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Date:

March 31, 2019

Arcadis Project No.:

RV009362.0003

Subject:

Revised Biological Resource and Habitat Assessment 4224 Highway 12,
Santa Rosa, Sonoma County, California

This memorandum summarizes the biological resources and habitat assessment for the proposed Santa Rosa Recess Project located at 4224 Highway 12, Santa Rosa, Sonoma County, California (Figure 1). The purpose of the analysis is to provide a description of the existing biological resources at the proposed Project site and to identify any potentially significant impacts that could occur to sensitive biological resources from the construction and operation of the proposed storage facility and residential development.

Potential biological resources include common plant and wildlife species and special status plants and animals designated by U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW), California Native Plant Society (CNPS), and waters of the U.S. and State regulated by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW.

This evaluation of biological resources in the Project area is based on technical research; field surveys; aerial photograph interpretation; and database review of special-status plants and wildlife, vegetation communities, wildlife habitat, and jurisdictional waters of the U.S. and waters of the State that occur in the Project vicinity.

PROPOSED PROJECT

American Recess Development Company (ARDC) proposed to construct a 124,000 square foot storage facility and up to 18 single-family homes on approximately 2.68 acres at 4224 Highway 12 in unincorporated Sonoma County. The proposed storage facility will be four stories with each floor comprising approximately 31,000 square feet for a total area of 124,000 square feet. The storage facility will have a 900 square foot office located on the southwestern side of the facility. Up to 18 residential homes will be constructed. Residences will vary in size from approximately 854 square feet to 1,407 square feet. Each home will be two or three-stories, include a covered parking area for one car, and a yard area. Seventeen guest parking spaces will be provided throughout the site and some spaces may be in tandem with the covered spaces for the unit. Construction of the residences would include installation of utility connections including water, sewer, electricity, and natural gas.

METHODS

Desktop Analysis and Site Reconnaissance

Arcadis wildlife biologist Lee Miles conducted a reconnaissance-level site visit on April 20, 2018. Prior to conducting the site visit, a desktop analysis was conducted. The California Natural Diversity Database (CNDDB) was queried for the Santa Rosa U.S. Geological Survey 7.5-minute quadrangle for special status species with known occurrences within the vicinity of the Project site. The USFWS's Information for Planning and Consultation (IPac) was queried for the Project parcel to obtain an unofficial USFWS species list. And the CNPS Rare Plant Inventory was queried for the Santa Rosa quadrangle for rare plants with potential to occur within the vicinity of the Project. The National Wetlands Inventory (NWI) was queried to understand the potential for wetlands or waters of the U.S. to occur on the Project site. The results of the queries are provided as attachments to this memorandum.

For the purposes of this document, special status are plants or animals that are legally protected under the following:

- Plants and animals that are listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 *et seq.*; 14 CCR §670.1 *et seq.*) or the FESA (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; various notices in the Federal Register [FR] for proposed species);
- Plants and animals that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- Plants and animals that meet the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;
- Plants occurring on Ranks 1A, 1B, 2A, 2B, 3, and 4 of CNPS' electronic *Inventory* (CNPS 2001). The California Department of Fish and Wildlife recognizes that Ranks 1A, 1B, 2A and 2B of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFW requests their inclusion in CEQA documents;
- Nesting and breeding birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CDGC) 3501;
- Animals that are designated as "species of special concern" by the CDFW (2014);
- Animal species that are "fully protected" in CDFCs 3511, 4700, 5050, and 5515).

Table 1 summarizes the results of the CNDDB and CNPS database query. A total of 11 species have potential to occur within the vicinity of the Project site according to the query. Because of past and current land use at the site, including a former walnut orchard and burning of refuse and debris, there is low potential for sensitive plants to occur. The Project site is not within designated critical habitat for California tiger salamander and California red-legged frog.

Table 1 Special Status Species Potential to Occur

Common Name	Scientific Name	Status	Blooming Period	Preferred Habitat	Potential to Occur	
Plants						
Sonoma sunshine	<i>Blennosperma bakeri</i>	1B.1	February-April	Valley and foothill grassland, vernal pools	Low	Project area does not provide suitable habitat
Congested-headed hayfield tarplant	<i>Hemizonia congesta</i> ssp. <i>Congesta</i>	1B.2	April-November	Valley and foothill grassland	Low	Project area does not provide suitable habitat
Lasthenia burkei	<i>Burke's goldfields</i>	1B.1	April-June	Meadows and seeps	Low	Project area does not provide suitable habitat
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>Bakeri</i>	1B.1	May-July	Cismontane woodland, lower montane coniferous forest, valley and foothill grassland, vernal pools	Low	Because of past land use, the Project area does not provide suitable habitat
Narrow-anthered California brodiaea	<i>Brodiaea leptandra</i>	1B.2	May-July	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland	Low	Because of past land use, the Project area does not provide suitable habitat. Known habitat for this species occurs over 0.25 miles to the southeast near
Rincon Ridge Manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	1B.1	February-April	Chaparral and cismontane woodland	Low	Project area does not provide suitable habitat. Known from only 10 occurrences in Napa and Sonoma County.
Amphibians/Reptiles						

