



**Biological Resources Assessment
Marinwood Community Services District
Park Maintenance Building Replacement Project
San Rafael, Marin County
November 2017**

Prepared for:

Marinwood Community Services District
775 Miller Creek Road
San Rafael, CA 94903-1323



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- Figure 1: Project Location
- Figure 2: Reported Special-status Species Occurrences in Project Vicinity
- Figure 3: Site Map
- California Department of Fish and Wildlife, Natural Diversity Database – Novato USGS Quadrangle
- U.S. Fish and Wildlife Service, Information Planning and Conservation System (IPaC) Trust Resource Report

1. Introduction

The Marinwood Community Services District (District) is planning to replace an existing park maintenance building with a new facility at 775 Miller Creek Road, San Rafael, Marin County, California (Figure 1). The District provides fire protection, recreation programs and facilities, parks, and community open space for the Community of Marinwood. In the 1960s, a park maintenance building was constructed along Miller Creek within the District's central facility. The building continues to serve as the central hub for the District's park maintenance staff for material storage and servicing of equipment. The site also includes a modular building used as office space and a restroom for park staff, gravel parking area, and access road from Miller Creek Road. The maintenance building is in dire need of replacement – it is located at the top of the bank above Miller Creek, encroaching on the riparian corridor, and much of the structure is deteriorating. The District has not determined the final building configuration for the new facility, but it will include approximately 1,000 square feet of interior storage, covered exterior storage, and realignment of the existing gravel road. The new facility will be moved away from the top of the bank and native riparian vegetation restored.

The County of Marin has requested a biological assessment to accompany a Site Plan Review application to the Community Development Agency. The assessment is needed to determine 1) the impacts of the proposed project on sensitive biological resources; 2) if there are any biological constraints associated with the proposed project; and to 3) provide recommendations for California Environmental Quality Act (CEQA) compliance. The District retained Prunuske Chatham, Inc. (PCI) to complete the biological assessment. This report summarizes a field survey of the project site and describes existing biological resources, reviews potential for special-status species and sensitive habitat occurrence, and provides general recommendations to protect biological resources during project implementation.

2. Field Survey Methodology

A biological field survey of the project site was completed on November 8, 2017, by PCI's Senior Wildlife Biologist and Staff Ecologist, who are both familiar with the region's flora and fauna. The assessment was intended as a general inventory of species observed or potentially occurring within the project area; it did not include focused surveys for special-status species. Observations were restricted to a few hours of on-site observation and were limited in scope due to the seasonal distribution of some species and rarity of others. The primary purposes were to characterize biological communities within the project area and to determine whether or not suitable habitat for special-status species and/or sensitive habitats is present. The potential presence of and impacts on special-status species were determined based on the proximity of the project area to reported occurrences, species' geographic ranges, and a comparison of existing habitat conditions and features with those required by the sensitive species.

PCI's biological assessment followed protocols established by California Department of Fish and Wildlife (CDFW 2009) and by Marin County's *Preparation of Biological Site Assessments* (Marin County undated). During the survey, an inventory of all plant and wildlife species observed was compiled; see below. Conditions during the survey were clear and sunny with no cloud cover and light wind (0-5 mph). The air temperature was 64° F at 12:00 pm. The survey was conducted with the aid of binoculars (Swarovski™ 10 x 42). Visual cues, calls, songs, and direct observations were used to identify fish and wildlife species. The site was examined for presence of birds, mammals, amphibians, reptiles, fish, and invertebrates. No aquatic sampling was completed as part of the assessment.

Figure 1 shows the project location and regional context. Figure 2 illustrates the locations of known sightings of special-status plants and animals within the project area's vicinity (CDFW 2017a). Figure 3 is an aerial view of the site with existing features and constraints identified. Representative photographs taken during the field survey are provided at the end of this report.

This level of assessment is standard at this stage of project review and is meant to guide Marin County staff in making initial determinations for compliance with CEQA, recommendations for further study, and/or mitigation, restoration, and enhancement opportunities. This biological assessment is specific to the project identified above (i.e., the replacement of an existing maintenance building at 775 Mill Creek Road); impacts beyond the project boundaries were not evaluated – the entire parcel was not assessed. It does not include an evaluation of the cumulative effects of the project within the context of potential future development at a local and regional scale. This report represents PCI's best professional effort to identify all sensitive habitats, species, and resources of concern based on the proposed project.

3. Project Setting

The project is located at 775 Miller Creek Road, west of Highway 101, off Lucas Valley Road and Miller Creek Road, in the community of Marinwood (Figure 1). It is mapped on the Novato USGS quadrangle (38.030667°N and -122.551146°W) at 65 to 70' in elevation. The project is located on a large parcel owned by the District that includes their administrative office, Marinwood Community Center, Marinwood Community Park (pool, picnic area, tennis courts, playground), fire house, and a pathway that extends from Miller Creek Road to Las Gallinas Avenue. Miller Creek runs through the parcel and adjacent to the existing park maintenance building. Miller Creek drains an area of approximately 12 square miles. It flows through the unincorporated community of Marinwood and enters San Pablo Bay near McInnis County Park.

According to the Marin County Community Development Agency website, the parcel (APN# 164-260-35) is designated as Open Area (OA; Marin County 2017d). The “OA zoning district is intended for areas of the County committed to open space uses, as well as environmental preservation. The OA zoning district is consistent with the Open Space, and Agriculture and Conservation land use categories of the Marin Countywide Plan” (Marin County 2017a). The Countywide Plan designation for the parcel is Open Space (OS; Marin County 2007). Open spaces are to be managed in a “sustainable manner for environmental health and long-term protection of resources”. The parcel is also designated as a Stream Conservation Area (Marin County 2017c). See *Jurisdictional Areas* below for additional information. Zoning and general plan designations for the parcel are inconsistent with current land uses on the site. As noted above, a majority of the parcel supports existing community resource development and only portions of the parcel are retained as open space. The proposed redevelopment would be consistent with the existing developed areas on the parcel.

4. Existing Site Conditions

Vegetation within the project site, including both the proposed project area and a buffer around it, consists primarily of upland ruderal and riparian woodlands along Miller Creek. The site is bordered by residential development directly to the north, Miller Creek Road and a graveled access driveway to west, Miller Creek and an ephemeral drainage to south, and a continuation of a pathway and additional creek side habitat to the east. Recreation facilities, a school, and residential development occur in the surrounding areas. As noted above, the site is accessed from a gravel road directly off Miller Creek Road. This pathway extends beyond the site all the way to Las Gallinas Avenue.

Soil on the site is mapped as Xerorthents-Urban land complex (NRCS 2017). This soil is comprised primarily of xerorthents¹ and similar soils and urban land. It is located on 0 to 9 percent slopes on valley floors and tidal flats.

The project site, where the new facility is proposed, is relatively flat and uniform topography. It is largely unvegetated with the exception of a mature planted pine tree (*Pinus* sp.) in the center of the development area and additional pines and ornamental plantings, and native coast live oak (*Quercus agrifolia*) and a mature valley oak (*Q. lobata*) along the periphery. Care will need to be taken during construction to protect the oak trees, especially the mature valley oak. A narrow band of riparian vegetation

¹ An orthent soil (see definition) with a xeric moisture regime. Orthent soils are shallow soils found on old landforms and completely devoid of weatherable materials.

occurs along the creek side of the existing maintenance building. The fences at the east end of the building are covered in invasive English ivy (*Hedera helix*).

