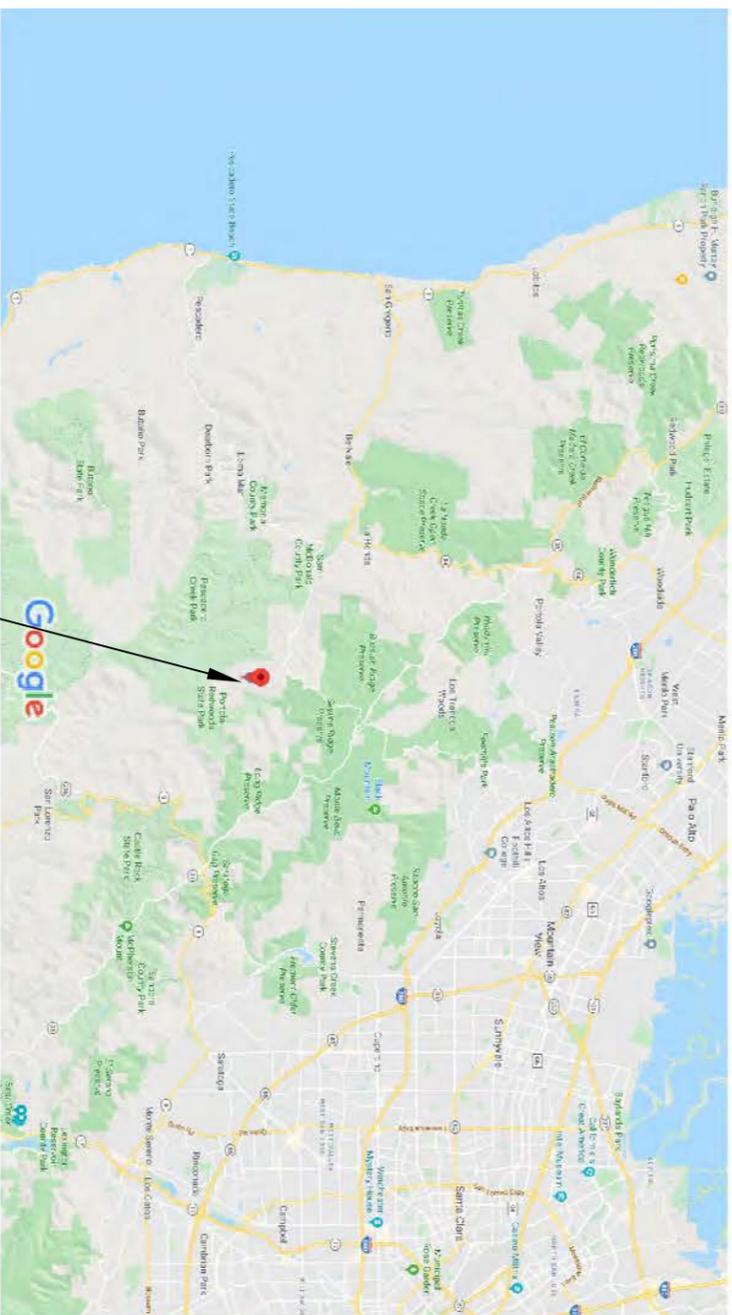
1. Mobilization and staging: This is the start of the project construction. The staging area are established and the site is isolated from the surrounding area by install of silt fence and tree protection. As necessary a coffer dam and diversion will be installed beneath the bridge.
2. Clearing and grubbing: The new bridge foundation sites will be cleared of vegetation and any tree removals will occur.
3. Portions of the old bridge and log structure may be demolished and removed from the site.
4. Foundation installation: This will involve excavation, forming and steel placement and concrete pours
5. Bridge structure installation: This includes placement of steel stingers and lateral bracing that will make the structural supports of the bridge.
6. Bridge deck and railing installation. Installation of concrete deck (maybe precast off site) and safety rails on bridge.
7. Bridge approach grading: The final grading and establish of the bridge approaches will be completed this may involve minor amounts of fill road bed improvement
8. Erosion control: The temporary erosion control and winterization measures will be installed. This may include installation of temporary straw wattles and seeding and mulching for site winterization.
9. Closeout and demobilization.
10. Periodic site checks throughout the winter.

Second season, second bridge and trail construction

1. Mobilization and staging: This is the start of the project construction season. The staging area(s) are established and is isolated from the surrounding area. Silt fences and tree protection is installed as needed.

2. Site clearing grubbing: The new bridge foundation sites and permanent trail alignments will be cleared of vegetation and any tree removals will occur.
3. Water Management and access routes: Installation of the bridge site coffer dam and diversion pipe, also installation of exclusionary bank toe features at the trail width improvement site.
4. Installation of temporary trail width shoring
5. Rough Trail grading including removal of large stump and installation of creek bed access route and tree removal as needed.
6. Foundation preparation and cable anchor installation: This may include drilling or excavate counterweights for cable suspension.
7. Cable tower installation: Cable towers would be installed on appropriate foundations. Towers may be prefabricated offsite and assembled and erected on site.
8. Cable bridge deck and railing installation
9. Bridge approach trail grading and filling
10. Cofferdam Removal and Streambed restoration
11. Erosion control installation of temporary straw wattles and seeding and mulching for site winterization
12. Closeout and site clean up
13. Periodic site checks throughout the winter.