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California tiger salamander	<i>Ambystoma californiense</i>	FT/ST		Vernal pools or seasonal ponds or for breeding and upland refugia including ground squirrel burrows	Low	No upland aestivation habitat was observed during site visit. There is no suitable aquatic habitat within migratory distance from the Project site
California red-legged frog	<i>Rana draytonii</i>	FT/CSC		Stock ponds, pools, and slow-moving streams.	Low	No upland aestivation habitat was observed during site visit. There is no suitable aquatic habitat within migratory distance from the Project site
California giant salamander	<i>Dicamptodon ensatus</i>	CSC		wet coastal forests near streams or seeps. Cold, clear streams with rocks or logs	Low	No suitable habitat within the vicinity of the Project.
Western pond turtle	<i>Emys marmorata</i>	CSC		Slow moving streams and ponds with logs or rocks for basking	Low	There are no aquatic features within the Project boundary. Closest known occurrence is approximately 0.25 miles to the south.
Birds						
White tailed kite	<i>Elanus leucurus</i>	FP		Found in lower foothills and valleys with scattered oaks and adjacent to streams.	Low	While there are scattered oaks on-site, higher quality habitat occurs offsite. No kite nests were observed during site visit.

Status:

FE - Federal Endangered
 FT - Federal Threatened
 FPE - Federal Proposed Endangered
 FPT - Federal Proposed Threatened
 FC - Federal Candidate

CE - California Endangered
 CT - California Threatened
 CR - California Rare
 CC - California Candidate Species
 CSC - California Species of Special Concern
 FP - California Fully Protected

Project Site Survey

Ms. Miles surveyed the Project site on foot with special focus on identification of habitat that could support special status plants or wildlife. Both the Project parcel and adjacent areas were surveyed including the Santa Rosa Creek Trail located to the east of the Project site. No protocol-level or focused surveys for plants or wildlife were conducted. An arborist survey was conducted and is provided under separate cover.

RESULTS

Soils

Soils at the Project site are mapped as Yolo clay loam, 0 to 5 percent slopes. This soil is well-drained and generally found at elevations from 0 to 360 above sea level. Mean annual precipitation is 28 to 41 inches and Yolo clay loam is typically found within alluvial fans.

Topography and Hydrology

The parcel is generally flat with a 10-foot elevational drop at the northeastern portion of the site. The site was previously used as a walnut orchard and has been subjected to human-derived disturbance with may have altered the topography. There was no evidence of surface hydrology, ponding or vernal pools.

Plant Communities and Habitats

The habitat at the site is dominated by non-native grasses and herbaceous vegetation resulting from past disturbance and use as an orchard. Species observed included ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Festuca perennis*), slender wild oat (*Avena barbata*), Mediterranean barley (*Hordeum marinum*), broadleaf filaree (*Erodium botrys*), prickly lettuce (*Lactuca serriola*), bristly ox-tongue (*Helminthotheca echinoides*), Himalayan blackberry (*Rubus armeniacus*), and birdfoot trefoil (*Lotus corniculatus*). Several native trees occur on site including western sycamore (*Plantanus racemose*), Coast live oak (*Quercus agrifolia*), and valley oak (*Quercus lobata*). Species expected to occur within these habitats are those adapted to ruderal vegetation communities and human-induced habitat disturbance including blacktailed deer (*Odocoileus hemionius*), Virginia opossum (*Didelphis marsupialis*) raccoon (*Procyon lotor*), and birds and raptors. The mature trees on site provide suitable nesting for birds and raptors although no nests were observed during the April 20, 2018 survey. Species observed onsite include blacktailed deer, black phoebe (*Sayornis nigricans*) and common crow (*Corvus brachyrhynchos*).

Waters of the U.S./Waters of the State

The NWI database did not indicate the potential for wetlands or potential waters of the U.S./waters of the State to occur within the Project boundary (Figure 2). The reconnaissance site visit determined that the Project parcel does not contain any waters of the U.S. or waters of the State. No surface water features were observed. The nearest surface water is Santa Rosa Creek located approximately 200 feet to the east and beyond the boundaries of the Project.

Special Status Species

Because of the past land use at the site, including the former walnut orchard, no formal rare plant surveys were conducted. Because of access issues, the adjacent parcel was surveyed from the perimeter of the parcel. However, this parcel has been developed with existing businesses and the site provides no habitat for plants or animals. The reconnaissance site visit did not reveal the presence of habitats or conditions to support sensitive plants. Currently, the site was dominated by ruderal and non-native herbaceous vegetation. Sensitive plant species identified in Table 1 have low potential to occur and have specific habitat requirements such as meadows, seeps, or vernal pools which are not present within the Project boundary. At the time of the April 20, 2018 survey, evidence of refuse and debris burning was observed on-site providing further likelihood that the site does not provide suitable habitat for special status plants.

Special Status Wildlife

California tiger salamander

California tiger salamanders (*Ambystoma californiense*) occur in grasslands and open oak woodlands that provide suitable aestivation and breeding habitats. California tiger salamanders spend the majority of their lives underground. They typically only emerge from their subterranean refugia for a few nights each year during the rainy season to migrate to breeding ponds. In Sonoma County, California tiger salamander emerge during the first heavy, warm rains of the year, typically in late November and early December. California tiger salamander typically will migrate to their breeding pools after dark during rainfall. During the spring, summer, and fall months, most known populations of the California tiger salamander throughout this species range in California predominately use California ground squirrel (*Spermophilus beechyi*) burrows. Where ground squirrel burrows are scarce, salamanders will use burrows or holes of other small burrowing mammals or crevices or cracks in upland habitat. Stock ponds, seasonal wetlands, and deep vernal pools typically provide most of the breeding habitat used by California tiger salamander. In such locations, California tiger salamander attach their eggs to rooted, emergent vegetation, and other stable objects in the water. California tiger salamanders have been known to breed in slow moving streams where there is sufficient material for eggs to adhere.