Miller Creek has a relatively intact canopy of native riparian trees (Figure 3). The banks are fairly steep and the toe of the bank below the building is reinforced with rock riprap. Coast live oak and California bay (*Umbellularia californica*) are the dominant tree species. Along the backside of the building, the creek bank understory is dominated by native poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), small white alder (*Alnus rhombifolia*) and boxelder (*Acer negundo*), and non-native Himalayan blackberry (*Rubus armeniacus*), English ivy, and cape ivy (*Delairea odorata*). A vegetated island occurs in the middle of the channel below the building with mature white alders (30" DBH) and California bays (3 to 4' DBH). There is also an invasive common fig (*Ficus carica*) growing at the downstream end of the island and several unidentified non-native ornamental trees and shrubs scattered throughout the riparian understory. The canopy of a mature coast live oak tree extends over the building – care will need to be taken to protect this tree during building demolition. There is an unvegetated path on the south side of the building that extends to the creek bed; a small bridge of downed branches spans the creek; and the trail continues to the east up the opposite bank. Upstream of the pedestrian crossing, the channel shows evidence of incision and exposed roots.

Flows in Miller Creek are typical of most Mediterranean-climate streams with the majority of discharge during the winter months and the stream becoming intermittent by summer. PCI's site visit occurred during early fall after several rain events and water was flowing through the site. The average wetted channel width was 4' and average depths were 4 to 6". The substrate was dominated by cobbles and larger gravel intermixed with granules. The water temperature measured 51°F. Schools of California roach (1-2") were observed. Miller Creek is reported to support a small run of steelhead (Jones 2000; Leidy et al. 2005). The stream may also support habitat for more common fish species adapted to warmer conditions and varied stream flows (e.g., threespine stickleback, sculpin). Smooth-cased caddisflies were observed along the stream bottom. The ephemeral drainage flowing into Miller Creek from the west was completely dry.

An ephemeral drainage flows into Miller Creek upstream of the building (see Figure 3). It is a narrow channel (average 3' wide) with steep banks. The canopy is dominated by California bay (including several specimen trees, several feet in diameter), coast live oak, native willows (*Salix* spp.), non-native ornamentals, and an understory of English ivy. The District has completed some non-native plant removal and native revegetation (mostly rushes and ferns) along the left bank adjacent to the parking area.

The riparian woodlands and streams provide nesting opportunities, food, and shelter and may serve as corridors or refugia during migration for other wildlife species. Birds

represent the most abundant and prominent wildlife species. A number of bird species were actively foraging and singing within the project area during the field survey; see below. The riparian community also supports habitat for native mammals, reptiles, and amphibians. Western gray squirrels were seen and several nest structures were present in oak and bay trees along the creek. Wildlife were also found to be using the old building as well. Multiple black phoebe nests were observed on the building and storage shed (this is typical of this species). The building is also being used by rodents as droppings were present in the corners of the building and on the exterior. See *Special-status and Common Bat Species* for additional information.

Wildlife observed (direct and indirect: scat, tracks, burrows) at the site by PCI included: (birds) chestnut-backed chickadee, dark-eyed junco, ruby-crowned kinglet, yellow-rumped warbler, bushtit, American crow, oak titmouse, spotted towhee, western scrub-jay, black phoebe, California towhee, Anna's hummingbird, common raven, golden-crowned sparrow, Nuttall's woodpecker, hermit thrush, (mammals) western gray squirrel, rat (unknown species, based on scat), and (invertebrates) smooth-cased caddisfly. See *Identified Special-status Species* below for further discussion about sensitive fish and wildlife resources within the site.

5. Special-status Species

Background Research

PCI reviewed background literature and databases to help determine the potential for special-status species and sensitive habitats to occur on or adjacent to the project site. The database review focused on reported occurrences for the Novato USGS quadrangle, where the project is located, and adjacent quads. PCI also reviewed aerial imagery to evaluate the potential for unique biological communities and special-status species. Sources reviewed include:

- California Department of Fish and Wildlife Natural Diversity Database (CNDDDB)² (CDFW 2017a);
- A Manual of California Vegetation; 2nd Edition (Sawyer et al. 2009);
- California Department of Fish and Wildlife Natural Communities List (CDFW 2010);

² The California Natural Diversity Data Base (CNDDDB) is a repository of information on sightings and collections of rare, threatened, or endangered plant and animal species within California. It is maintained by CDFW. CNDDDB reports occurrences of special-status species and sensitive habitats that have been entered into the database and does not generally include inventories of more common animals or plants. The absence of a species or habitats from the database does not necessarily mean that they do not occur in the area, only that no sightings have been reported. In addition, sightings are subject to observer judgment and may not be entirely reliable as a result.

- CNPS Inventory of Rare and Endangered Vascular Plants of California on-line inventory (CNPS 2017);
- Information for Planning and Conservation (IPaC) Trust Resource List for the project area (USFWS 2017); and
- Field guides and general references for plants, birds, mammals, reptiles, amphibians, and invertebrates.

Jurisdictional Areas

Wetlands and other waters of the U.S. and the state of California are considered jurisdictional areas. Wetlands and other waters include a variety of both permanent and ephemeral aquatic features. Regulations and policies that protect aquatic habitats have been enacted by a number of government agencies. Wetlands and waters fall under the jurisdiction of the U.S. Army Corps of Engineers, local Regional Water Quality Control Board, California Department of Fish and Wildlife, and Marin County. Any fill, removal of native riparian vegetation, or alteration of drainage patterns at the project site will require permits and resource agency consultation.

Marin County has also established Stream Conservation Areas along perennial, intermittent, and ephemeral streams³. Miller Creek is mapped as a solid blue-line stream on the Novato USGS topographical map, and subject to SCA setbacks. The ephemeral drainage, flowing into Miller Creek, may also be subject to SCA setbacks. This drainage “carries only surface runoff and flows during and immediately after period of precipitation”. According to Marin County, the SCA setback for the project parcel is 100’, but additional setback may be required (Marin County 2017c). Setback applicability to project should be confirmed directly with Marin County planning staff.

Special-status Natural Communities

Special-status natural communities are defined by CDFW as “communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects” (CDFW 2010). Natural communities are designated as special-status based on CDFW’s current plant classification system. Riparian communities are considered sensitive based on their limited distribution in the State. Work will occur along the riparian corridor – this will include building removal, invasive species removal, and native revegetation.

Definition of Special-status Species

In California, special-status plants and animals include those species that are afforded legal protection under the federal and California Endangered Species Acts (ESA and

³ Marin County has also established Wetland Conservation Areas for jurisdictional wetlands. This included minimum setbacks to protect wetlands and an upland buffer. No jurisdictional wetlands are present on the project site and are not discussed further.

CESA, respectively) and other regulations. These species must be considered during project evaluation to comply with CEQA, during consultation with State and federal resources agencies, and in development of specific management guidelines for resource protection. Special-status species are defined as the following:

- Species listed or proposed for listing as threatened or endangered under the federal ESA;
- Species listed or proposed for listing as threatened or endangered under CESA;
- Species that are recognized as candidates for future listing by agencies with resource management responsibilities, such as U.S. Fish and Wildlife Service (USFWS), NOAA’s National Marine Fisheries Service (NOAA Fisheries), and CDFW;
- Species defined by CDFW as California Species of Special Concern;
- Species classified as Fully Protected by CDFW;
- Plant species, subspecies, and varieties defined as rare or threatened by the California Native Plant Protection Act (California Fish and Game Code Section 1900, et seq.);
- Plant species listed by the California Native Plant Society as California Rare Plant Rank 1, 2 and 3 under CEQA (CEQA Guidelines Section 15380); and some list 4 plants based on CNPS guidelines;
- Species that otherwise meet the definition of rare, threatened, or endangered pursuant to Section 15380 of the CEQA Guidelines; and
- Mountain lions protected under the California Wildlife Protection Act of 1990 (Proposition 117) and designated as a “specially protected mammal in California”.