PETER'S CREEK BRIDGES

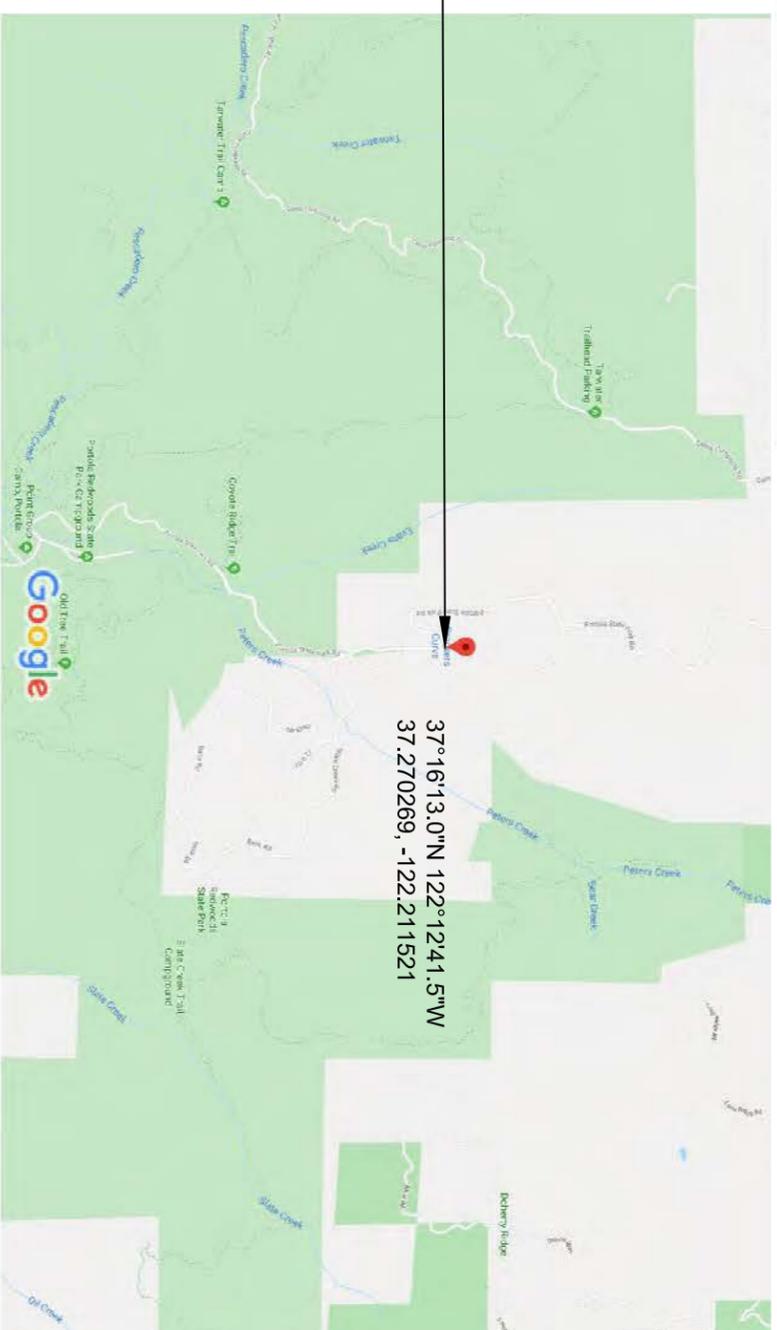


Map data ©2019 Google 2 mi

TOTAL PROJECT AREA
(SQ FT)

	BELOW OHW	UPLAND	TOTAL AREA
Temporary	7,535	7,087	14,622
Permanent	0	12,650	12,650
Total	7,535	19,737	27,272

PROJECT LOCATION



Map data ©2019 1000 ft

FIGURE 1

PETER'S CREEK BRIDGES

SAVE THE REDWOODS LEAGUE
SAN FRANCISCO, CA



QUESTA ENGINEERING CORP.
P.O. Box 70356 1220 Brickyard Cove Road Point Redwood, CA 94807
Environmental & Water Resources
(510) 296-6114
FAX (510) 296-2423
questa@questacorp.com

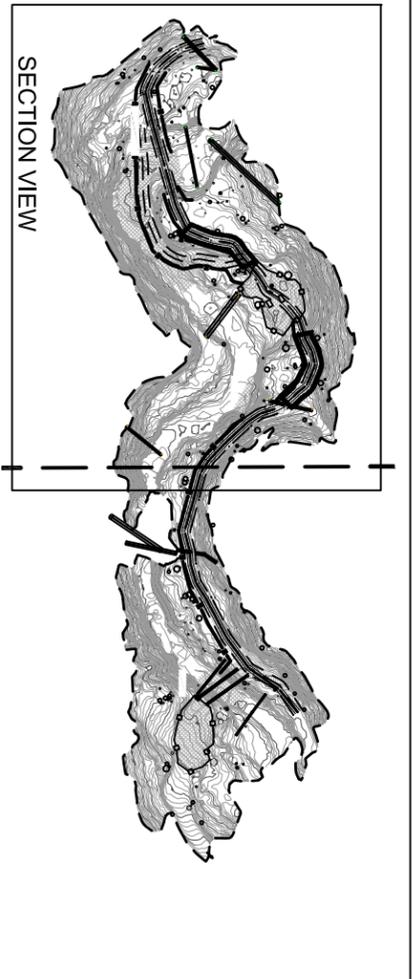
Sheet	Rev:	Date:	By:	Description:	App'd:

Design:	ST
Drawn:	FP
Checked:	ST
App'd:	ST

PETER'S CREEK BRIDGES PROJECT LOCATION

SAN MATEO COUNTY, CA

Size	Project
D	1900028
Scale:	NTS
Date:	10/25/2019



SITE OVERVIEW

TOTAL PROJECT AREA (SQ. FT)

	BELOW OHW	UPLAND	TOTAL AREA
Temporary	7,535	7,087	14,622
Permanent	0	12,650	12,650
Total	7,535	19,737	27,272

-  PERMANENT IMPROVEMENT AREA
-  TEMPORARY CONSTRUCTION AREA

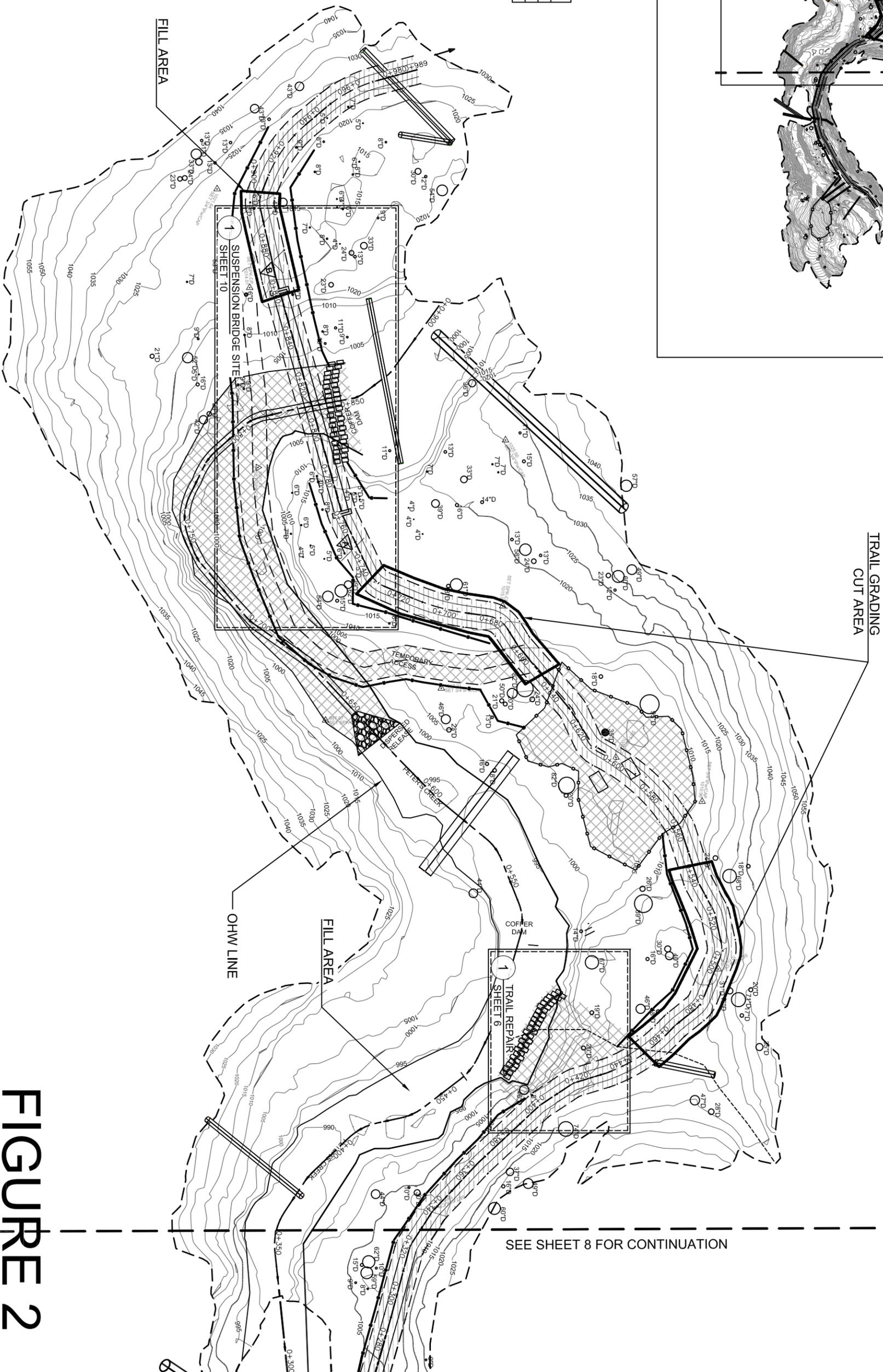
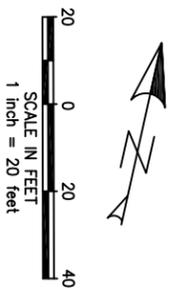


FIGURE 2

PETER'S CREEK BRIDGES

SAVE THE REDWOODS LEAGUE
SAN FRANCISCO, CA

QUESTA ENGINEERING CORP.
Environmental & Water Resources
P.O. Box 70356 1220 Brikyard Cove Road Point Richmond, CA 94807
(510) 296-6114
FAX (510) 298-2423
questa@questa.com