The Project site does not occur within designated critical habitat for California tiger. Aquatic habitat provided by Santa Rosa Creek does not provide suitable breeding habitat for California tiger salamander because flows with Santa Rosa Creek in the vicinity of the Project site are too high for sustainable breeding to occur. The Project site does not provide suitable upland aestivation habitat for California tiger salamander. No burrows, holes, crevices or other subterranean habitat was observed during the April 2018 site visit.

California red-legged frog

The California red-legged frog (*Rana draytonii*) is federally listed as threatened (Federal Register, 1996), and is a California species of special concern. The USFWS issued a revised critical habitat designation for the California red-legged frog on March 17, 2010. The Project area does not fall within critical habitat for California red-legged frog.

Historically, the California red-legged frog occurred in coastal mountains from Marin County southward to northern Baja California, and along the floor and foothills of the Central Valley from about Shasta County southward to Kern County (Jennings et al., 1992). Currently, this subspecies generally only occurs in the coastal portions of its historical range; it has been apparently extirpated from the valley and foothills and

from most of Southern California south of Ventura County. California red-legged frogs are usually confined to aquatic habitats such as creeks, streams, and ponds, and occur primarily in areas having pools approximately 3 feet deep, with adjacent dense emergent or riparian vegetation. Adult frogs move seasonally between their egg-laying sites and foraging habitat, but they typically do not move large distances from their aquatic habitat. California red-legged frogs breed from November to March. Egg masses are attached to emergent vegetation and hatch within approximately 14 days. Metamorphosis generally occurs between July and September.

No suitable aquatic or upland aestivation habitat occurs within the Project boundary. Santa Rosa Creek, located approximately 200 feet to the west, may provide suitable aquatic habitat but there are no known occurrences of California red-legged frogs within the vicinity of this reach (CNDDDB 2018).

Western Pond Turtle

The Western pond turtle (*Emys marmorata*) is a California species of special concern. Historically, this turtle had a relatively continuous distribution in most Pacific slope drainages from Klickitat County, Washington, along the Columbia River to Arroyo Santo Domingo, northern Baja California, and Mexico. The known elevational range of the western pond turtle extends from near sea level to about 4,690 feet above sea level. In California, western pond turtles were historically present in most Pacific slope drainages between the Oregon and Mexican borders (Jennings and Hayes, 1994).

Western pond turtle is an aquatic turtle that is found in ponds, lakes, and slow-water streams. Pond turtles are uncommon in high-gradient streams, likely because their local distribution may be limited by water temperatures, current velocity, or food resources. Western pond turtles require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks (Jennings and Hayes 1994). Habitat quality seems to vary with the availability of aerial and aquatic basking sites; however, western pond turtles often reach higher densities where many aerial and aquatic basking sites are available. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage. Western pond turtles also require an upland oviposition site in the vicinity of the aquatic site. Suitable oviposition sites must have the proper thermal and hydraulic environment for incubation of the eggs. The thin-shelled eggs of these turtles are suited to development in a dry nest; in an excessively moist nest (irrigated areas), eggs have a high probability of failing. Nests are typically located on a slope that is unshaded to ensure that substrate temperatures would be high enough to incubate the eggs.

Western pond turtles leave the aquatic site to reproduce, aestivate, and overwinter. Western pond turtles may overwinter on land or in water or may remain active in water during the winter season (Jennings and Hayes 1994). Mating, which has been rarely observed, typically occurs in late April or early May, but may occur year-round. Females migrate from the aquatic site to an upland location and deposit from 1 to 13 eggs in a shallow excavation. Females may lay more than one clutch per year, usually during May and June, although some individuals may deposit eggs as early as late April and as late as early August (Jennings and Hayes, 1994).

No suitable aquatic habitat occurs on site and western pond turtle is not expected to occur within the Project boundary. Santa Rosa Creek may provide low-quality pond turtle habitat occurs approximately 200 feet to the west of the Project site. The flow within this reach of the Creek likely provides limited pond

turtle habitat. The nearest known occurrence of Western pond turtle occurs to the southwest of the Project site at the confluence of Santa Rosa Creek and Brush Creek (CNDDDB 2018).

Nesting Birds and Raptors

The Project site native and non-native trees and shrubs that may provide suitable nesting habitat for passerine species and small raptors. No nests or nesting behavior was observed during the April 20, 2018 site visit. Larger raptors, such as red-tailed hawk (*Buteo jamacaicens*), may use the Project site for foraging but are unlikely to nest within the Project boundary because more suitable habitat occurs in the open space areas outside of the Project boundary.

CONCLUSIONS

Based on information from the CNDDDB, CNPS, NWI, iPac databases and the April 20, 2018 site visit, there is low potential for special status species to occur on the Project site. The site does not provide suitable habitat for CTS, CRLF, or Western pond turtle as described in this memorandum. Therefore, impacts on special status species are not anticipated to be less than significant and no mitigation measures are proposed.

The site does not provide suitable habitat for rare plants and no impacts on sensitive plants are anticipated. The native and non-native trees, shrubs, and herbaceous vegetation does provide potential suitable nesting habitat for birds and raptors. While no nests were observed during the April 20, 2018 site visit, the potential for nesting birds is high. Without mitigation to reduce the potential for impacts on nesting and breeding birds protected under MBTA and CFGC 3503 could be significant. However, the following mitigation measures are recommended to reduce potential impacts on nesting and breeding birds to less than significant.