Special-status Plants

The background literature review identified the potential for presence of a number of special-status plants with potential to occur in the project vicinity (Figure 2; CDFW 2017a, USFWS 2017). Species with reported observations in close proximity to the site and/or in habitat types of relevance (e.g., cismontane woodland and riparian forest) are addressed in Table 1 below. Species that only occur in habitats not present on the site (e.g., coastal brackish marsh, redwood forest, chaparral, serpentine, coastal prairie, and meadows and seeps) are not discussed.

Special-status plants were not observed during the field survey of the entire project site including the adjacent riparian habitat. The lateness of the season made it impossible to accurately identify all species that may be present, but no special-status species were observed or considered likely to be found at another time of year. Suitable habitat for special-status plants is not present within the area of the proposed redevelopment.

Table 1. Special-Status Species Reported from Project Vicinity

Scientific Name	Common Name	Listing Status USFWS/ CDFW/ CNPS	Life Form, Blooming Period, and General Habitat	Potential for Species Occurrence
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	--/--/ 1B.2	Perennial deciduous shrub. Blooms April-July. Broadleaved upland forest (openings), chaparral, cismontane woodland. 120-2000 m.	Low. Documented occurrence within three miles. Only marginally suitable habitat present within the project area. Impacts are unlikely.
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	--/--/ 1B.2	Annual herb. Blooms March-June. Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Typically on gravelly slopes, grassland, openings in woodland, often serpentine. 3-500 m.	Low. Documented occurrence within five miles, but only marginally suitable habitat present within the project area. Impacts are unlikely.
<i>Eriogonum luteolum</i> var. <i>caninum</i>	Tiburon buckwheat	--/--/ 1B.2	Annual herb. Blooms May-September. Serpentine, sandy to gravelly locations in chaparral, woodland, coastal prairie, and grassland. 0-700 m.	Low. Documented occurrence within one mile, but no suitable habitat present within the project area. Impacts are unlikely.
<i>Fritillaria liliacea</i>	fragrant fritillary	--/--/ 1B.2	Perennial bulbiferous herb. Blooms February-April. Woodland, coastal prairie, coastal scrub, valley and foothill grassland (often serpentine). 3-410 m.	Low. Marginally suitable habitat present within the project area. Impacts are unlikely.
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	congested-headed hayfield tarplant	--/--/ 1B.2	Annual herb. Blooms April-November. Valley and foothill grassland, sometimes roadsides. 20-560 m.	Low. Documented occurrences within one miles. Marginally suitable habitat exists within project area, but species not observed. Impacts are unlikely.
<i>Lessingia micradenia</i> var. <i>micradenia</i>	Tamalpais lessingia	--/S2/1B.2	Annual herb. Blooms (June) July-October. Usually serpentine, often roadsides. Chaparral, valley and foothill grassland. 100-500 m.	Low. Documented occurrences within four miles, but only marginally suitable habitat present within the project area. Impacts are unlikely.
<i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i>	Hoffman's bristly jewel-flower	--/--/ 1B.3	Annual herb. Blooms March-July. Chaparral, cismontane woodland, and valley and foothill grassland (often serpentine). 120-475 m.	Low. Documented occurrences within one mile, but only marginally suitable habitat present within the project area. Impacts unlikely.

Special-status Animals

The background literature review identified the potential for presence of a number of special-status animals with potential to occur in the project vicinity; see Figure 2 and attached CDFW CNDDDB list and USFWS IPaC list (CDFW 2017a, USFWS 2017). Based on the suitability of habitat on and near the project site and the proximity of recorded sightings, these species were evaluated for their potential to occur within the project area. Species with reported observations in close proximity to the project site (CDFW 2017a), or with moderate to high potential for occurrence based on suitable habitat, are described below. Scientific names and listing statuses are provided below⁴ (CDFW 2017c).

BIRDS:

Burrowing owl (*Athene cunicularia*; SSC, burrowing sites and some wintering sites) – occur in open grasslands and other habitats with low-growing vegetation. Subterranean nester that utilize abandoned burrows of ground squirrels and other mammals. Feed on a variety of prey items, including ground insects and small vertebrates. Marin County was historically included in the breeding range for this species, but there are no recent breeding occurrences reported in Marin County (Shuford 1993, Shuford and Gardali 2008). Species observed in open grasslands near the airport within 2 miles of the project site (CDFW 2017a). Suitable habitat is not present. Impacts are unlikely.

Oak titmouse (*Baeolophus inornatus*; BCC) – small, gray-brown bird of oak woodlands. Forages for insects and seeds, hopping from branch to branch. Breeding occurs from March through July. Nests in cavities in trees or nest boxes. Oak titmice are a year-round resident in Marin County. Species was documented within the project site by PCI. Precautionary protection measures should be put in place to avoid potential impacts to all breeding birds.

White-tailed kite (*Elanus leucurus*; FP, nesting) – occur in semi-open areas including woodlands, bottomlands, and agricultural grasslands. Hunts small rodents by hovering and parachuting down on its preys. Nests in trees and tall bushes Nesting kites have been documented in open habitats along the baylands to the north of the project site (Shuford 1993). Due to the urban development and woodland habitats surrounding the site, the likelihood of white-tailed kite is low. However, all breeding birds should be protected in accordance with the following measures.

⁴ Listing Status: FE-federally listed as endangered, FT-federally listed as threatened, BCC-Bird of Conservation Concern, ST- State listed as threatened, SE-State listed as threatened, Candidate ST-State candidate to be listed as threatened under CESA, FP-State of California fully-protected species, SSC-California Species of Special Concern, and WL-Watch List

San Francisco common yellowthroat (*Geothlypis trichas sinuosa*; BCC, SSC) – subspecies of common yellowthroat that is endemic to the greater San Francisco Bay region in wetland and riparian habitats. Locally, occurs in tidal marsh areas. Nests constructed close to the ground or water. Feeds primarily on insects. Species occurs extensively at the mouth of Las Gallinas Creek and adjacent McInnis Park (CDFW 2017a). Due to the urban development and distance to tidal habitats, the likelihood of yellowthroat occurrence is low. However, all breeding birds should be protected in accordance with the following measures.

California black rail (*Laterallus jamaicensis coturniculus*; SE, FP) – occur in salt marsh habitat. Smallest rail in North America. Very secretive and seldom seen. Pair formation occurs as early as late February; egg laying occurs from early March into early July. Forages for aquatic and terrestrial invertebrates and seeds. Species observed during recent surveys (2013) of Las Gallinas Creek (approximately 3 miles from project site) and tidal areas in Novato Creek and Rush Creek to the north (CDFW 2017a). Suitable habitat is not present. Impacts are unlikely.

San Pablo song sparrow (*Melospiza melodia samuelis*; BCC, SSC) – subspecies of song sparrow that occur in saltwater marshes around San Pablo Bay and northern San Francisco Bay, breeding in gum plants (*Grindelia* spp.). This species breeds from March to July in wetland gum plants. Species occurs extensively along the lower Las Gallinas Creek and adjacent McInnis Park (CDFW 2017a). Due to the urban development and distance to tidal habitats, the likelihood of San Pablo song sparrow occurrence is low. However, all breeding birds should be protected in accordance with the following measures.