Sheet	Rev.	Date	By:	Description:	Appr'd:	Design:

PETER'S CREEK BRIDGES PROJECT AREA
SAN MATEO COUNTY, CA

Size	Project
D	1900028
Scale:	1" = 20'
Date:	10/25/2019

**TOTAL PROJECT AREA
(SQ FT)**

	BELOW OHW	UPLAND	TOTAL AREA
Temporary	7,535	7,087	14,622
Permanent	0	12,650	12,650
Total	7,535	19,737	27,272

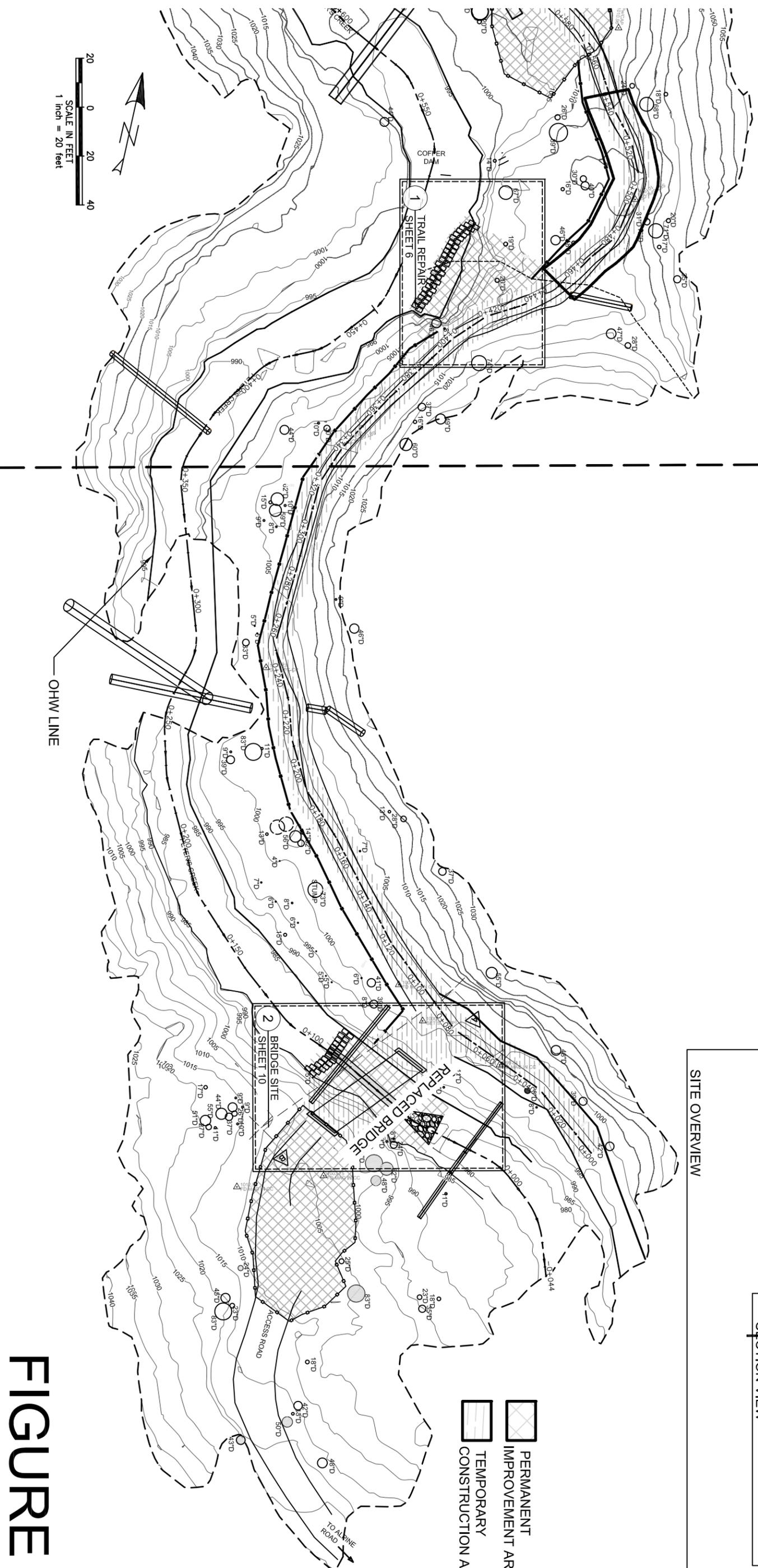
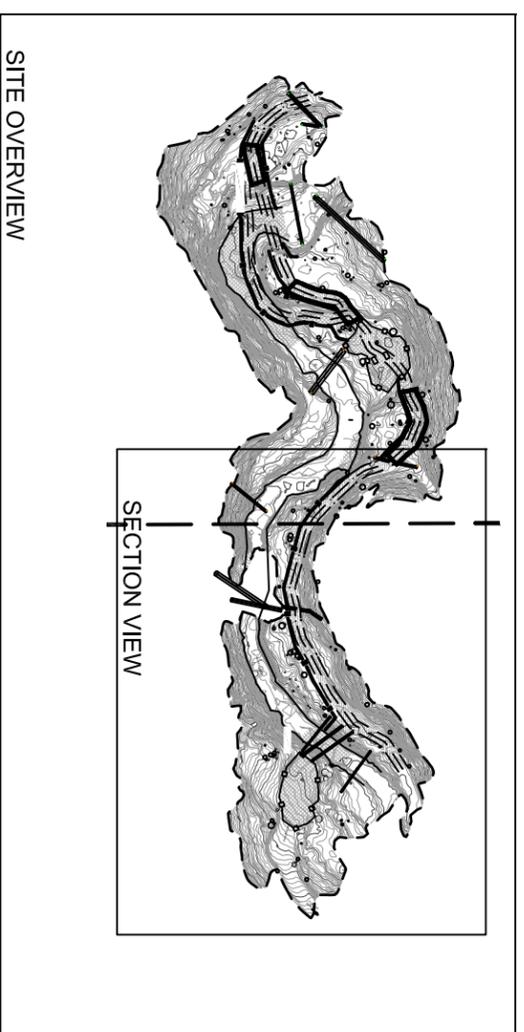