Mitigation Measure 1: Preconstruction Nesting Bird Surveys

In order to avoid impacts to nesting birds, Project activities shall occur outside of the peak avian breeding season which runs from February 1 through September 1. If Project construction is necessary during the bird breeding season, a qualified biologist with experience in conducting bird breeding surveys shall conduct weekly bird surveys for nesting birds, within three days prior to the work in the area, and ensure no nesting birds in the Project area would be impacted by the Project. If an active nest is identified, a buffer shall be established between the construction activities and the nest so that nesting activities are not interrupted. The buffer shall be a minimum width of 200 feet (500 feet for raptors), be delineated by temporary fencing, and remain in effect as long as construction is occurring or until the nest is no longer active. No Project construction shall occur within the fenced nest zone until the young have fledged. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors and if buffer reduction is necessary, coordination with CDFW will occur.

Mitigation Measure 2: Non-nesting Season Vegetation Removal

Vegetation removal would occur outside of the typical nesting season for birds and raptors within the Project vicinity generally September 1 to February 1. Prior to vegetation removal, Mitigation Measure 1 would be implemented. If nests are observed during the survey, no vegetation removal shall occur until young have fledged.

REFERENCES

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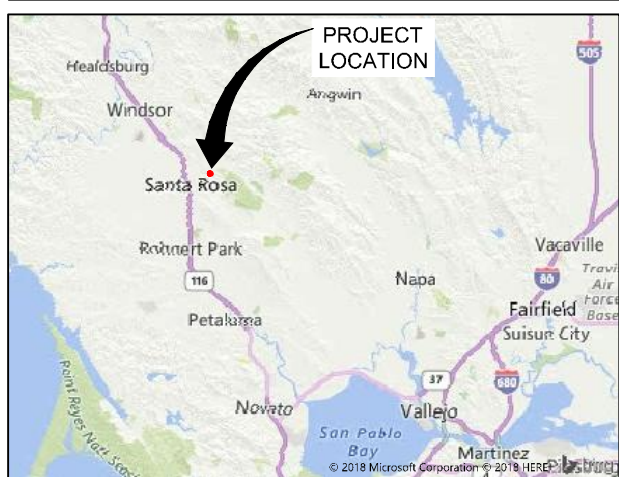
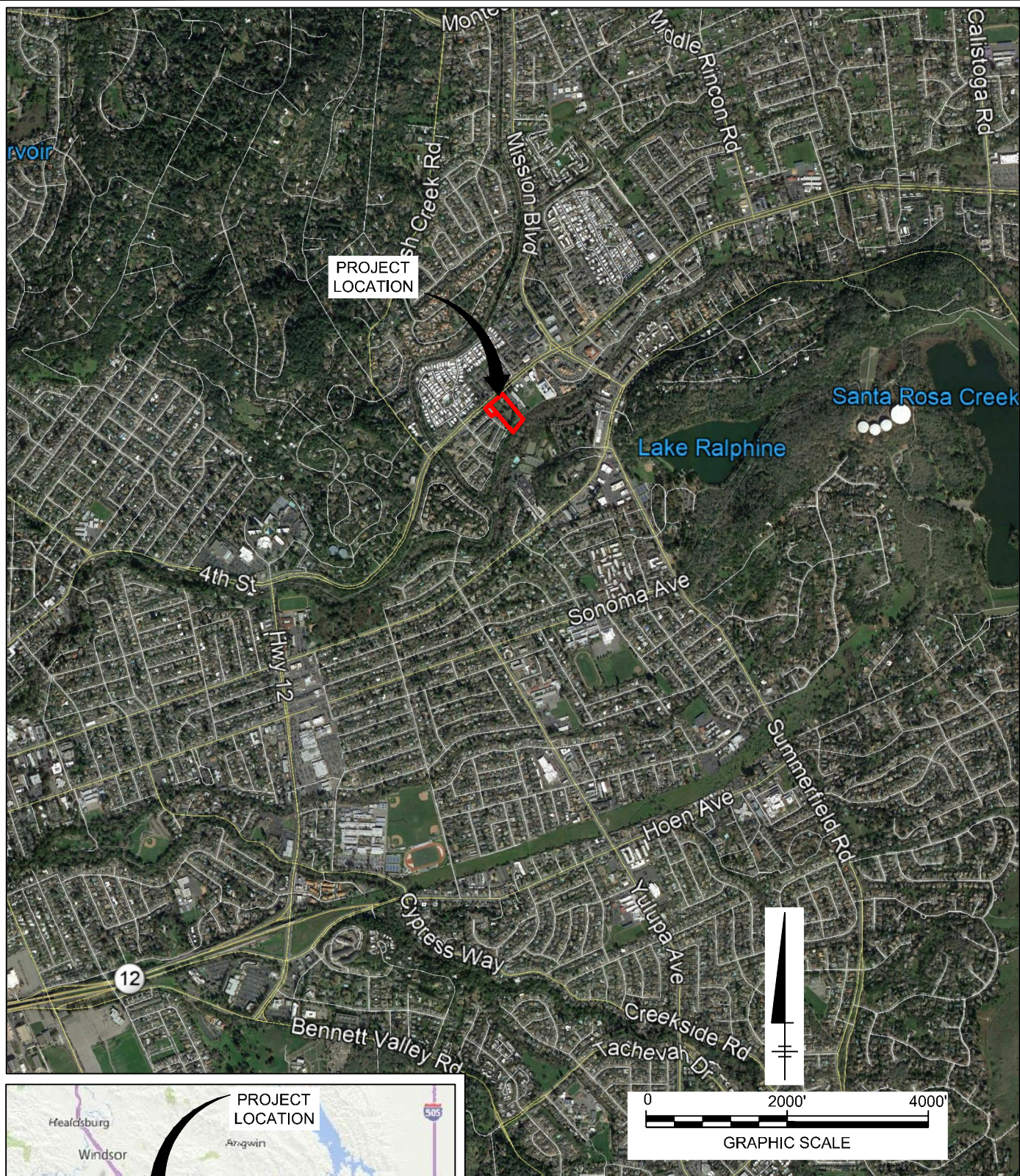
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REPORT PREPARERS