Nuttall's woodpecker (*Picoides nuttallii*; BCC) – permanent, resident woodpecker of woodland habitats, prefers oak and streamside habitats. Probes for insects in tree bark and crevices. Breeding occurs from late March to early July. Nests in live or dead tree cavities excavated by males of the species. Nuttall's woodpeckers are a year-round resident in Marin County. Species was documented within the project site by PCI. Precautionary protection measures should be put in place to avoid potential impacts to all breeding birds.

California Ridgway's rail (*Rallus obsoletus obsoletus*; FE, SE, FP) – occur in salt marsh habitat (e.g., mudflats, tidal sloughs); seek cover in pickleweed (*Salicornia* spp.), and cordgrass (*Spartina* spp.). Breeding occurs from mid-March through August. Forages for aquatic invertebrates and small fish. Species observed in tidal baylands at confluence with Miller Creek, Las Gallinas, and Novato Creek (CDFW 2017a). Suitable habitat is not present. Impacts are unlikely.

Northern spotted owl (*Strix occidentalis caurina*; FT, ST; on June 27, 2017, the California Fish and Game Commission issued a Notice of Findings that the listing of the northern spotted owl as a threatened species is warranted (CFGF 2017), CDFW Species of Special Concern (CDFW 2017c)] – occupy dense forest and woodland habitats. Breeding sites include tree or snag cavities or broken tops of large trees. Nocturnal hunter eating mostly small mammals, especially dusky-footed woodrats. Year-round resident in Marin County where it is known from breeding occurrences in old-growth and mixed forest habitats. Northern spotted owls have been documented in forested habitats approximately 3.5 miles from the project area in the Indian Valley Open Space Preserve and 3 miles near the Tiburon peninsula (CDFW 2017a). Due to the urban development and distance to densely forested habitats, the likelihood of spotted owl occurrence is low. However, all breeding birds should be protected in accordance with the following measures.

AMPHIBIANS:

California giant salamander (*Dicamptodon ensatus*; SSC) – use wet coastal forests near permanent and semi-permanent streams and springs. This species is one of the largest terrestrial salamanders in North America. Eggs are laid in water. They transform into land dwelling salamanders with lungs. Giant salamanders documented in the Miller Creek watershed near Big Rock – over 3 miles from the project site. Suitable breeding habitat is present in Miller Creek, but essential upland habitat for adults is absent in this urban area. Salamanders are unlikely to occur within the project site. Impacts are unlikely.

Foothill yellow-legged frog (*Rana boylei*; SSC, Candidate ST) – occur year-round in perennial streams, never found far from water. Breeding generally occurs from mid-March to early June after high winter flows have subsided. Tadpoles require three to four months to attain metamorphosis. Adults take aquatic and terrestrial invertebrates, and tadpoles graze along rocky stream bottoms on algae and diatoms. There are no reports of foothill yellow-legged frog in the Miller Creek watershed (CDFW 2017 and Marin County 2017b). Frogs have been documented at the confluence with Big Rock and Dairy Creek, tributaries to Nicasio Creek (the watershed to the west of Miller Creek; CDFW 2017a). Marginally suitable habitat is present within the project site. Due to the lack of sightings in the watershed and urban condition, the likelihood of occurrence within Miller Creek is low. Impacts are unlikely. However, protection measures should be put in place to protect all aquatic species in Miller Creek.

California red-legged frog (*Rana draytonii*, FT, SSC) – occupies marshes, streams, lakes, reservoirs, ponds and other water sources with plant cover. Breeding occurs in deep, slow-moving waters with dense, shrubby, or emergent vegetation from November through April, exact timing dependent on location. California red-legged frogs may be found in uplands during the non-breeding season and during migration. A small

population of California red-legged frog is reported on the Tiburon peninsula – 5 miles from the project site (CDFW 2017a). Additional sightings are reported approximately 10 miles west in the Lagunitas Creek watershed. Due to the lack of sightings in the watershed and urban condition, the likelihood of occurrence within Miller Creek is low. Impacts are unlikely. However, protection measures should be put in place to protect all aquatic species in Miller Creek.

REPTILES:

Northern western pond turtle (*Actinemys marmorata*; under review for federal listing, SSC) – a year-round resident of Marin County where they are found in or near permanent or semi-permanent water sources (e.g., ponds, lakes, rivers, streams) with suitable basking sites and underwater retreats. Eggs are laid from April through August in areas with sparse vegetation. Species observed north of Novato at undisclosed location (in 2004) and to the west (over 7 miles) from a historic collection (CDFW 2017a). Marginally suitable habitat is present within the project site. Due to the lack of sightings in the watershed and urban condition, the likelihood of occurrence within Miller Creek is low. Impacts are unlikely. However, protection measures should be put in place to protect all aquatic species in Miller Creek.

MAMMALS:

Salt marsh harvest mouse (*Reithrodontomys raviventris*; FE, SE, FP) – occur in pickleweed-dominated wetlands and marshes. Pickleweed is the primary food source. Species occurs extensively through Petaluma Marsh and has been documented at the mouth of Las Gallinas Creek and adjacent McInnis Park (CDFW 2017a). Suitable habitat is not present within the project site. Impacts are unlikely.

FISH:

Tidewater goby (*Eucyclogobius newberryi*; FE, SSC) – occur in coastal lagoons, estuaries, and marshes, restricted to California. Tidewater gobies were reported for tidal areas in the Petaluma River, Novato Creek, and Corte Madera Creek– all tributaries to San Pablo and San Francisco Bays. Gobies have not been found during recent surveys of these watersheds (USFWS 2005). They are assumed to be extirpated from the watershed. Suitable habitat is not present. Impacts are unlikely.

Steelhead - Central California Coast DPS (*Oncorhynchus mykiss irideus*; FT) – occur year-round in select Marin County streams. Steelhead spawn in freshwater and rear in the ocean, except resident trout, which can be found year-round in perennial systems. According to Leidy et al. (2005), Miller Creek supports a small number of steelhead. There is a shortage of survey information for the watershed, but limited sampling has found steelhead with multiple age classes. The watershed probably contributes a small number of steelhead, but it is important for regional production. Suitable habitat is

present within Miller Creek. Precautionary measures should be in place to avoid impacts to this species.

In addition to the above-mentioned species, several non-listed invertebrates are reported from the San Rafael and Novato area (e.g., Marin blind harvestman, Marin Hesperian, mimic tryonia, obscure bumble bee, Opler's longhorn moth, Ubick's gnaphosid spider, western bumble bee). Many of these species are documented from historic collections from grassland and serpentine habitats. All of these species are not formally listed (at federal or State level). Impacts to invertebrate populations are unlikely.

Several migratory bird species of concern are also reported for the project area (USFWS 2017). Some of these species may occur within the project area on a regular basis (i.e., great blue heron, great egret, snowy egret), but others are highly unlikely. These species are not described further in this report, but should be protected, if found in or near the project area, in accordance with the protected bird species recommendations below. See *Protected Nesting Birds* for additional information.

Special-status and common bats are described in the following section.

Protected Nesting Birds

Nesting native bird species are protected under both federal and State regulations. According to U.S. Fish and Wildlife Service, under the federal Migratory Bird Treaty Act of 1918 (MBTA; 50 CFR 10.13,), "it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined as: 'pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.'" Bald and golden eagles are also protected under the federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) of 1940.

Birds and their nests are also protected under the California Fish and Wildlife Code (§3503 and §3513). Under §3503, "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto". Under §3513, "it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act". The federal Endangered Species Act and California Endangered Species Act also protect nesting threatened and endangered bird species.