FIGURE 3

PETER'S CREEK BRIDGES

SAVE THE REDWOODS LEAGUE
SAN FRANCISCO, CA

QUESTA Environmental & Water Resources
ENGINEERING CORP.
P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807
(510) 296-6114
QUESTA@QUESTA.COM
FAX (510) 298-2423

Sheet	Rev.	Date	By:	Description:	Appr.:

**PETER'S CREEK BRIDGES
PROJECT AREA**
SAN MATEO COUNTY, CA

Size	Project
D	1900028
Scale:	1" = 20'
Date:	10/25/2019

APPENDIX B

Species Lists from CNDDDB Record Search and IPaC Report



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (La Honda (3712233) OR Franklin Point (3712223) OR Big Basin (3712222) OR Mindego Hill (3712232))

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.
<i>Aneides niger</i> Santa Cruz black salamander	G3 S3	None None	CDFW_SSC-Species of Special Concern	49 2,300	78 S:14	0	0	0	0	0	14	8	6	14	0	0
<i>Anomobryum julaceum</i> slender silver moss	G5? S2	None None	Rare Plant Rank - 4.2		13 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Antrozous pallidus</i> pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	240 240	420 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Arctostaphylos andersonii</i> Anderson's manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	525 2,400	64 S:25	2	8	4	2	0	9	11	14	25	0	0
<i>Arctostaphylos glutinosa</i> Schreiber's manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture	1,800 2,230	7 S:2	1	0	0	1	0	0	1	1	2	0	0
<i>Arctostaphylos ohloneana</i> Ohlone manzanita	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	1,700 1,700	4 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	G2 S2	None None	Rare Plant Rank - 1B.2	2,000 2,300	17 S:3	0	1	0	0	0	2	2	1	3	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.
<i>Arctostaphylos silvicola</i> Bonny Doon manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	900 900	16 S:1	1	0	0	0	0	0	0	1	1	0	0
<i>Asio otus</i> long-eared owl	G5 S3?	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,000 2,000	48 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	500 500	25 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cunicularia</i> 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	713 2,253	2011 S:2	0	0	0	0	0	2	0	2	2	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	500 500	181 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Bombus occidentalis</i> western bumble bee	G2G3 S1	None Candidate Endangered	USFS_S-Sensitive	100 100	306 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Brachyramphus marmoratus</i> marbled murrelet	G3 S2	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered NABCI_RWL-Red Watch List	200 1,800	110 S:35	0	1	0	0	0	34	21	14	35	0	0
<i>Calyptridium parryi</i> var. <i>hesseae</i> Santa Cruz Mountains pussypaws	G3G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	2,300 2,600	11 S:2	0	0	0	0	0	2	2	0	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.
<i>Charadrius nivosus nivosus</i> western snowy plover	G3T3 S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	10 10	138 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Chorizanthe pungens var. hartwegiana</i> Ben Lomond spineflower	G2T1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	800 1,160	18 S:3	0	1	0	0	0	2	2	1	3	0	0
<i>Cirsium andrewsii</i> Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2	80 80	31 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Clarkia concinna ssp. automixa</i> Santa Clara red ribbons	G5?T3 S3	None None	Rare Plant Rank - 4.3	1,500 2,750	20 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	30 2,250	635 S:9	0	1	1	0	0	7	5	4	9	0	0
<i>Cypseloides niger</i> 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	540 540	46 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	G4T2T3 S2S3	Candidate None	USFS_S-Sensitive	50 200	383 S:2	0	2	0	0	0	0	1	1	2	0	0
<i>Dicamptodon ensatus</i> California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	80 2,400	234 S:22	0	0	0	0	0	22	9	13	22	0	0
<i>Dirca occidentalis</i> western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	430 2,165	90 S:12	2	4	1	0	0	5	1	11	12	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.
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	45 949	1398 S:3	1	1	0	0	0	1	0	3	3	0	0
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,000 2,000	8 S:2	0	0	0	0	1	1	2	0	1	1	0
<i>Erysimum ammophilum</i> sand-loving wallflower	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CRES-San Diego Zoo CRES Native Gene Seed Bank SB_SBBG-Santa Barbara Botanic Garden	100 100	58 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Falco peregrinus anatum</i> American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	1,871 1,871	58 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	250 300	22 S:3	0	0	0	0	0	3	1	2	3	0	0
<i>Fritillaria liliacea</i> fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	33 33	82 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Grimmia torenii</i> Toren's grimmia	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	1,970 2,325	13 S:4	0	0	0	0	0	4	0	4	4	0	0
<i>Grimmia vaginulata</i> vaginulate grimmia	G3 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	2,250 2,250	2 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Hesperevax sparsiflora var. brevifolia</i> short-leaved evax	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	850 850	72 S:1	0	0	0	0	0	1	1	0	1	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.
<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i> Santa Cruz cypress	G1T1 S1	Threatened Endangered	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	1,000 2,000	7 S:2	0	1	0	0	0	1	0	2	2	0	0
<i>Hesperocyparis abramsiana</i> var. <i>butanoensis</i> Butano Ridge cypress	G1T1 S1	Threatened Endangered	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	1,400 1,400	1 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Lasiurus cinereus</i> hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Legenere limosa</i> legenere	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley	1,200 1,200	83 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i> Point Reyes meadowfoam	G4T1 S1	None Endangered	Rare Plant Rank - 1B.2	240 240	12 S:1	0	0	1	0	0	0	1	0	1	0	0
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	G2Q S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	450 2,400	30 S:4	0	0	0	0	0	4	3	1	4	0	0
<i>Margaritifera falcata</i> western pearlshell	G4G5 S1S2	None None		50 50	78 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Monolopia gracilens</i> woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2	400 1,850	68 S:8	0	0	0	0	1	7	5	3	7	1	0
<i>Monterey Pine Forest</i> Monterey Pine Forest	G1 S1.1	None None		400 400	11 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>N. Central Coast Calif. Roach/Stickleback/Steelhead Stream</i> N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	GNR SNR	None None		130 200	2 S:2	0	2	0	0	0	0	2	0	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.
North Central Coast Drainage Sacramento Sucker/Roach River North Central Coast Drainage Sacramento Sucker/Roach River	GNR SNR	None None		400 400	4 S:1	0	1	0	0	0	0	1	0	1	0	0
North Central Coast Short-Run Coho Stream North Central Coast Short-Run Coho Stream	GNR SNR	None None		50 50	2 S:1	0	0	1	0	0	0	1	0	1	0	0
North Central Coast Steelhead/Sculpin Stream North Central Coast Steelhead/Sculpin Stream	GNR SNR	None None		160 160	1 S:1	0	1	0	0	0	0	1	0	1	0	0
Northern Interior Cypress Forest Northern Interior Cypress Forest	G2 S2.2	None None		1,000 2,100	22 S:3	0	0	0	0	0	3	3	0	3	0	0
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	G5T2T3Q S2	Endangered Endangered	AFS_EN-Endangered	40 400	23 S:2	0	0	1	1	0	0	2	0	2	0	0
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	40 1,200	44 S:7	0	1	0	0	0	6	5	2	7	0	0
Orthotrichum kellmanii Kellman's bristle moss	G1 S1	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	2,133 2,247	4 S:2	0	0	0	0	0	2	0	2	2	0	0
Pedicularis dudleyi Dudley's lousewort	G2 S2	None Rare	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz USFS_S-Sensitive	500 500	11 S:2	0	1	0	0	0	1	1	1	2	0	0
Penstemon rattanii var. kleei Santa Cruz Mountains beardtongue	G4T2 S2	None None	Rare Plant Rank - 1B.2	2,000 2,000	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Pentachaeta bellidiflora white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	680 2,000	14 S:3	0	0	0	0	2	1	3	0	1	2	0
Pinus radiata Monterey pine	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	400 400	5 S:1	1	0	0	0	0	0	0	1	1	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.
<i>Piperia candida</i> white-flowered rein orchid	G3 S3	None None	Rare Plant Rank - 1B.2	500 1,300	222 S:4	0	0	0	0	0	4	2	2	4	0	0
<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	40 2,300	42 S:13	1	2	1	0	0	9	7	6	13	0	0
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	G1Q S1	None Endangered	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	160 160	17 S:1	0	0	1	0	0	0	1	0	1	0	0
<i>Rana boylei</i> foothill yellow-legged frog	G3 S3	None Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	192 1,654	2468 S:13	0	1	0	0	4	8	13	0	9	2	2
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	17 1,872	1659 S:42	12	11	4	6	0	9	13	29	42	0	0
<i>Senecio aphanactis</i> chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	1,200 1,200	98 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2		23 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Speyeria adiastrae adiastrae</i> unsilvered fritillary	G1G2T1 S1	None None		1,600 2,300	2 S:2	0	1	0	0	0	1	2	0	2	0	0
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	G5T1 S1	Endangered None		28 28	17 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Candidate Threatened		20 20	46 S:1	0	0	0	0	0	1	1	0	1	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.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	875 875	19 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Stuckenia filiformis ssp. alpina</i> slender-leaved pondweed	G5T5 S2S3	None None	Rare Plant Rank - 2B.2	50 50	21 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Taricha rivularis</i> red-bellied newt	G2 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	1,800 2,000	136 S:2	0	0	0	0	0	2	0	2	2	0	0
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	359 2,542	594 S:18	0	0	0	0	0	18	1	17	18	0	0
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	G5T2Q S2	Endangered Endangered	CDFW_FP-Fully Protected	60 2,030	66 S:24	4	6	4	0	0	10	17	7	24	0	0
<i>Trifolium buckwestiorum</i> Santa Cruz clover	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture		64 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Trifolium polyodon</i> Pacific Grove clover	G1 S1	None Rare	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_USDA-US Dept of Agriculture	870 870	21 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Usnea longissima</i> Methuselah's beard lichen	G4 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	2,040 2,040	206 S:1	0	0	0	0	1	0	1	0	0	0	1

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.

Project information

NAME

Peters Creek Bridges Project

LOCATION

San Mateo County, California



DESCRIPTION

Some(The Project consists of rebuilding an existing bridge and constructing a new pedestrian bridge over Peter's Creek on property owned and managed by Save the Redwoods League. These bridges would be part of an access improvement program to allow for safe and low impact access to the property as well as the adjacent Portola Redwoods State Park lands and trails. The bridges would be clear span structures that are approximately 50 feet and 100 feet in span, respectively. Construction would be timed during the dry period when stream flows are lowest to minimize impacts on aquatic habitat and is estimated to take two years to complete.)

Local office

Sacramento Fish And Wildlife Office

 (916) 414-6600

 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

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

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

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

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

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ 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 Fisheries²).

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

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

Birds

NAME

STATUS

California Least Tern *Sterna antillarum browni* Endangered
Wherever found
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 overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/4467>

Reptiles

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

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Tidewater Goby *Eucyclogobius newberryi* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/57>

Flowering Plants

NAME

STATUS

San Mateo Woolly Sunflower *Eriophyllum latilobum* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7791>

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME

TYPE

California Red-legged Frog *Rana draytonii* Final

<https://ecos.fws.gov/ecp/species/2891#crithab>

Marbled Murrelet *Brachyramphus marmoratus* Final

<https://ecos.fws.gov/ecp/species/4467#crithab>

Migratory birds

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

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

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

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>

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

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see 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

Black Swift *Cypseloides niger*
 This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

<p>Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084</p>	Breeds May 20 to Jul 31
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20
<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Rufous Hummingbird <i>Selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002</p>	Breeds elsewhere
<p>Song Sparrow <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Feb 20 to Sep 5
<p>Spotted Towhee <i>Pipilo maculatus clementae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243</p>	Breeds Apr 15 to Jul 20
<p>Wrentit <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	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.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

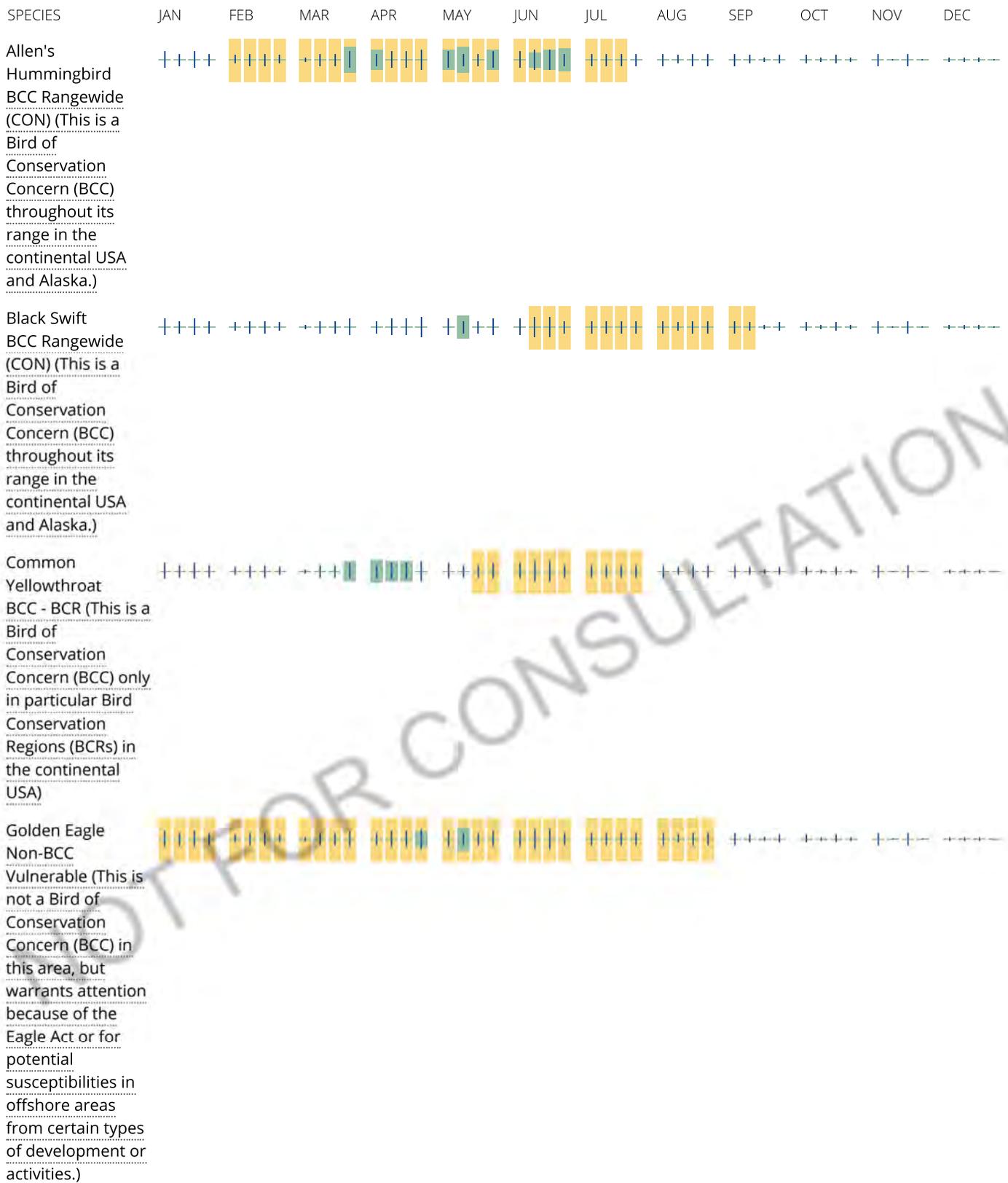
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

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

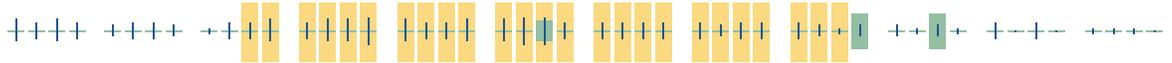
Survey Timeframe

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

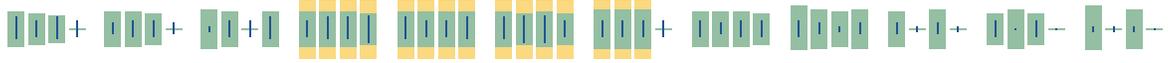


NOT FOR CONSULTATION

Lawrence's
Goldfinch
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Nuttall's
Woodpecker
BCC - BCR (This is a
Bird of
Conservation
Concern (BCC) only
in particular Bird
Conservation
Regions (BCRs) in
the continental
USA)



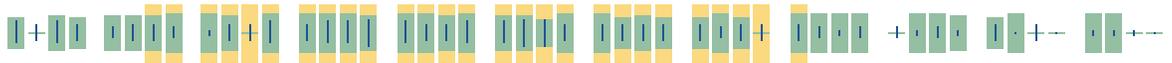
Oak Titmouse
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



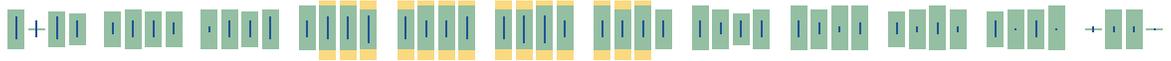
Rufous
Hummingbird
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



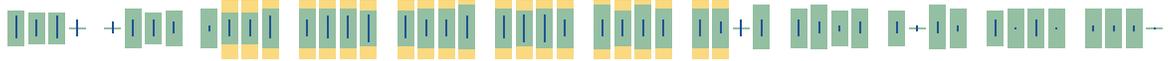
Song Sparrow
BCC - BCR (This is a
Bird of
Conservation
Concern (BCC) only
in particular Bird
Conservation
Regions (BCRs) in
the continental
USA)



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



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



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

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

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

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

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFOC](#)

[PFOA](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

APPENDIX C
Representative Photographs of Study Area



View 1. View to east of existing bridge crossing of Peters Creek.



View 2. View to the west of existing bridge.



View 3. View of west bank of Peters Creek channel under existing bridge.



View 4. View of underside of existing bridge, showing old railroad car understructure.



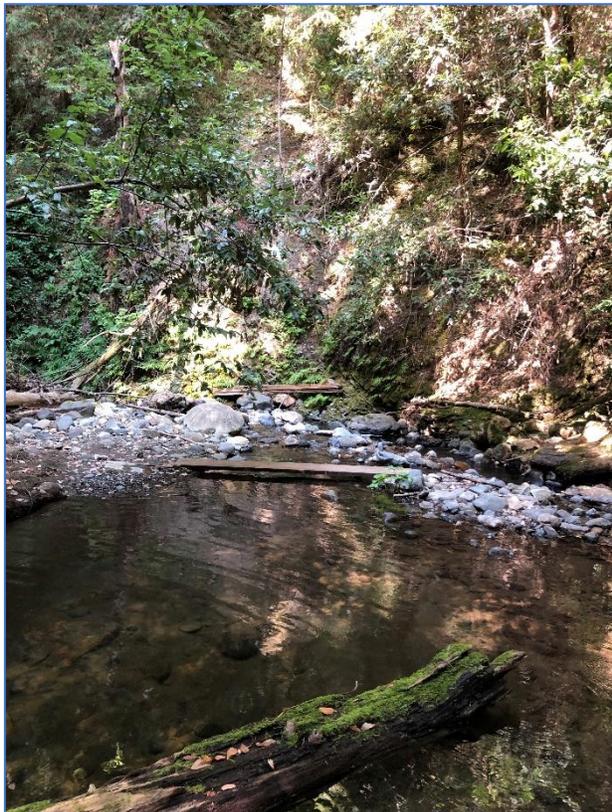
View 5. View of south bank to be repaired and stabilized.



View 6. View of unvegetated ephemeral drainage along old roadbed, looking upslope into ravine.



View 7. View of upper crossing from southeast bank, near new bridge footing.



View 8. View upstream of the bridge crossing, where the temporary cofferdam would be located.



View 9. View upstream at the southeast bank of the upper bridge crossing.



View 10. View of mature old growth redwood forest further upstream on State Parks lands.