Lee Miles, AICP is a terrestrial biologist and certified planner with over 18 years of environmental compliance experience in California specializing in linear projects, pipelines, and infrastructure. She has conducted biological surveys for California tiger salamander, California red-legged frog, Foothill yellow-legged frog, San Joaquin kit fox, salt marsh harvest mouse, and nesting birds and raptors. She has conducted wetland delineations in a variety of habitats throughout Northern and Central California. She leads Arcadis's California Environmental Permitting team and her experience also includes developing and managing the preparation of California Environmental Quality Act (CEQA) documents for including initial studies, mitigated negative declarations, Environmental Impact Reports, Mitigation, Monitoring and Reporting Plans, and addendums and CEQA Plus documents. Ms. Miles has extensive experience obtaining regulatory authorizations from U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Department of Fish and Wildlife (CDFW). She provides expertise with Clean Water Act Section 404, 401, Endangered Species Act Section 7, 9 and 10, and California Fish and Game Code 1602, 2081, 2080.1 (b)(c). She has prepared Biological Assessments for California red-legged frog, California tiger salamander, San Joaquin kit fox, salt marsh harvest mouse, San Francisco garter snake, Alameda whipsnake, and migratory salmonids.



4224 HIGHWAY 12
 SANTA ROSA, CALIFORNIA

SITE LOCATION MAP



U.S. Fish and Wildlife Service

National Wetlands Inventory


4224 Highway 12 Santa Rosa, CA



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

March 23, 2018

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

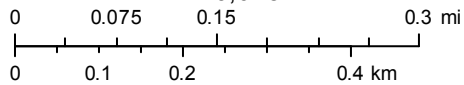
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

4224 Hwy 12 Bios Map

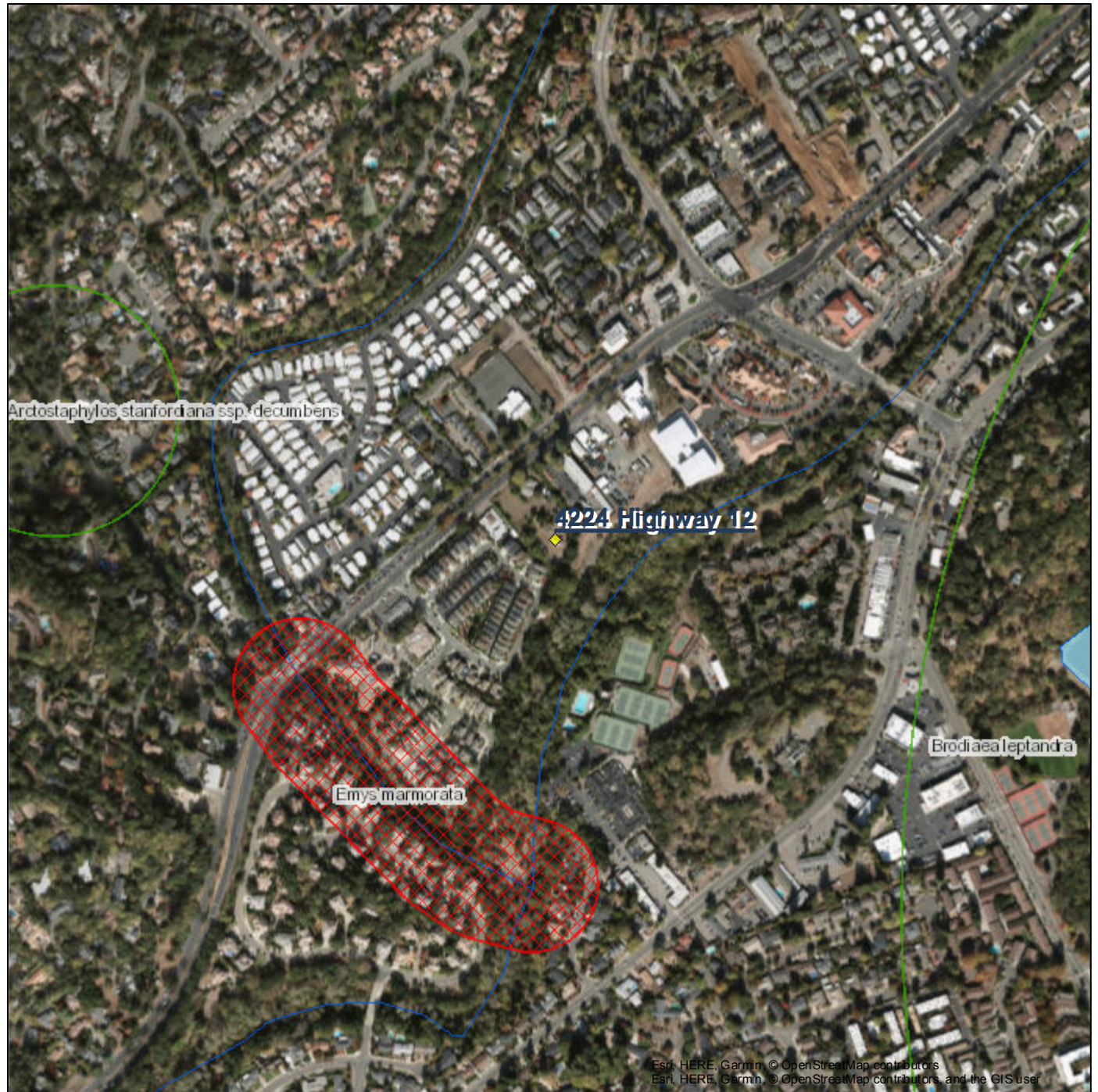
California Natural Diversity
Database (CNDDB) Commercial
[ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