Vegetation removal and/or construction activities in areas with suitable nesting habitat during the breeding period, typically February through August in this area, could result in nest abandonment or loss of native nesting birds unless appropriate actions are taken (e.g., preconstruction surveys, avoidance, monitoring, etc.; RHJV 2004). Precautionary protection measures should be put in place to avoid impacts during any site disturbance within the project area.

Special-status and Common Bat Species

There are approximately 25 bat species with known occurrences within California, and a number of these species have a high probability of occurring within the project area and adjacent lands. Bats are highly mobile; many are migratory. Foraging habitats range from woodlands, forests, grasslands to open water. All bat species occurring Marin County are insectivorous and feed by echolocation. Bats use caves, mines, buildings, bridges, tree hollows, and other natural and man-made crevices for roosting. Focused surveys for bats were not performed as part of this assessment; however, the building and nearby trees were inspected for the potential presence of bats. The building supports a number of small crevices that may support individual bats (i.e., many small crevices between boards on exterior and interior of building; access points into structure). Nearby trees may support roosting bats as well (i.e., crevices, leafy cover).

A number of bat species may be present in the project area. Three special-status (CDFW listed) bat species are reported in the project area region – Townsend’s big-eared, pallid bat, western red bat (CDFW 2017a, Marin County Parks 2017). Additional bats species considered priority species for conservation by the Western Bat Working Group are also reported for the region (e.g., hoary bat, silver-haired bat, fringed myotis, long-legged myotis). Suitable roosting habitat for bats is present within the existing building and adjacent riparian habitat.

- **Pallid bat** (*Antrozous pallidus*; SSC, Western Bat Working Group high priority species) – occurs in grassland, shrubland, forest, and woodland habitats at low elevations up through mixed coniferous forests. A social species forming small colonies. A crevice dwelling species. Roosting sites include caves, mines, crevices, buildings (frequently uses), and hollow trees during day, more open sites used at night. A yearlong resident throughout most of its range. During non-breeding season, both sexes may be found roosting in groups of 20 or more individuals. A maternity colony of pallid bats was documented within 1.25 miles of the project area in a residential structure in 2001, the colony is possibly extirpated (CDFW 2017a). Species documented at Mount Burdell (Marin County Parks 2017). Suitable foraging and roosting (building and riparian) habitat is present within the project area. Precautionary protection measures should be put in place to avoid potential impacts to all bat species.

- **Townsend's big-eared bat** (*Corynorhinus townsendii*; SSC, Western Bat Working Group high priority species; in August 2016, CDFW issued a notice that a petition to list Townsend's big-eared bat to the list of threatened or endangered species under CESA is not warranted (CDFW 2017b) – occurs in low to mid-elevation mesic habitats including riparian, mixed forest, coniferous forest, prairies, and agricultural lands. Utilizes edge habitat for foraging. A crevice dwelling species. Roosting sites include caves, mines, tunnels, buildings (sometimes), and other man-made structures. Townsend's big-eared bat are reported from a collection from the 1930s within 2.5 miles of the project area (CDFW 2017a). Species documented at Mount Burdell (Marin County Parks 2017). Suitable foraging and roosting (riparian) habitat is present within the project area. Precautionary protection measures should be put in place to avoid potential impacts to all bat species.
- **Western red bat** (*Lasiurus blossevillii*; SSC, Western Bat Working Group high priority species) – occurs throughout California in forested and riparian habitat, typically along edges, field, and urban areas. A solitary bat, coming together only during mating and migration. A foliage dwelling species – roosting in leaves of trees and leaf litter in winter. Rarely enters buildings. There are no recent reports of western red bat in eastern Marin County, but bats are typically underrepresented in the CNDDDB (CDFW 2017a). Species documented at Mount Burdell (Marin County Parks 2017). Suitable foraging and roosting (riparian) habitat is present within the project area. Precautionary protection measures should be put in place to avoid potential impacts to all bat species.

6. Conclusions

The Marinwood Community Services District is proposing to replace an existing park maintenance building with a new facility (building, fenced yard, and parking area). The District uses the existing facility for a variety of storage and maintenance needs. The facility was constructed in the 1960s before riparian setbacks were in place. Work will require demolition of the existing structure and fencing perched at the top of the bank along Miller Creek. The new facility will be relocated immediately to the northwest of the existing structure and away from the creek. It will require a deviation from the established setback from the Stream Conservation Area along Miller Creek and possibly along the ephemeral drainage. The site does not allow for development under the required setback; the site is approximately 100' wide from the top of the bank to the northern property boundary.

The current building configuration diminishes the habitat functions and values of the riparian corridor along Miller Creek. Removal and replacement of the facility away from the top of the bank would greatly improve the habitat values on the site, reduce the potential for pollutants and debris to enter Miller Creek, and buffer fish and wildlife populations from human disturbance. Given the close proximity to the creek, the existing building and fences will need to be carefully removed to protect trees and other vegetation. Protection measures will also need to be put in place to protect fish and wildlife resources within the project area during demolition and throughout construction. Invasive species removal and native revegetation will be an integral part of the project and ultimately result in improved riparian habitat conditions.

Based on the background literature, data search, and field survey, the following biological resource determinations were made:

- The site is located in an area with extensive urban development. It is bordered by a residential community, recreation and community services, and a school.
- The site supports native riparian vegetation, but non-native invasive plants are pervasive.
- A perennial stream and an ephemeral drainage flow adjacent to the existing facility. These may be considered jurisdictional areas and the riparian habitat a sensitive natural community. Stream Conservation Area setbacks would apply for any new developed on the project parcel.
- The site supports habitat for a variety of native wildlife species (e.g., reptiles, amphibians, mammals, invertebrates).
- Miller Creek supports documented habitat for steelhead and other native fish.
- The site supports breeding/wintering/foraging habitat for a number of native bird species, including several special-status species. Birds were using the

building and adjacent storage building during the 2017 breeding season; old nest structure were observed.

- The site supports potential roosting and foraging habitat for special-status and common bat species. The existing building may be used as roosting habitat for a small number of individual bats. Nearby vegetation is also suitable roosting habitat.
- The site is unlikely to support special-status herpetofauna (i.e., foothill yellow-legged frog, California red-legged frog, and northern western pond turtle) due to the lack of sightings in the watershed and urban condition, but PCI recommends protection measures for all potential aquatic species.
- The optimal time to demolish the building is September through October. This will avoid the bird nesting season and bat maternity and winter hibernation.

The following includes a list of general recommendations to protect biological resources during project construction:

General Protection Measures

1. Complete a preconstruction training session for all supervisory construction staff by a qualified biologist. The training should include a discussion of the sensitive biological resources within the project site and the potential presence of special-status species. This should include a discussion of special-status species' habitats, protection measures to ensure species are not impacted by project activities, project boundaries, biological conditions outlined in the project permits, and procedures to follow if sensitive wildlife species are found within the project site.
2. A copy of all project permits should be on site at all times and reviewed by construction crew personnel prior to beginning work.
3. The project limits should be clearly marked on the final design drawings and work confined within those boundaries. Prior to construction, the construction supervisor and a qualified biologist should meet on site to agree upon and delineate project boundaries (see #17 below).
4. Foot and vehicle traffic should be restricted to the designated work and staging areas.
5. Excavated holes, trenches, etc. greater than one foot in depth should be covered with boards or other appropriate materials or backfilled with dirt at the end of each working day. If trenches remain open overnight, earthen escape ramps should be constructed every 10'.
6. If a special-status wildlife species enters the work area, the construction crew supervisor should contact a qualified biologist and/or resource agency staff for further guidance.

7. Special-status and common wildlife species should not be captured or handled by the supervisor or field crew members unless directed by a qualified biologist and/or resource agencies.
8. Proper erosion control and other water quality Best Management Practices (BMPs) should be implemented to avoid sedimentation and disturbance to downstream aquatic habitats.
9. All staging, maintenance, fueling, and storage of construction equipment should be conducted in a location and manner that will prevent potential runoff of petroleum products into downstream aquatic habitats. Oil-absorbent and spill-containment materials should be on site at all times.
10. All food trash that may attract predators should be properly stored and removed at the end of each construction day. Following construction, all trash and construction debris should be removed.
11. To prevent harassment, injury, or mortality to sensitive species or their habitat, no pets should be permitted within the work area.

Specific Measures to Protect Plant Communities

12. Minimize disturbance to native vegetation. Native trees are particularly susceptible to disturbance, especially within the root crown (the base of the trunk) and root zone commonly referred to as the root protection zone (RPZ), which is typically defined as one-third larger than the drip line radius measured from the trunk. When feasible, work within the RPZ should be limited. If any trees greater than 6" in diameter at breast height are removed, replacement with native species should occur at a ratio of 3:1 for all trees over 6" in diameter. Currently, only one ornamental pine is proposed for removal.
13. Prior to mobilization of construction equipment, temporary protective fencing should be installed around RPZs or, at a minimum, the dripline perimeter of trees to be preserved near construction zones.
14. Incorporate removal of invasive species (e.g., Himalayan blackberry, cape ivy, English ivy) into project design. Remove, by hand or mechanical means all non-natives within the project site and within 25' buffer around it. Dispose of any material with potential to germinate or resprout in a landfill. Establish native riparian vegetation along the riparian corridor (see #26 below).
15. Prevent introduction and spread of invasive plant species.
 - a. Any seed, straw, or mulch brought into the site should be weed-free.
 - b. Construction vehicles and other equipment should be cleaned of seed and soil from weed-infested locations before entering new areas.
 - c. Revegetation of disturbed soil should occur promptly after disturbance.
 - d. All site restoration and erosion control seeding should include only native species from Marin County.
 - e. Monitor areas of ground disturbance for invasive species infestation.

Specific Measures to Protect Wildlife Species (General)

16. A preconstruction survey (ahead of the construction crew) should be performed by a qualified biologist prior to any site disturbance/building demolition. If terrestrial species are observed within the work area or immediate surroundings, these areas should be avoided until the animal(s) has (have) vacated the area and/or the animal(s) will be relocated out of the project area by a qualified biologist with agency approval.
17. Temporary wildlife exclusionary fencing (e.g., silt fence, which is a piece of synthetic filter fabric [also called geotextile]) should be installed around work areas during construction. Openings should be restricted to areas of construction site access. This fencing would preclude animals from entering the work area and prevent construction debris and workers from entering adjacent riparian habitat.

Specific Measures to Protect Special-status and Common Bird Species

18. Construction activities (including building removal) should occur outside of the critical breeding period (typically February through August in this area).
19. If activities must occur during the normal breeding season, the work area should be surveyed by a qualified biologist prior to commencing. If active nests or behavior indicative of nesting are encountered, those areas plus a 50-foot buffer for small songbirds and 150-foot buffer for larger birds (e.g., owls, raptors) designated by the biologist should be avoided until the nests have been vacated.
20. If work occurs during the active breeding season and active nests are documented within the project site, ongoing construction monitoring should occur to ensure no nesting activity is disturbed. If the site is left unattended for more than one week, an additional survey should be completed.

Specific Measures to Protect Special-status and Common Bat Species

21. Prior to building removal and tree removal/trimming, a qualified biologist should survey for bat roosts. If active bat roosts are identified within the existing building or vegetation to be disturbed, disturbance should not be allowed until the roost is abandoned or unoccupied. CDFW consultation may be required if special-status bat species are present.
22. If bats are present, the District should employ a number of deterrent methods to encourage bats to relocate (for non-CDFW listed species). This could include changes to lighting, air flow patterns, and noise disturbance. Exclusion methods should be developed based on the species present and location of occupied roosts. Bat exclusion should not be performed during that maternity season (June through August) or during winter hibernation (November through February). Bat exclusion should be overseen by a qualified biologist.

23. If building removal/tree trimming/removal is postponed or interrupted for more than two weeks from the date of the initial bat survey, the biologist should repeat the pre-construction survey.
24. Construction should be limited to daylight hours to avoid interference with the foraging abilities of bats.

Additional Protection Measures

25. Following completion of engineered plans and construction specifications and in consultation with the resource agencies, the recommended protection measures should be reevaluated to determine if they are adequate for the protection of resources within the project area. Based on the final design, more comprehensive protection measures may be warranted to address the need for preconstruction surveys, relocation techniques and sites, wildlife exclusion, on-going construction monitoring, worker education, and habitat enhancement and restoration guidelines.
26. Following removal of the building and associated structures non-native plant species should be removed and the creek bank should be revegetated with native plants. The restored riparian corridor will provide bank stability, filtration capacity, and in the long term, woody debris input to the creek. The restored habitat will also serve as an important resource for a variety of aquatic and terrestrial species by providing nesting opportunities, food, and shelter, as well as serving as a migratory corridor. Enhancement of the riparian corridor will improve habitat for these and other species. The development of the riparian corridor will also shade the channel, lowering water temperatures. The overhanging trees will also provide nutrient input to the stream in the form of leaves and twigs, as well as insects that fall into the water and become food for aquatic organisms. A qualified vegetation specialist should be consulted during development of the restoration plan.

7. References

California Department of Fish and Wildlife (CDFW). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. California Department of Fish and Wildlife. Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2010. Natural Communities List. California Department of Fish and Wildlife. Sacramento, CA. Accessed at: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp.

California Department of Fish and Wildlife (CDFW). 2017a. California Natural Diversity Database, RareFind Version 5.0, Spotted Owl Viewer, and BIOS. California Department of Fish and Game. Sacramento, CA. <http://www.dfg.ca.gov/biogeodata/cnddb>

California Department of Fish and Wildlife (CDFW). 2017b. Petitions Currently Under Consideration, California Fish and Game Commission. <http://www.fgc.ca.gov/CESA/>

California Department of Fish and Wildlife (CDFW). 2017c. Special Animals List – October 2017. Periodic publication.

California Fish and Game Commission (CFGC). 2017. Notice of Findings, Northern Spotted Owl (*Strix occidentalis caurina*) – June 2017. <http://www.fgc.ca.gov/CESA/#nso>

California Native Plant Society (CNPS). 2017. Inventory of Rare and Endangered Plants (online edition). California Native Plant Society. Sacramento, CA.

Jones, W. 2000. NMFS California Anadromous Fish Distributions, California Coastal Salmon and Steelhead, Current Stream Habitat Distribution Table, Marin County. Draft January 2000.

Leidy, R.A., G.S. Becker, B.N. Harvey. 2005. Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, CA.

Marin County. Undated. Preparation of Biological Site Assessments. County of Marin, Community Development Agency, Planning Division.