1:9,028



August 12, 2018





Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Santa Rosa (3812246))

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.
Ambystoma californiense California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	85 120	1177 S:28	4	6	8	3	1	6	0	28	27	1	0
Amorpha californica var. napensis Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	700 700	69 S:1	0	0	0	0	0	1	0	1	1	0	0
Amsinckia lunaris bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		86 S:1	0	0	0	0	0	1	1	0	1	0	0
Andrena blennospermatis Blennosperma vernal pool andrenid bee	G2 S2	None None		90 90	15 S:1	0	0	0	0	0	1	1	0	1	0	0
Arctostaphylos stanfordiana ssp. decumbens Rincon Ridge manzanita	G3T1 S1	None None	Rare Plant Rank - 1B.1	300 800	12 S:4	0	0	1	1	1	1	2	2	3	0	1
Astragalus claranus Clara Hunt's milk-vetch	G1 S1	Endangered Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	770 770	6 S:1	0	1	0	0	0	0	0	1	1	0	0
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	890 1,230	50 S:2	2	0	0	0	0	0	2	0	2	0	0
Blennosperma bakeri Sonoma sunshine	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	90 105	25 S:6	0	4	1	0	1	0	1	5	5	1	0
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	150 150	181 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None None	USFS_S-Sensitive XERCES_IM-Imperiled	100 100	282 S:1	0	0	0	0	0	1	1	0	1	0	0
Brodiaea leptandra narrow-anthered brodiaea	G3? S3?	None None	Rare Plant Rank - 1B.2		39 S:2	0	0	0	0	0	2	2	0	2	0	0
Ceanothus confusus Rincon Ridge ceanothus	G1 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	510 800	33 S:2	0	0	1	0	0	1	1	1	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>Ceanothus divergens</i> Calistoga ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	800 800	23 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Ceanothus purpureus</i> holly-leaved ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2	475 475	43 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Ceanothus sonomensis</i> Sonoma ceanothus	G2 S2	None None	Rare Plant Rank - 1B.2	475 475	30 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Coturnicops noveboracensis</i> yellow rail	G4 S1S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	283 283	45 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Dicamptodon ensatus</i> California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	350 350	232 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Elanus leucurus</i> white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	120 120	175 S:1	0	1	0	0	0	0	0	1	1	0	0
<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	150 475	1343 S:9	1	1	6	1	0	0	3	6	9	0	0
<i>Fritillaria liliacea</i> fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	150 800	82 S:6	0	2	1	0	2	1	3	3	4	2	0
<i>Hemizonia congesta ssp. congesta</i> congested-headed hayfield tarplant	G5T2 S2	None None	Rare Plant Rank - 1B.2	442 442	52 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Lasthenia burkei</i> Burke's goldfields	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	100 442	34 S:4	0	3	0	0	0	1	0	4	4	0	0
<i>Layia septentrionalis</i> Colusa layia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		57 S:1	0	0	0	0	0	1	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>Leptosiphon jepsonii</i> Jepson's leptosiphon	G3 S3	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	180 450	39 S:2	0	0	0	0	0	2	1	1	2	0	0
<i>Limnanthes vincularis</i> Sebastopol meadowfoam	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	80 105	45 S:8	1	2	0	2	0	3	3	5	8	0	0
<i>Linderiella occidentalis</i> California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	100 776	434 S:3	0	1	0	0	0	2	2	1	3	0	0
<i>Navarretia leucocephala ssp. bakeri</i> Baker's navarretia	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	740 740	58 S:1	1	0	0	0	0	0	0	1	1	0	0
<i>Rana boylei</i> foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	750 750	2054 S:1	1	0	0	0	0	0	1	0	1	0	0
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	770 770	1497 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Trifolium amoenum</i> two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	160 160	26 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Trifolium buckwestiorum</i> Santa Cruz clover	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_USDA-US Dept of Agriculture		50 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	100 100	49 S:2	0	0	0	0	2	0	2	0	0	1	1
<i>Triquetrella californica</i> coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	328 328	13 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Valley Needlegrass Grassland</i> Valley Needlegrass Grassland	G3 S3.1	None None		835 835	45 S:1	0	0	0	0	0	1	1	0	1	0	0