Marin County. 2007. Marin Countywide Plan. Adopted November 6, 2007. County of Marin, Community Development Agency. Accessed at: <http://gis.marinpublic.com/SCALookup/>

Marin County. 2017a. Marin County Code Title 22, Development Code. Amended March 14, 2017. County of Marin, Community Development Agency. Accessed at:

<https://www.marincounty.org/~media/files/departments/cd/planning/currentplanning/development-code-amendments-2017/devcode2017--complete.pdf>

Marin County. 2017b. Marin County Watershed Program. Watershed Explorer. Marin County Department of Public Works. Accessed at: http://marinwatersheds.org/watershed_explorer.html

Marin County. 2017c. Stream Conservation Area. County of Marin, Community Development Agency. Accessed at: <http://gis.marinpublic.com/SCALookup/>

Marin County. 2017d. Zoning and Property Information. County of Marin, Community Development Agency. Accessed at: www.marincounty.org/depts/cd/divisions/planning/zoning-and-general-plan-lookup

Marin County Parks. 2017. Personal communication with Marin County Parks, Resource Specialist (citing bat acoustic monitoring surveys completed for Marin County Parks at Mount Burdell in 2016).

Natural Resources Conservation Service (NRCS). 2017. Web Soil Survey. Accessed at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.

Riparian Habitat Joint Venture (RHJV). 2004. Version 2.0. The Riparian Bird Conservation Plan: A Strategy for Reversing the Decline of Riparian Associated Birds in California. California Partners in Flight.

Sawyer, J., T. Keeler-Wolf, and J. Evens. 2009. A Manual of California Vegetation. Second Edition. California Native Plant Society and California Department of Fish and Game. Sacramento, CA.

Shuford, W.D. 1993. The Marin County Breeding Bird Atlas. A Distributional and Natural History of Coastal California Birds. California Avifauna Series 1. Bushtit Books, Bolinas, CA.

Shuford, W.D., and T. Gardali (eds.). 2008. California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. *Studies of Western Birds 1*. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Wildlife, Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 2017. Information for Planning and Conservation (IPaC) Trust Resource Report. <https://ecos.fws.gov/ipac/>.

U.S. Fish and Wildlife Service (USFWS). 2005. Recovery Plan for the Tidewater Goby (*Eucyclogobius newberryi*). Pacific Region, Portland, OR.

8. Photographs



Above: Looking east at existing maintenance and modular building.
Below: Looking west at fenced storage area and modular building.





Above: Looking west at access driveway to facility.
Below: Access driveway from Miller Creek Road.





Above: Interior fenced storage area with dilapidated fence along Miller Creek.
Below: Limited storage within maintenance building.





Above: Fence at top of bank along Miller Creek. Below: Looking upslope at building from creek; protect trees at top of bank during demolition.





Above: Pedestrian path to creek immediately southwest of building; fence visible on left. Below: Looking north at site from top of bank/pedestrian path.





Above: Looking downstream at creek below building.
Below: Looking upstream at creek at pedestrian crossing.





Above: Mature valley oak to protect during construction.

Below: Edge of fenced storage area and English ivy infestation (at top of bank, creek bed visible below); ivy should be removed during construction and banks revegetated.



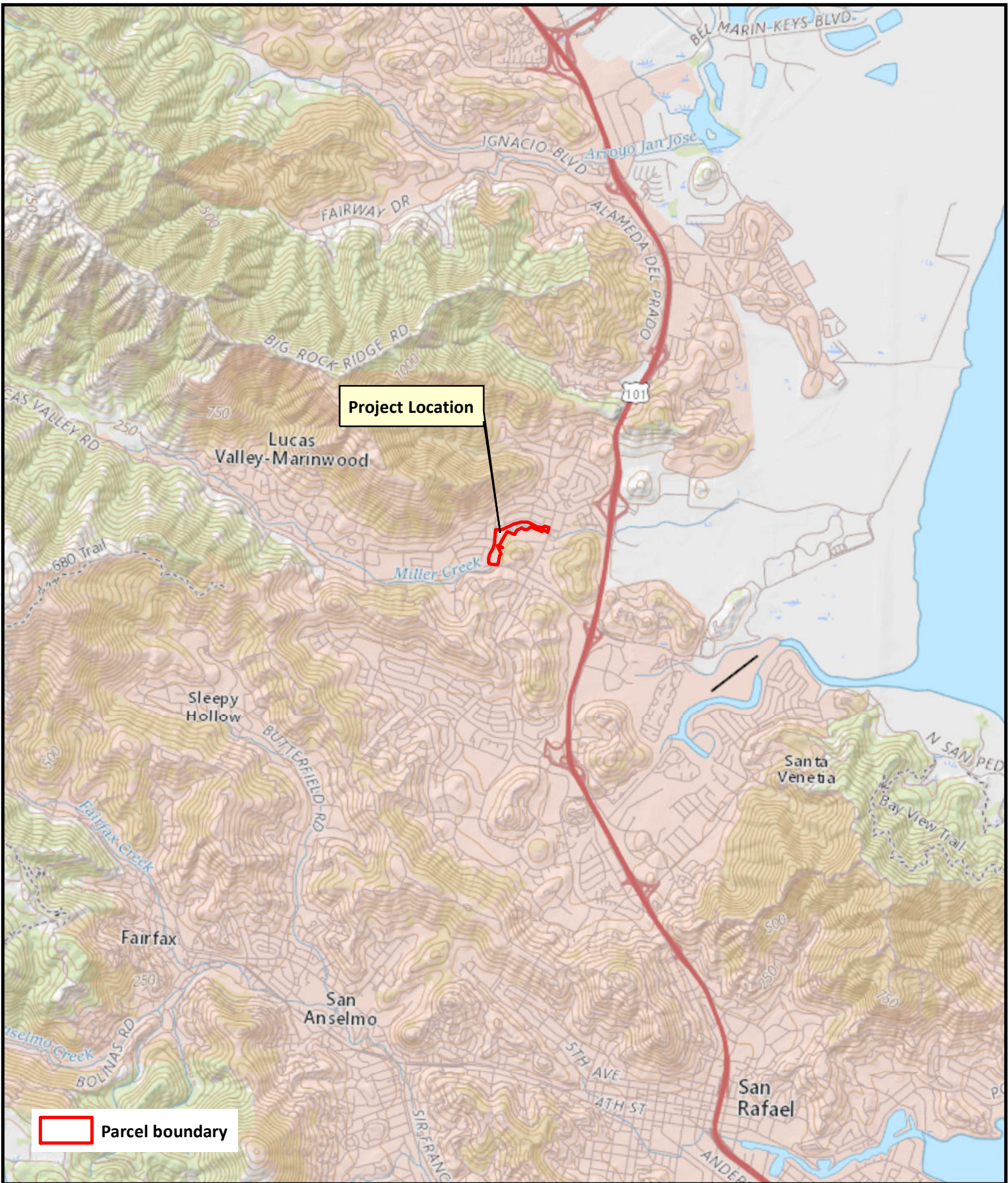


Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Novato (3812215))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	PDBOR01070	None	None	G2G3	S2S3	1B.2
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California giant salamander <i>Dicamptodon ensatus</i>	AAAAH01020	None	None	G3	S2S3	SSC
California Ridgway's rail <i>Rallus obsoletus obsoletus</i>	ABNME05016	Endangered	Endangered	G5T1	S1	FP
Coastal Brackish Marsh <i>Coastal Brackish Marsh</i>	CTT52200CA	None	None	G2	S2.1	
congested-headed hayfield tarplant <i>Hemizonia congesta ssp. congesta</i>	PDAST4R065	None	None	G5T1T2	S1S2	1B.2
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
fragrant fritillary <i>Fritillaria liliacea</i>	PMLIL0V0C0	None	None	G2	S2	1B.2
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
longfin smelt <i>Spirinchus thaleichthys</i>	AFCHB03010	Candidate	Threatened	G5	S1	SSC
Marin blind harvestman <i>Calicina diminua</i>	ILARAU8040	None	None	G1	S1	
Marin hesperian <i>Vespericola marinensis</i>	IMGASA4140	None	None	G2	S2	
Marin western flax <i>Hesperolinon congestum</i>	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	IMGASJ7040	None	None	G2	S2	
Mt. Tamalpais bristly jewelflower <i>Streptanthus glandulosus ssp. pulchellus</i>	PDBRA2G0J2	None	None	G4T2	S2	1B.2
Mt. Tamalpais manzanita <i>Arctostaphylos montana ssp. montana</i>	PDERI040J5	None	None	G3T3	S3	1B.3
Northern Coastal Salt Marsh <i>Northern Coastal Salt Marsh</i>	CTT52110CA	None	None	G3	S3.2	
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	