Scientific Name	Common Name	Family	Lifeform	CRPR	CESA	FESA	Blooming Period	Habitat
Amorpha californica var. napensis	Napa false indigo	Fabaceae	perennial deciduous shrub	1B.2	None	None	Apr-Jul	Broadleafed upland forest (openings), Chaparral, Cismontane woodland
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	1B.2	None	None	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	Ericaceae	perennial evergreen shrub	1B.1	None	None	Feb-Apr(May)	Chaparral (rhyolitic), Cismontane woodland
Astragalus claranus	Clara Hunt's milk-vetch	Fabaceae	annual herb	1B.1	CT	FE	Mar-May	Chaparral (openings), Cismontane woodland, Valley and foothill grassland
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	1B.2	None	None	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	1B.1	CE	FE	Mar-May	Valley and foothill grassland (mesic), Vernal pools
Brodiaea leptandra	narrow-anthered brodiaea	Themidaceae	perennial bulbiferous herb	1B.2	None	None	May-Jul	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland
Calochortus uniflorus	pink star-tulip	Liliaceae	perennial bulbiferous herb		4.2 None	None	Apr-Jun	Coastal prairie, Coastal scrub, Meadows and seeps, North Coast coniferous forest
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	1B.1	None	None	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	1B.2	None	None	Feb-Apr	Chaparral (serpentinite or volcanic, rocky) Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	1B.2	None	None	Feb-Apr	Valley and foothill grassland
Hemizonia congesta ssp. congesta	congested-headed hayfield	Asteraceae	annual herb	1B.2	None	None	Apr-Nov	Meadows and seeps (mesic), Vernal pools
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	1B.1	CE	FE	Apr-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	1B.2	None	None	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	1B.2	None	None	Mar-May	Chaparral, Cismontane woodland, Valley and foothill grassland

Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	1B.1	CE	FE	Apr-May	Meadows and seeps, Valley and foothill grassland, Vernal pools Cismontane woodland, Lower montane coniferous forest,
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Polemoniaceae	annual herb	1B.1	None	None	Apr-Jul	Meadows and seeps, Valley and foothill grassland, Vernal pools
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	annual herb	1B.2	CE	FE	May-Jun	Vernal pools (volcanic ash flow) Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)		4.2 None	None	Feb-May	
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	1B.1	None	FE	Apr-Jun	Coastal bluff scrub, Valley and foothill grassland (sometimes serpentinite)
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	1B.1	None	None	Apr-Oct	Broadleafed upland forest, Cismontane woodland, Coastal prairie Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	1B.2	None	None	Apr-Jun	Coastal bluff scrub, Coastal scrub
Triquetrella californica	coastal triquetrella	Pottiaceae	moss	1B.2	None	None		

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

Santa Rosa Recess Project

LOCATION

Sonoma County, California



DESCRIPTION

Development of storage facility and residences.

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.
- 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
------	--------

Northern Spotted Owl *Strix occidentalis caurina*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/1123>

Reptiles

NAME

STATUS

Green Sea Turtle *Chelonia mydas*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6199>

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

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

California Tiger Salamander *Ambystoma californiense*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2076>

Insects

NAME

STATUS

San Bruno Elfin Butterfly *Callophrys mossii bayensis*

Endangered

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

<https://ecos.fws.gov/ecp/species/3394>

Crustaceans

NAME

STATUS

California Freshwater Shrimp *Syncaris pacifica*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7903>

Flowering Plants

NAME

STATUS

Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4338	Endangered
Clara Hunt's Milk-vetch <i>Astragalus clarianus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3300	Endangered
Sebastopol Meadowfoam <i>Limnanthes vincularis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/404	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6459	Endangered
Sonoma Sunshine <i>Blennosperma bakeri</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	Endangered
White Sedge <i>Carex albida</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3063	Endangered

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 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*

Breeds Feb 1 to Jul 15

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

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

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

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

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

Burrowing Owl *Athene cunicularia*

Breeds Mar 15 to Aug 31

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

<https://ecos.fws.gov/ecp/species/9737>

California Thrasher *Toxostoma redivivum*

Breeds Jan 1 to Jul 31

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

Common Yellowthroat *Geothlypis trichas sinuosa*

Breeds May 20 to Jul 31

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

<https://ecos.fws.gov/ecp/species/2084>

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

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

<https://ecos.fws.gov/ecp/species/1680>

Nuttall's Woodpecker *Picoides nuttallii*

Breeds Apr 1 to Jul 20

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

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

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

<https://ecos.fws.gov/ecp/species/9656>

Rufous Hummingbird *Selasphorus rufus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/8002>

Song Sparrow *Melospiza melodia*

Breeds Feb 20 to Sep 5

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

Spotted Towhee *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

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

<https://ecos.fws.gov/ecp/species/4243>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

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

<https://ecos.fws.gov/ecp/species/3910>

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

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

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 (I)

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.