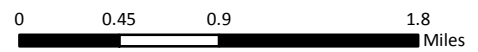


 Parcel boundary



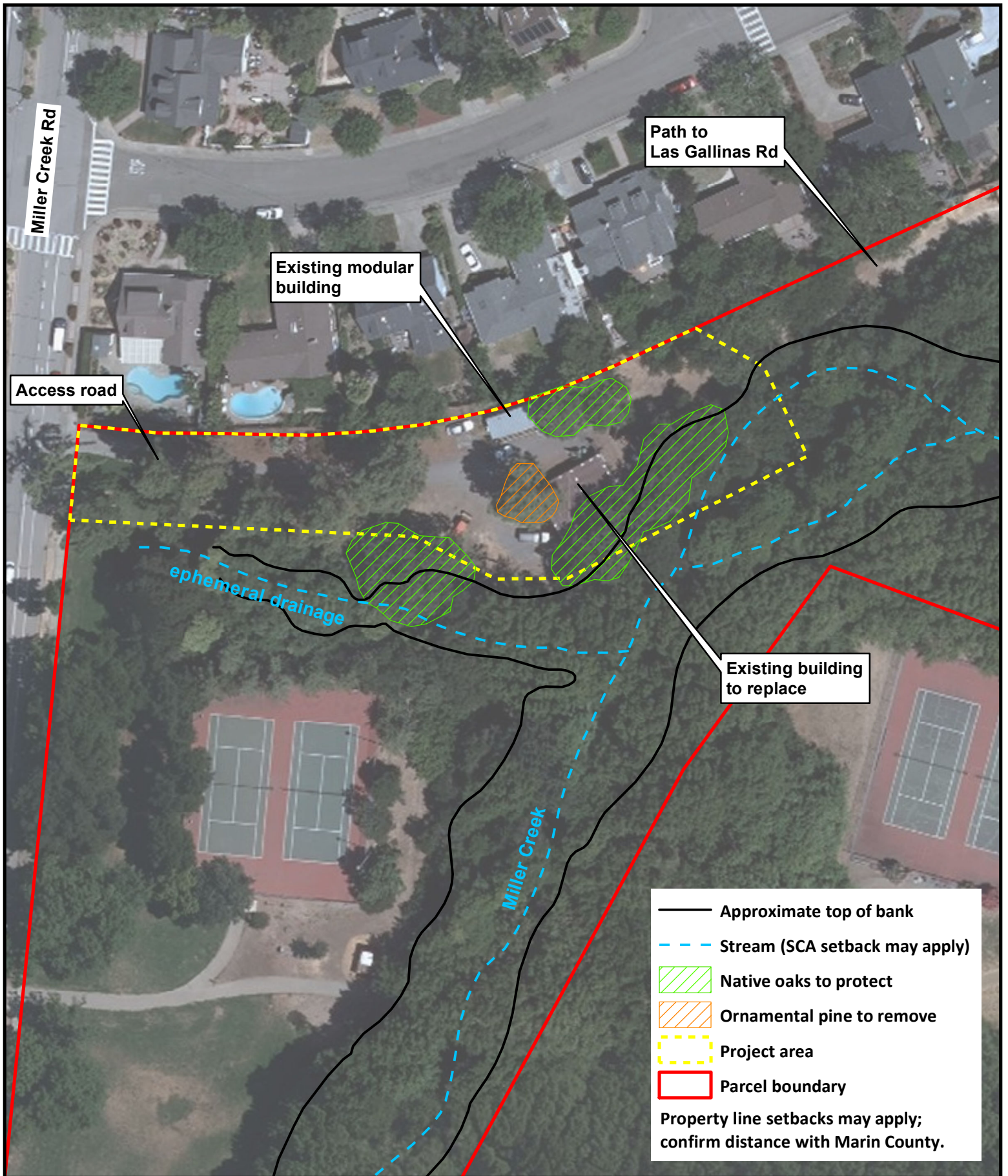
PRUNUSKE CHATHAM, INC.

Figure 1. Project Location
 775 Miller Creek Road
 San Rafael, Marin County



11/6/17
 Topography: ESRI





PRUNUSKE CHATHAM, INC.

Figure 3. Site Map
 775 Miller Creek Road
 San Rafael, Marin County

0 30 60 120 Feet

11/6/17
 Imagery: ESRI
 Top of bank: County of Marin DEM



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Opler's longhorn moth <i>Adela oplerella</i>	IILEE0G040	None	None	G2	S2	
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
Point Reyes salty bird's-beak <i>Chloropyron maritimum ssp. palustre</i>	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	ABPBX1201A	None	None	G5T3	S3	SSC
salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	ABPBXA301W	None	None	G5T2	S2	SSC
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	
Tamalpais lessingia <i>Lessingia micradenia var. micradenia</i>	PDAST5S063	None	None	G2T2	S2	1B.2
Tiburon buckwheat <i>Eriogonum luteolum var. caninum</i>	PDPGN083S1	None	None	G5T2	S2	1B.2
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SSC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
Ubick's gnaphosid spider <i>Talanites ubicki</i>	ILARA98030	None	None	G1	S1	
western bumble bee <i>Bombus occidentalis</i>	IIHYM24250	None	None	G2G3	S1	
western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 35

IPaC resource list

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

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

Location

Marin County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

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

Endangered species

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

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

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

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

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

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

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

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

Mammals

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

Birds

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

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

Amphibians

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

Fishes

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

Insects

NAME	STATUS
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS
California Freshwater Shrimp <i>Syncaris pacifica</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7903	Endangered

Flowering Plants

NAME	STATUS
Marin Dwarf-flax <i>Hesperolinon congestum</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5363	Threatened

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and 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.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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>

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

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. Such measures are particularly important when birds are most likely to occur in the project area. To see when birds are most likely to occur in your project area, view the Probability of Presence Summary. Special attention should be made to look for nests and avoid nest destruction during the breeding season. The best information about when birds are breeding can be found in [Birds of North America \(BNA\) Online](#) under the "Breeding Phenology" section of each species profile. Note that accessing this information may require a [subscription](#). [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) that might be affected by activities in your project location. These birds are of priority concern because it has been determined that without additional conservation actions, they are likely to become candidates for listing under the [Endangered Species Act \(ESA\)](#).

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](#). The AKN list represents all birds reported to be occurring at some level throughout the year in the counties in which your project lies. That list is then narrowed to only the Birds of Conservation Concern for your project area.

Again, the Migratory Bird Resource list only includes species of particular priority concern, and is not representative of all birds that may occur in your project area. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

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

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

Probability of presence data is continuously being updated as new and better information becomes available.

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

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

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](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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