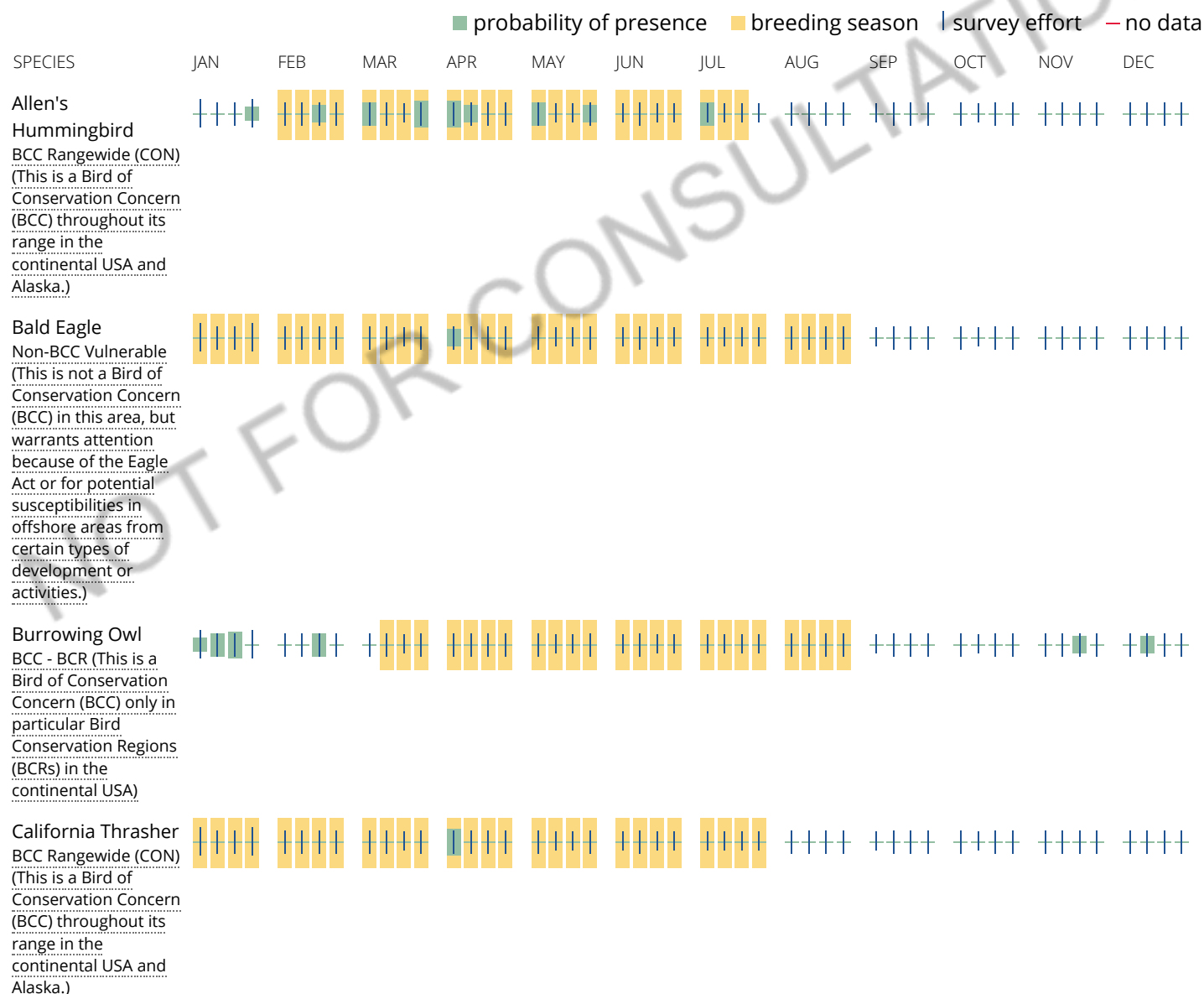
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

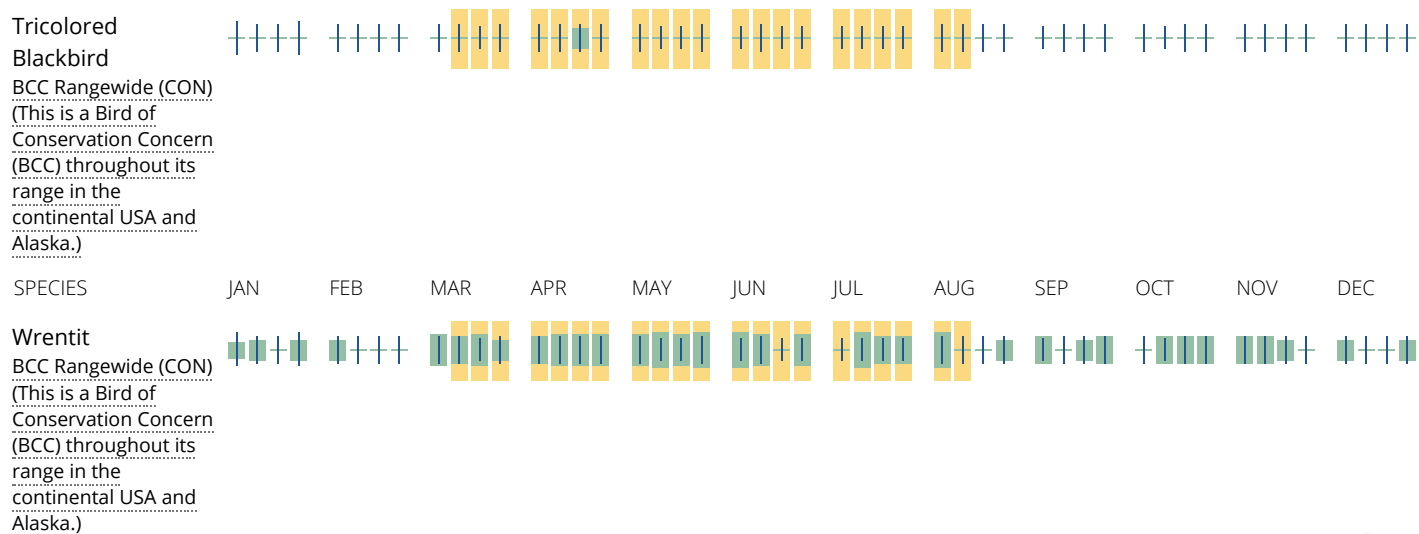
A week is marked as having no data if there were no survey events for that week.

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.







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

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

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

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

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 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 [E-bird Explore Data Tool](#).

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The 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

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this

inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION