# Biological Resources Assessment
# Yuba City Groundwater Well Installation Project

## Sutter County, California

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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, and monitoring and compliance reporting.

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## LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| BA | Biological assessment |
| BCC | Birds of conservation concern |
| BO | Biological opinion |
| BRA | Biological resources assessment |
| CARI | California Aquatic Resources Inventory |

## LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CBOC | California Burrowing Owl Consortium |
| CDFG | California Department of Fish and Game |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| City | City of Yuba City |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CRPR | California Rare Plant Rank |
| CWA | Clean Water Act |
| ECORP | ECORP Consulting, Inc. |
| ESA | Endangered Species Act |
| MBTA | Migratory Bird Treaty Act |
| NAD | North American Datum |
| NMFS | National Marine Fisheries Service |
| NPDES | National Pollutant Discharge Elimination System |
| NPPA | Native Plant Protection Act |
| NRCS | Natural Resources Conservation Service |
| Project | Yuba City Groundwater Well Installation Project |
| RWQCB | Regional Water Quality Control Board |
| SSC | CDFW Species of Special Concern |
| USACE | U.S. Army Corps of Engineers |
| USC | U.S. Code |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| WTP | Water Treatment Plant |

# 1.0 INTRODUCTION

On behalf of the City of Yuba City (City) Public Works Department, ECORP Consulting, Inc. (ECORP) conducted a biological resources assessment (BRA) for the Groundwater Well Installation Project (Project) located in the city of Yuba City, Sutter County, California. The purpose of the assessment was to collect information on the biological resources present or with the potential to occur in the Project Study Area, assess potential biological impacts related to Project activities, and identify potential mitigation measures to inform and support the Project's California Environmental Quality Act (CEQA) documentation for biological resources.

## 1.1 Project Location

The Project is located within the City's Water Treatment Plant (WTP) at 701 Northgate Drive, Yuba City, California (Figure 1. *Project Location and Vicinity*). The site corresponds to the unsectioned portion of the Rancho New Helvetia Land Grant in the "Sutter, California" and "Yuba City, California" 7.5-minute quadrangles (North American Datum [NAD]27) (U.S. Geological Survey [USGS] 1952, photorevised 1973). The approximate center of the site is located at latitude 39.760833° (NAD83) and longitude -121.817251° (NAD83) within the Honcut Headwaters-Lower Feather Watershed (Hydrologic Unit Code #18020159) Watershed (Natural Resources Conservation Service [NRCS], USGS, and U.S. Environmental Protection Agency [USEPA] 2017).

## 1.2 Study Area

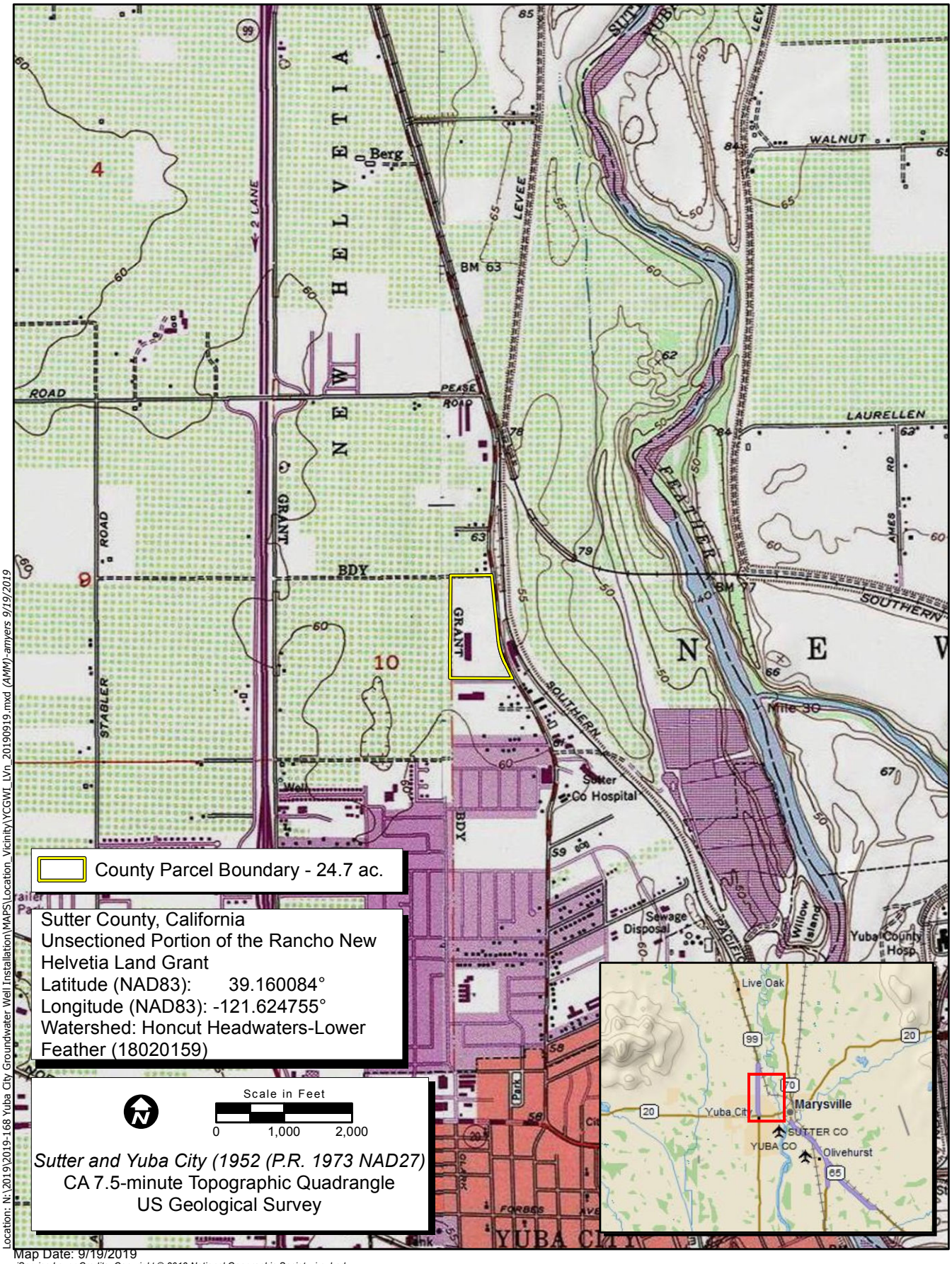
The Study Area for this BRA includes the entire WTP facility (Figure 2. *Yuba City Water Treatment Plant Study Area*).

## 1.3 Project Description

The City is proposing to build a new potable groundwater well with partial funding from the Bureau of Reclamation WaterSMART Drought Response Program. The groundwater well will reduce the City's reliance on imported water from the State Water Project and will potentially become an Aquifer Storage and Recovery well in future phases. The sites for the proposed well are located at the WTP.

## 1.4 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species and their habitats and sensitive habitats such as wetlands and riparian communities within the Study Area. This assessment includes information generated from the reconnaissance-level site assessment and does not include a wetland delineation performed according to U.S. Army Corps of Engineers' (USACE's) standards, nor does it include determinate field surveys for special-status plant and animal species.

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Map Date: 9/19/2019



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**Figure 1. Project Location and Vicinity**

*2019-168 Yuba City Groundwater Well Installation*


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Map Date: 9/19/2019
Photo Source:NAIP 2018

**Figure 2. Yuba City Water Treatment Plant Study Area**

*2019-168 Yuba City Groundwater Well Installation*

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This assessment includes a preliminary analysis of impacts on biological resources anticipated to result from the Project as presently defined. The mitigation recommendations presented in this assessment are based on a preliminary impact analysis, a review of existing literature, and the results of the site reconnaissance survey.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under § 15380 of the CEQA Guidelines;
- are identified as a species of special concern by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California," "plants about which more information is needed," or "plants of limited distribution – a watch list" (i.e., species with a California Rare Plant Rank [CRPR] of 1B, 2, 3, or 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, § 3511 (birds), § 4700 (mammals), § 5050 (amphibians and reptiles), and § 5515 (fishes).

# 2.0 REGULATORY SETTING

## 2.1 Federal Regulations

### *2.1.1 Endangered Species Act*

The ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of the ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law (16 U.S. Code [USC] 1538).

Under Section 7 of the ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO),

USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

### Section 7 Consultation

Section 7 of the ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the proposed Project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the Project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

### Critical Habitat

Critical Habitat is defined in Section 3 of the ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and

2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior.

2. Food, water, air, light, minerals, or other nutritional or physiological requirements.

3. Cover or shelter.

4. Sites for breeding, reproduction, or rearing (or development) of offspring.

5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

### *2.1.2 Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of nongame birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

### *2.1.3 Clean Water Act*

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The USEPA also has authority over wetlands, including the authority to veto permits issued by USACE under CWA Section 404(c).

Projects involving activities that have no more than minimal individual and cumulative adverse environmental effects may meet the conditions of one of the Nationwide Permits already issued by USACE (Federal Register 82:1860, January 6, 2017). If impacts on wetlands could be substantial, an individual permit is required. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

## 2.2 State and Local Regulations

### *2.2.1 California Endangered Species Act*

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch,

capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

### *2.2.2 Fully Protected Species*

The State of California first began to designate species as "fully protected" prior to the creation of the federal and the California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit, and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

### *2.2.3 Native Plant Protection Act*

The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare." The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA, but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, referring all listings to the California ESA.

### *2.2.4 California Fish and Game Code Special Protections for Birds*

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take non-game birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic non-native species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory non-game bird as designated in the MBTA.

### *2.2.5 Lake or Streambed Alteration Agreements*

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement.

### *2.2.6 Porter-Cologne Water Quality Act*

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

### *2.2.7 California Environmental Quality Act*

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in ESA, the California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under ESA, the California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as species of special concern (SSC) by CDFW and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

### Species of Special Concern

SSC are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under ESA, the California ESA, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not State) threatened or endangered, or meets the State definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for State threatened or endangered status.
- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

### U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, USFWS published a list of BCC (USFWS 2008) for the U.S. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS's highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

### California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2019), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

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

Additionally, CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent of occurrences threatened/moderate degree and immediacy of threat).
- Threat Rank 0.3 – Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2018).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

### California Environmental Quality Act Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, § 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded

Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant under CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

### *2.2.8 Yuba City General Plan*

The Yuba City General Plan is a document required by State law and adopted by the City Council that addresses issues related to physical development, growth, and conservation of City resources. The following Biological Resource Guiding Policies pertain to the Project.

8.4-G-1 Protect special-status species, in accordance with State regulatory requirements.

8.4-G-4 Where appropriate, incorporate natural, wildlife habitat features into public landscapes, parks, and other public facilities.

# 3.0 METHODS

## 3.1 Literature Review

The following resources were reviewed to determine the special-status species that had been previously documented within or in the vicinity of the Study Area:

- CDFW CNDDB data for the "Sutter, California" and "Yuba City, California" 7.5-minute quadrangles (CDFW 2019).
- USFWS list of species and other resources under the USFWS jurisdiction that are known or expected to be on or near the Study Area (USFWS 2019).
- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Sutter, California" and "Yuba City, California" 7.5-minute quadrangle and the ten surrounding USGS quadrangles (CNPS 2019).

## 3.2 Field Surveys Conducted

ECORP biologists Keith Kwan and Hannah Stone conducted a site assessment on September 19, 2019. During the field assessment, meandering transects were walked through the Study Area searching for aquatic resources, potential waters of the U.S./State, special-status species or their habitat. The findings of this site assessment have been incorporated into this BRA.

## 3.3 Special-Status Species Considered for the Project

Special-status plant and animal species considered to have the potential to occur within the region were evaluated for their potential to occur onsite. Species that are tracked in the CNDDB but do not have any other special status, as defined above, were not included in this assessment.

# 4.0 RESULTS

## 4.1 Site Characteristics and Land Use

The Study Area is the currently operational WTP within a developed portion of the city of Yuba City situated at an elevation range of approximately 60 to 65 feet above mean sea level in the Sacramento Valley subregion of the Great Valley region of the California floristic province (Baldwin et. al. 2012). The Project is developed with existing buildings, water treatment infrastructure, two constructed backwater basins, a solar panel array, paved parking areas, paved and dirt roads, barren dirt pads, and landscaping areas with no native or natural vegetation communities or habitats. Representative photographs of the WTP can be found in Attachment B.

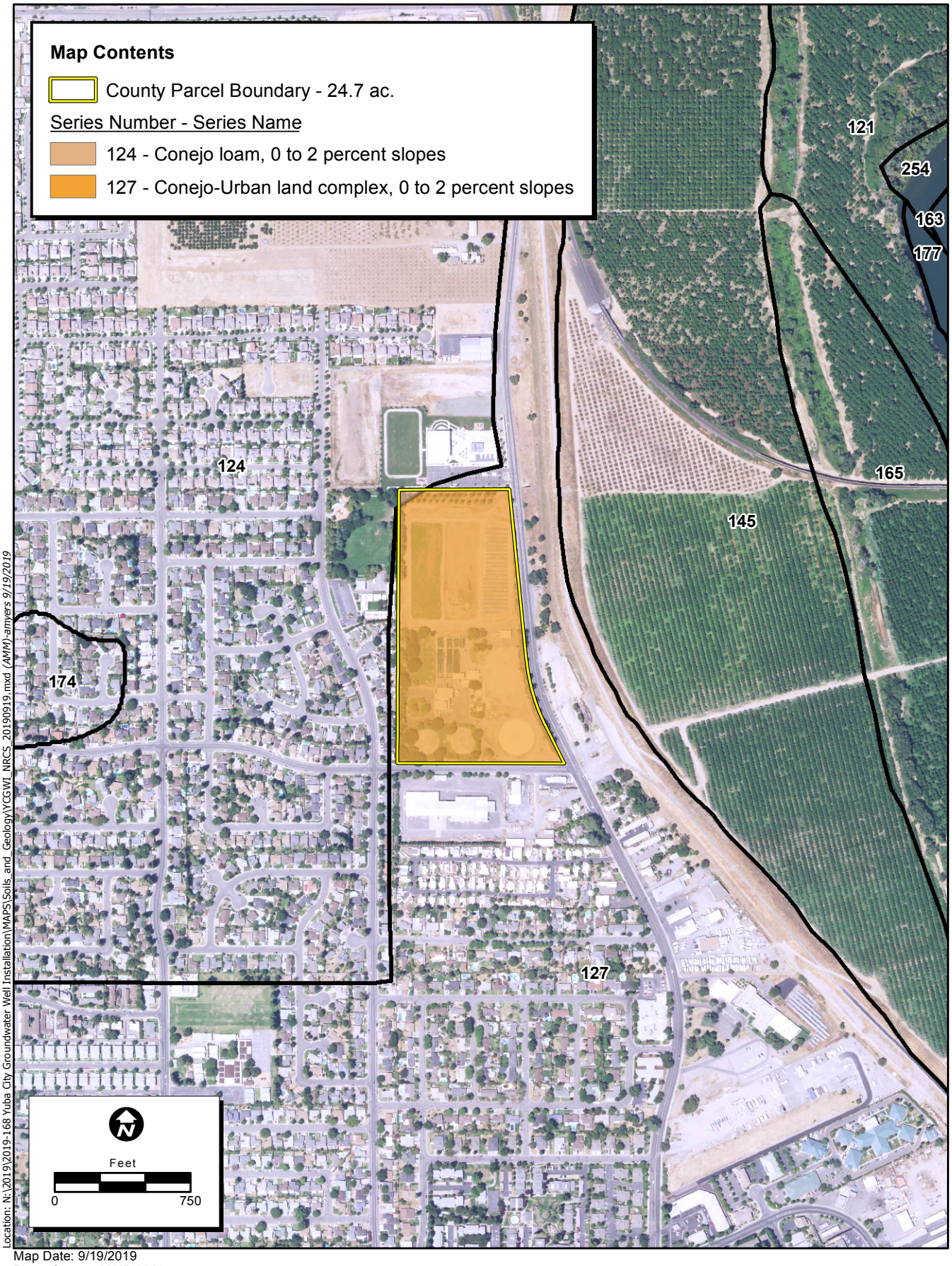
The surrounding lands include residential development, abandoned and operational commercial/industrial development, a community park, and the Twin Rivers Charter School.

## 4.2 Vegetation Communities

The Project is entirely developed with buildings and paved surfaces, lawns, ruderal areas of compacted dirt between various structures, constructed backwater basins, and other above-ground operational structures. There are no native or natural vegetation communities or habitats present. Vegetation is mostly comprised of manicured lawns and landscaping shrubs and trees of varying sizes. Common tree species within landscaping areas include Japanese zelkova (*Zelkova serrata*), glossy privet (*Lugistrum lucidum*), black locust (*Robinia pseudoacacia*), chinese tallow (*Triadica sebifera*), and coast redwood (*Sequoia sempervirens*). Most trees are well established and greater than 16 inches in diameter. Holly (*Ilex* sp.) and oleander (*Nerium oleander*) are the predominant shrubs within landscaping areas. Plant species that were not deliberately planted exist in compacted soils between planted vegetation within landscaping areas and in the constructed backwater basins. Common species include johnsongrass (*Sorghum halapense*), California wild grape (*Vitis californica*), and turkey-mullein (*Croton setiger*).

## 4.3 Soils

According to the *Web Soil Survey* (NRCS 2019a), there are two soil units mapped within the Project: (124) Conejo loam, 0 to 1 percent slopes, MLRA 17 and (127) Conejo-Urban land complex, 0 percent slopes, MLRA 17 (Figure 3. *Natural Resources Conservation Service Soil Types*). Neither of these soil units are considered hydric (NRCS 2019b).

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Map Date: 9/19/2019
Photo Source: NAIP 2018

**Figure 3. National Resources Conservation Soil Types**

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## 4.4 Potential Waters of the U.S.

There are two backwash basins that support some wetland characteristics. One of the basins was partially inundated during the survey. A constructed detention pond is in the southeastern corner of the WTP. This feature was unvegetated at the time of this field visit. According to the 2015 Clean Water Rule, which is currently in effect in California, "artificial, constructed lakes or ponds created by excavating and/or diking dry land such as farm and stock water ponds, irrigation ponds, settling basins, log cleaning ponds, cooling ponds, or fields flooded for rice growing" are not Waters of the U.S. There are no other aquatic resources present.

According to the California Aquatic Resources Inventory (CARI), there is one previously mapped aquatic resource for the Study Area (Figure 4. *California Aquatic Resources Inventory*). One of the backwater basins was labeled "depressional natural." Aquatic features mapped in CARI are typically not ground-truthed, so discrepancies are common. The backwater basins and the detention basin within the WTP are clearly not natural.

## 4.5 Wildlife

Wildlife use onsite is expected to be minimal due to the highly developed nature of the Project area and vicinity. Bird species commonly found in urban settings that may occur onsite include northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*). Several California ground squirrel (*Otospermophilus beecheyi*) burrows were found in dirt spoil piles in the northern portion of the WTP.

## 4.6 Evaluation of Special-Status Species Identified in the Literature Search

There are no special-status species previously documented within the Study Area, but several special-status species are known to occur within an approximate five-mile radius of the Project (see Attachment A).

Special-status species that came up on the CNPS, CNDDB, and USFWS database queries were evaluated for their potential to occur onsite (Table 1). Based upon the vegetation community and habitats present onsite, there are no potentially occurring special-status plants, invertebrates, fish, amphibians, reptiles, and mammals for the Project site, but does support potential nesting habitat for a few special-status birds and birds protected under the MBTA.


Location: N:\2019\2019-168 Yuba City Groundwater Well Installation\MAPS\Jurisdictional_Delineation\YCGWI_CARI_20190919.mxd (AWM)-amyers 9/19/2019

Map Date: 9/19/2019
Photo Source: NAIP 2018

**Figure 4. California Aquatic Resources Inventory**

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**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| **Plants** | | | | | | |
| Ferris' milk-vetch<br><br>*(Astragalus tener* var. *ferrisiae)* | – | – | 1B.1 | Vernally mesic meadows and seeps and in sub-alkaline flats within valley and foothill grasslands (7'–246'). | April–May | Absent; no suitable habitat onsite. |
| Heartscale<br><br>*(Atriplex cordulata* var. *cordulata)* | – | – | 1B.2 | Alkaline or saline valley and foothill grasslands, meadows and seeps, and chenopod scrub communities (0'–1,837'). | April–October | Absent; no suitable habitat onsite. |
| Lesser Saltscale<br><br>*(Atriplex minuscula)* | – | – | 1B.1 | Alkaline, sandy soils in chenopod scrub, playas, and valley and foothill grassland (49'–656'). | May–October | Absent; no suitable habitat onsite. |
| Sublte orache<br><br>*(Atriplex subtilis)* | – | – | 1B.2 | Valley and foothill grasslands/alkaline (131'–328'). | June–September | Absent; no suitable habitat onsite. |
| Pink creamsacs<br><br>*(Castilleja rubicundula* var. *rubicundula)* | – | – | 1B.2 | Serpentinite substrates in chaparral openings, cismontane woodland, meadows and seeps, and valley and foothill grassland (66'–2,986'). | April–June | Absent; no suitable habitat onsite. |
| Pappose tarplant<br><br>(*Centromadia parryi* ssp. *parryi*) | – | – | 4.2 | Often on alkaline soils within chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, vernally mesic valley and foothill grassland (0'–1,378'). | May–November | Absent; no suitable habitat onsite. |
| Recurved larkspur<br><br>*(Delphinium recurvatum)* | – | – | 1B.2 | Chenopod scrub, cismontane woodland, and valley and foothill grasslands (10'–2,592'). | March–June | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Dwarf downingia<br><br>*(Downingia pusilla)* | – | – | 2B.2 | Mesic areas in valley and foothill grassland, and vernal pools. Species appears to have an affinity for slight disturbance (i.e., scraped depressions, ditches, etc.) (Baldwin et al. 2012, CDFW 2018) (3'–1,460'). | March–May | Absent; no suitable habitat onsite. |
| Rose–mallow<br><br>*(Hibiscus lasiocarpos* var. *occidentalis)* | – | – | 1B.2 | Marshes and freshwater swamps. Often in riprap on sides of levees (0'–394'). | June–September | Absent; no suitable habitat onsite. |
| Ahart's dwarf rush<br><br>*(Juncus leiospermus* var. *ahartii)* | – | – | 1B.2 | Mesic areas in valley and foothill grassland. Species has an affinity for slight disturbance such as farmed fields (USFWS 2005) (98'–751'). | March–May | Absent; no suitable habitat onsite. |
| Red Bluff dwarf rush<br><br>*(Juncus leiospermus* var. *leiospermus)* | – | – | 1B.1 | Vernally mesic areas in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools (115'–4,101'). | March–June | Absent; no suitable habitat onsite. |
| Colusa layia<br><br>*(Layia septentrionalis)* | – | – | 1B.2 | Sandy or serpentinite soils in chaparral, cismontane woodland, and valley and foothill grasslands (328'–3,593'). | April–May | Absent; no suitable habitat onsite. |
| Legenere<br><br>*(Legenere limosa)* | – | – | 1B.1 | Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005) (3'–2,887'). | April–June | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Veiny monardella<br><br>*(Monardella venosa)* | – | – | 1B.1 | Heavy clay soils in cismontane woodland and valley and foothill grasslands (197'–1,345'). | May–July | Absent; no suitable habitat onsite. |
| Baker's navarretia<br><br>*(Navarretia leucocephala* ssp. *bakeri)* | – | – | 1B.1 | Vernal pools and mesic areas within cismontane woodlands, lower montane coniferous forests, meadows and seeps, and valley and foothill grasslands (16'–5,709'). | April–July | Absent; no suitable habitat onsite. |
| Ahart's paronychia<br><br>*(Paronychia ahartii)* | – | – | 1B.1 | Cismontane woodland; valley and foothill grassland; vernal pools (98'–1,673'). | February-June | Absent; no suitable habitat onsite. |
| Hartweg's Golden Sunburst<br><br>*(Pseudobahia bahiifolia)* | FE | CE | 1B.1 | Clay, often acidic soils in cismontane woodland, valley and foothill grasslands (49'–492'). | March–April | Absent; no suitable habitat onsite. |
| California alkali grass<br><br>(*Puccinellia simplex*) | – | – | 1B.2 | Alkaline, vernally mesic areas in sinks, flats and lake margins in chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools (7'–3,051'). | March–May | Absent; no suitable habitat onsite. |
| Sanford's arrowhead<br><br>*(Sagittaria sanfordii)* | – | – | 1B.2 | Shallow marshes and freshwater swamps (0'–2,133'). | May–October | Absent; no suitable habitat onsite. |
| Wright's trichocoronis<br><br>*(Trichocoronis wrightii* var. *wrightii)* | – | – | 2B.1 | Alkaline soils in meadows and seeps, marshes and swamps, riparian forest, and vernal pools (16'–1,427'). | May–September | Absent; no suitable habitat onsite. |
| Brazilian watermeal<br><br>*(Wolffia brasiliensis)* | – | – | 2B.3 | Assorted shallow freshwater marshes and swamps (66'–328'). | April–December | Absent; no suitable habitat onsite. |
| **Invertebrates** | | | | | | |
| Conservancy fairy shrimp<br><br>(*Branchinecta conservatio)* | FE | – | – | Vernal pools/wetlands. | November-April | Absent; no suitable habitat present. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| California linderiella<br><br>*(Linderiella occidentalis)* | – | – | CNDDB | Vernal pools/wetlands. | November-April | Absent; no suitable habitat present. |
| Vernal pool fairy shrimp<br><br>(*Branchinecta lynchi*) | FT | – | – | Vernal pools/wetlands. | November-April | Absent; no suitable habitat present. |
| Vernal pool tadpole shrimp<br><br>(*Lepidurus packardi*) | FE | – | – | Vernal pools/wetlands. | November-April | Absent; no suitable habitat present. |
| Valley elderberry longhorn beetle<br><br>(*Desmocerus californicus dimorphus*) | FT | – | – | Elderberry shrubs. | Any season | Absent; no suitable habitat present. |
| **Fish** | | | | | | |
| Delta smelt<br><br>(*Hypomesus transpacificus*) | FT | CE | – | Sacramento-San Joaquin delta. | N/A | Absent; no suitable habitat present. |
| Chinook salmon (Central Valley spring-run ESU)<br><br>(*Oncorhynchus tshawytscha*) | FT | CT | – | Undammed rivers, streams, creeks. | N/A | Absent; no suitable habitat present. |
| Steelhead (CA Central Valley DPS)<br><br>(*Oncorhynchus mykiss*) | FT | – | – | Undammed rivers, streams, creeks. | N/A | Absent; no suitable habitat present. |
| **Amphibians** | | | | | | |
| California red-legged frog<br><br>(*Rana draytonii*) | FT | – | SSC | Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down. | May 1-November 1 | Absent; no suitable habitat present. |
| Western spadefoot<br><br>(*Spea hammondii*) | – | – | SSC | California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley. | March-May | Absent; no suitable habitat present. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| **Reptiles** | | | | | | |
| Giant garter snake (*Thamnophis gigas*) | FT | CT | – | Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range. | April-October | Absent; no suitable habitat onsite. |
| Northwestern pond turtle (*Actinemys marmorata*) | – | – | SSC | Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches. | April-September | Absent; no suitable habitat onsite. |
| **Birds** | | | | | | |
| Aleutian cackling goose *(Branta hutchinsii leucopareia)* | De-listed | – | – | Pasture, marsh (Sacramento/San Joaquin Valley and Delta) | October-March | Absent; no suitable habitat onsite. |
| Yellow-billed cuckoo (*Coccyzus americanus*) | FT | CE | BCC | Breeds in California, Arizona, Utah, Colorado, and Wyoming. In California, they nest along the upper Sacramento River and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. Other known nesting locations include Feather River (Butte, Yuba, Sutter counties), Prado Flood Control Basin (San Bernardino and Riverside counties), Amargosa River and Owens Valley (Inyo Co.), Santa Clara River (Los Angeles Co.), Mojave River and Colorado River (San Bernardino Co.). Nests in riparian woodland. Winters in South America. | June 15-August 15 | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Rufous hummingbird<br><br>*(Selasphorus rufus)* | – | – | BCC | Breeds in British Columbia and Alaska (does not breed in California). Winters in coastal Southern California south into Mexico. Common migrant during March-April in Sierra Nevada foothills and June-August in Lower Conifer to Alpine zone of Sierra Nevada. Nesting habitat includes secondary succession communities and openings, mature forests, parks and residential area. | April-July | Absent; no suitable habitat onsite. |
| California black rail<br><br>(*Laterallus jamaicensis coturniculus*) | – | CT | BCC, CFP | Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer counties). | March-September (breeding) | Absent; no suitable habitat onsite. |
| Greater sandhill crane<br><br>*(Antigone canadensis tabida)* | – | CT | CFP | Breeds in NE California, Nevada, Oregon, Washington, and BC, Canada; winters from CA to Florida. In winter, they forage in burned grasslands, pastures, and feed on waste grain in a variety of agricultural settings (corn, wheat, milo, rice, oats, and barley), tilled fields, recently planted fields, alfalfa fields, row crops and burned rice fields. | March-August (breeding); September-March (wintering) | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| White-tailed kite (*Elanus leucurus*) | – | – | CFP | Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats. | March-August | Potential. |
| Bald eagle (*Haliaeetus leucocephalus)* | De-listed | CE | CFP, BCC | Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g. rivers, lakes), wetlands, flooded agricultural fields, open grasslands. | February – September (nesting); October-March (wintering) | Absent; no suitable habitat onsite. |
| Northern harrier (*Circus hudsonius*) | – | – | SSC | Nests on the ground in open wetlands, marshy meadows, wet/lightly grazed pastures, (rarely) freshwater/brackish marshes, tundra, grasslands, prairies, croplands, desert, shrub-steppe, and (rarely) riparian woodland communities. | April-September | Absent; no suitable habitat onsite. |
| Swainson's hawk (*Buteo swainsoni*) | – | CT | BCC | Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures. | March-August | Low potential. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Burrowing owl<br><br>*(Athene cunicularia)* | – | – | BCC, SSC | Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g. prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds. | February-August | Potential |
| Nuttall's woodpecker<br><br>*(Dryobates nuttallii)* | – | – | BCC | Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands. | April-July | Absent; no suitable habitat onsite. |
| Least Bell's vireo<br><br>(*Vireo bellii pusillus*) | FE | CE | BCC | In California, breeding range includes Ventura, Los Angeles, Riverside, Orange, San Diego, and San Bernardino counties, and rarely Stanislaus and Santa Clara counties. Nesting habitat includes dense, low shrubby vegetation in riparian areas, brushy fields, young second-growth woodland, scrub oak, coastal chaparral and mesquite brushland. Winters in southern Baja California Sur. | April 1-July 31 | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Yellow-billed magpie (*Pica nuttallii*) | – | – | BCC | Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings. | April-June | Potential. |
| Bank swallow (*Riparia riparia*) | – | CT | – | Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California. | May-July | Absent; no suitable habitat onsite. |
| Wrentit (*Chamaea fasciata*) | – | – | BCC | Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens. | March-August | Absent; no suitable habitat onsite. |
| San Clemente spotted towhee (*Pipilo maculatus clementae*) | – | – | BCC, SSC | Resident on Santa Catalina and Santa Rosa Islands; extirpated on San Clemente Island, California. Breeds in dense, broadleaf shrubby brush, thickets, and tangles in chaparral, oak woodland, island woodland, and Bishop pine forest. | Year round resident; breeding season is April-July | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Song sparrow "Modesto" (*Melospiza melodia heermanni*) | – | – | BCC, SSC | Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat. | April-June | Absent; no suitable habitat onsite. |
| Tricolored blackbird (*Agelaius tricolor*) | – | CT | BCC, SSC | Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields. | March-August | Absent; no suitable habitat onsite. |

**Table 1. Potentially Occurring Special-Status Species**

| Common Name (Scientific Name) | Status | | | Habitat Description | Survey Period | Potential To Occur Onsite |
|---|---|---|---|---|---|---|
| | FESA | CESA/ NPPA | Other | | | |
| Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) | – | – | BCC, SSC | Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego Co. | March-July | Absent; no suitable habitat onsite. |

Status Codes:

| | |
|---|---|
| FESA | Federal Endangered Species Act. |
| CESA | California Endangered Species Act. |
| FE | FESA listed, Endangered. |
| FT | FESA listed, Endangered. |
| BCC | USFWS Bird of Conservation Concern (USFWS 2002). |
| CE | CESA or NPPA listed, Endangered. |
| CT | CESA- or NPPA-listed, Threatened. |
| CFP | California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians). |
| CNDDB | Species that is tracked by CDFW's CNDDB but does not have any of the above special-status designations otherwise. |
| SSC | CDFW Species of Special Concern. |
| 1B | CRPRs/Rare or Endangered in California and elsewhere. |
| 2B | CRPR /Rare or Endangered in California, more common elsewhere. |
| 4 | CRPR plants of limited distribution. |
| 0.1 | Threat Rank/Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat). |
| 0.2 | Threat Rank/Moderately threatened in California (20-80 percent of occurrences threatened / moderate degree and immediacy of threat). |
| 0.3 | Threat Rank/ Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known). |

### *4.6.1 White-Tailed Kite*

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 1995). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 1995). The trees found throughout the WTP represent potentially suitable nesting habitat for this species.

### *4.6.2 Swainson's Hawk*

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species and are protected pursuant to the California Endangered Species Act. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2010). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Spermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanopulus* species). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, disking, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species. The larger trees found throughout the WTP represent potentially suitable nesting habitat for this species. Since there is no foraging habitat onsite and limited in the vicinity along with the constant human presence within the WTP, the potential for nesting onsite is considered low.

### *4.6.3 Burrowing Owl*

The burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a bird of conservation concern by the USFWS and a species of special concern by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2011). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (California Department of Fish and Game [CDFG] 2012). The breeding season typically occurs between February 1 and August 31 (California Burrowing Owl Consortium [CBOC] 1993; CDFG 2012). No burrowing owls or evidence of occupied burrows were observed onsite. However, the scattered ground squirrel burrows along the northern boundary of the WTP represent potentially suitable habitat for this species.

### *4.6.4 Yellow-Billed Magpie*

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to 6-8 weeks to complete, with eggs laid during April-May, and fledging during May-June (Koenig and Reynolds 2009). The young leave the nest at about 30 days after hatching (Koenig and Reynolds 2009). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2009). The trees within the WTP represent potentially suitable nesting habitat for this species.

### *4.6.5 Migratory Bird Treaty Act Protected Birds*

The trees within the Study Area support potentially suitable nesting habitat for birds protected under the MBTA. These could include common species such as northern mockingbird and house finch, among others.

## 4.7 Wildlife Movement/Corridors

The Study Area is located within the existing WTP facility and in a developed portion of the city of Yuba City. There are no signification habitat features (e.g., wetlands, woodlands) within or adjacent to the WTP. Project development is not expected to impact wildlife movement.

## 4.8 Critical Habitat

There is no designated Critical Habitat within the Project.

# 5.0 RECOMMENDATIONS

This section summarizes possible measures to avoid, minimize, or compensate for potential impacts to biological resources from the proposed Project. Mitigation recommendations are provided but may not be necessary should impacts be determined less than significant in the CEQA analysis.

## 5.1 Waters of the U.S.

There are no aquatic features or potential Waters of the U.S. present, so no avoidance or mitigation measures are recommended.

## 5.2 Special-Status Plants

The Project site is highly impacted, located in a developed portion of the city of Yuba City, and does not have native or unaltered vegetation communities that can support potentially occurring special-status plants. No avoidance or mitigation measures are recommended.

## 5.3 Special-Status Animal Species

The Project site is highly impacted, located in a developed portion of the city of Yuba City, and does not support potentially suitable habitat for special-status invertebrates, fish, amphibians, or reptiles. No avoidance or mitigation measures pertaining to these taxa are recommended.

### *5.3.1 Special-Status Birds and Migratory Bird Treaty Act Protected Birds*

Project construction could result in direct permanent impacts to developed habitat that could provide suitable nesting habitat for birds protected under the MBTA. All non-game native birds (resident and migratory) and the nests and eggs of all birds are protected under the California Fish and Game Code (§§ 3800, 3813, and 3503) and all migratory birds are protected under the federal MBTA. As such, to ensure that there are no impacts to protected birds, the following measures are recommended:

- During the nesting season (approximately February 1 to August 31) conduct pre-construction nesting bird surveys of suitable habitats in the Project area within 14 days prior to the commencement of Project construction. The survey area shall include the Project footprint and 300-foot radius for raptors and a 100-foot radius for other birds protected under the MBTA.
- If active nests are found, a no-disturbance buffer should be established around the nest. The buffer distance should be established by a qualified biologist in consultation with the City and CDFW. The buffer should be maintained until the fledglings are capable of flight and become independent of the nest, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures would be necessary. Pre-construction nesting surveys would not be required for construction activity that begins outside the nesting season (September 1 to January 31).

### *5.3.2 Burrowing Owls*

Project construction could result in direct permanent impacts to suitable nesting habitat for burrowing owls. To ensure that there are no impacts to protected burrowing owls are reduced, the following measures are recommended:

- Prior to Project construction, a qualified biologist shall conduct a burrowing owl habitat assessment according to the Staff Report on Burrowing Owl Mitigation (Staff Report) (CDFG 2012).
- If potential burrowing owl nesting habitat is present within 656 feet (200 meters) of the Project footprint, nesting or wintering season surveys for burrowing owl shall be conducted according to the Staff Report (CDFG 2012).
- If an active, occupied burrow is discovered within 656 feet of the Project footprint, the City and CDFW shall be notified. An avoidance radius shall be established and fenced around the occupied burrow, in consultation with the City and CDFW.
- If avoidance of the occupied burrow is not feasible, a passive relocation plan shall be prepared in consultation with the City and CDFW. The passive relocation plan will be implemented only upon City and CDFW approval.

### *5.3.3 Swainson's Hawks*

Project construction could result in direct permanent impacts to suitable nesting habitat for Swainson's hawks. To ensure that there are no impacts to protected Swainson's hawk are reduced, the following measures are recommended:

- If Project construction is anticipated to commence during the Swainson's hawk nesting season, approximately March 1 through September 15, a qualified biologist shall conduct a preconstruction survey within 0.25 mile of the Project footprint in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000). If no active Swainson's

hawk nests are found within 0.25 mile of the Project, no avoidance or other mitigation measures are recommended.

- If an active Swainson's Hawk nest is found within 0.25 mile of the Project footprint, an avoidance and minimization plan shall be prepared in consultation with the City and CDFW. The avoidance and minimization plan will be implemented only upon City and CDFW approval. The plan shall include, but is not limited to, worker awareness training, avoidance radius around the active nest, and nest monitoring during construction.
- Swainson's hawk surveys are not necessary if Project construction commences during September 15 through February 28.

## 6.0 REFERENCES

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## LIST OF ATTACHMENTS

# ATTACHMENT A

Special-Status Species Searches
(9-Quad CNPS Search, CNNDB Search, and Study Area IPaC Search)

# Inventory of Rare and Endangered Plants - 7th edition interface

v7-18mar 3-19-18

**Status:** search results - Tue, Oct. 8, 2019, 18:44 ET b

{QUADS_123} =~ m/544B|560C|560D|545A|545D|561D|544A|544C|544D/ Search

**Tip:** `Lathyrus Astragalus` returns species from both genera.[all tips and help.][search history]

**Your Quad Selection:** Sutter (544B) 3912126, Gridley (560C) 3912136, Honcut (560D) 3912135, Sutter Buttes (545A) 3912127, Tisdale Weir (545D) 3912117, Pennington (561D) 3912137, Yuba City (544A) 3912125, Gilsizer Slough (544C) 3912116, Olivehurst (544D) 3912115

**Hits 1 to 19 of 19**

**Requests that specify topo quads will return only Lists 1-3.**

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press | check all | check none

Selections will appear in a new window.

| open | save | hits | scientific | common | family | CNPS |
|---|---|---|---|---|---|---|
| | | 1 | **Astragalus tener var. ferrisiae** | Ferris' milk-vetch | Fabaceae | List 1B.1 |
| | | 1 | **Atriplex cordulata var. cordulata** | heartscale | Chenopodiaceae | List 1B.2 |
| | | 1 | **Atriplex minuscula** | lesser saltscale | Chenopodiaceae | List 1B.1 |
| | | 1 | **Atriplex subtilis** | subtle orache | Chenopodiaceae | List 1B.2 |
| | | 1 | **Castilleja rubicundula var. rubicundula** | pink creamsacs | Orobanchaceae | List 1B.2 |
| | | 1 | **Centromadia parryi ssp. parryi** | pappose tarplant | Asteraceae | List 1B.2 |
| | | 1 | **Delphinium recurvatum** | recurved larkspur | Ranunculaceae | List 1B.2 |
| | | 1 | **Hibiscus lasiocarpos var. occidentalis** | woolly rose-mallow | Malvaceae | List 1B.2 |
| | | 1 | **Juncus leiospermus var. ahartii** | Ahart's dwarf rush | Juncaceae | List 1B.2 |
| | | 1 | **Juncus leiospermus var. leiospermus** | Red Bluff dwarf rush | Juncaceae | List 1B.1 |
| | | 1 | **Layia septentrionalis** | Colusa layia | Asteraceae | List 1B.2 |
| | | 1 | **Monardella venosa** | veiny monardella | Lamiaceae | List 1B.1 |
| | | 1 | **Navarretia leucocephala ssp. bakeri** | Baker's navarretia | Polemoniaceae | List 1B.1 |
| | | 1 | **Paronychia ahartii** | Ahart's paronychia | Caryophyllaceae | List 1B.1 |
| | | 1 | **Pseudobahia bahiifolia** | Hartweg's golden sunburst | Asteraceae | List 1B.1 |
| | | 1 | **Puccinellia simplex** | California alkali grass | Poaceae | List 1B.2 |
| | | 1 | **Sagittaria sanfordii** | Sanford's arrowhead | Alismataceae | List 1B.2 |
| | | 1 | **Trichocoronis wrightii var. wrightii** | Wright's trichocoronis | Asteraceae | List 2B.1 |
| | | 1 | **Wolffia brasiliensis** | Brazilian watermeal | Araceae | List 2B.3 |

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press | check all | check none

Selections will appear in a new window.

No more hits.

# Inventory of Rare and Endangered Plants - 7th edition interface

v7-18mar 3-19-18

**Status:** search results - Mon, Sep. 9, 2019, 18:00 ET b

{QUADS_123} =~ m/544A|560C|560D|543B|543C|559C|544B|544C|544D/ Search

Tip: Terms prefixed by "+" are required, and by "−" excluded.[all tips and help.][search history]

**Your Quad Selection:** Yuba City (544A) 3912125, Gridley (560C) 3912136, Honcut (560D) 3912135, Browns Valley (543B) 3912124, Wheatland (543C) 3912114, Loma Rica (559C) 3912134, Sutter (544B) 3912126, Gilsizer Slough (544C) 3912116, Olivehurst (544D) 3912115

**Hits 1 to 13 of 13**

**Requests that specify topo quads will return only Lists 1-3.**

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press | check all | check none

Selections will appear in a new window.

| open | save | hits | scientific | common | family | CNPS |
|---|---|---|---|---|---|---|
| | | 1 | **Astragalus tener var. ferrisiae** | Ferris' milk-vetch | Fabaceae | List 1B.1 |
| | | 1 | **Delphinium recurvatum** | recurved larkspur | Ranunculaceae | List 1B.2 |
| | | 1 | **Downingia pusilla** | dwarf downingia | Campanulaceae | List 2B.2 |
| | | 1 | **Hibiscus lasiocarpos var. occidentalis** | woolly rose-mallow | Malvaceae | List 1B.2 |
| | | 1 | **Juncus leiospermus var. ahartii** | Ahart's dwarf rush | Juncaceae | List 1B.2 |
| | | 1 | **Juncus leiospermus var. leiospermus** | Red Bluff dwarf rush | Juncaceae | List 1B.1 |
| | | 1 | **Legenere limosa** | legenere | Campanulaceae | List 1B.1 |
| | | 1 | **Monardella venosa** | veiny monardella | Lamiaceae | List 1B.1 |
| | | 1 | **Navarretia leucocephala ssp. bakeri** | Baker's navarretia | Polemoniaceae | List 1B.1 |
| | | 1 | **Paronychia ahartii** | Ahart's paronychia | Caryophyllaceae | List 1B.1 |
| | | 1 | **Pseudobahia bahiifolia** | Hartweg's golden sunburst | Asteraceae | List 1B.1 |
| | | 1 | **Sagittaria sanfordii** | Sanford's arrowhead | Alismataceae | List 1B.2 |
| | | 1 | **Trichocoronis wrightii var. wrightii** | Wright's trichocoronis | Asteraceae | List 2B.1 |

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press | check all | check none

Selections will appear in a new window.

No more hits.

# Selected Elements by Element Code

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Sutter (3912126) OR Yuba City (3912125))

| Element Code | Species | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ABNKC19070 | ***Buteo swainsoni***<br>Swainson's hawk | None | Threatened | G5 | S3 | |
| ABNRB02022 | ***Coccyzus americanus occidentalis***<br>western yellow-billed cuckoo | Threatened | Endangered | G5T2T3 | S1 | |
| ABPAU08010 | ***Riparia riparia***<br>bank swallow | None | Threatened | G5 | S2 | |
| ABPBW01114 | ***Vireo bellii pusillus***<br>least Bell's vireo | Endangered | Endangered | G5T2 | S2 | |
| ABPBXA3010 | ***Melospiza melodia***<br>song sparrow ("Modesto" population) | None | None | G5 | S3? | SSC |
| ABPBXB0020 | ***Agelaius tricolor***<br>tricolored blackbird | None | Threatened | G2G3 | S1S2 | SSC |
| AFCHA0205A | ***Oncorhynchus tshawytscha pop. 6***<br>chinook salmon - Central Valley spring-run ESU | Threatened | Threatened | G5 | S1 | |
| AFCHA0209K | ***Oncorhynchus mykiss irideus pop. 11***<br>steelhead - Central Valley DPS | Threatened | None | G5T2Q | S2 | |
| ARADB36150 | ***Thamnophis gigas***<br>giant gartersnake | Threatened | Threatened | G2 | S2 | |
| CTT44110CA | ***Northern Hardpan Vernal Pool***<br>Northern Hardpan Vernal Pool | None | None | G3 | S3.1 | |
| CTT61410CA | ***Great Valley Cottonwood Riparian Forest***<br>Great Valley Cottonwood Riparian Forest | None | None | G2 | S2.1 | |
| CTT61420CA | ***Great Valley Mixed Riparian Forest***<br>Great Valley Mixed Riparian Forest | None | None | G2 | S2.2 | |
| ICBRA10010 | ***Lepidurus packardi***<br>vernal pool tadpole shrimp | Endangered | None | G4 | S3S4 | |
| IICOL48011 | ***Desmocerus californicus dimorphus***<br>valley elderberry longhorn beetle | Threatened | None | G3T2 | S2 | |
| PDAST7P010 | ***Pseudobahia bahiifolia***<br>Hartweg's golden sunburst | Endangered | Endangered | G2 | S2 | 1B.1 |
| PDFAB0F8R3 | ***Astragalus tener var. ferrisiae***<br>Ferris' milk-vetch | None | None | G2T1 | S1 | 1B.1 |
| PDLAM18082 | ***Monardella venosa***<br>veiny monardella | None | None | G1 | S1 | 1B.1 |
| PDPLM0C0E1 | ***Navarretia leucocephala ssp. bakeri***<br>Baker's navarretia | None | None | G4T2 | S2 | 1B.1 |
| PDRAN0B1J0 | ***Delphinium recurvatum***<br>recurved larkspur | None | None | G2? | S2? | 1B.2 |

**Record Count: 19**

# 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

Sutter County, California

## Local office

Sacramento Fish And Wildlife Office

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

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

# Endangered species

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

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

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

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

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

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

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



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

| | |
|---|---|
| Yellow-billed Cuckoo Coccyzus americanus<br>There is **proposed** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/3911 | Threatened |

## Reptiles

| NAME | STATUS |
|---|---|
| Giant Garter Snake Thamnophis gigas<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/4482 | Threatened |

## Amphibians

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

## Fishes

| NAME | STATUS |
|---|---|
| Delta Smelt Hypomesus transpacificus<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/321 | Threatened |

## Insects

| NAME | STATUS |
|---|---|
| Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/7850 | Threatened |

## Crustaceans

| NAME | STATUS |
|---|---|
| Conservancy Fairy Shrimp Branchinecta conservatio<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/8246 | Endangered |

| | |
|---|---|
| Vernal Pool Fairy Shrimp Branchinecta lynchi<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/498 | Threatened |
| Vernal Pool Tadpole Shrimp Lepidurus packardi<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/2246 | Endangered |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Hartweg's Golden Sunburst Pseudobahia bahiifolia<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/1704 | 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 Act[1] and the Bald and Golden Eagle Protection Act[2].

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

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

Additional information can be found using the following links:

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

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

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



| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| Bald Eagle Haliaeetus leucocephalus<br>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.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Jan 1 to Aug 31 |
| Common Yellowthroat Geothlypis trichas sinuosa<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/2084 | Breeds May 20 to Jul 31 |
| Nuttall's Woodpecker Picoides nuttallii<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/9410 | Breeds Apr 1 to Jul 20 |

| | |
|---|---|
| Rufous Hummingbird selasphorus rufus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8002 | Breeds elsewhere |
| Song Sparrow Melospiza melodia<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Feb 20 to Sep 5 |
| Spotted Towhee Pipilo maculatus clementae<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/4243 | Breeds Apr 15 to Jul 20 |
| Tricolored Blackbird Agelaius tricolor<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3910 | Breeds Mar 15 to Aug 10 |
| Wrentit Chamaea fasciata<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 10 |
| Yellow-billed Magpie Pica nuttalli<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9726 | Breeds Apr 1 to Jul 31 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that

week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

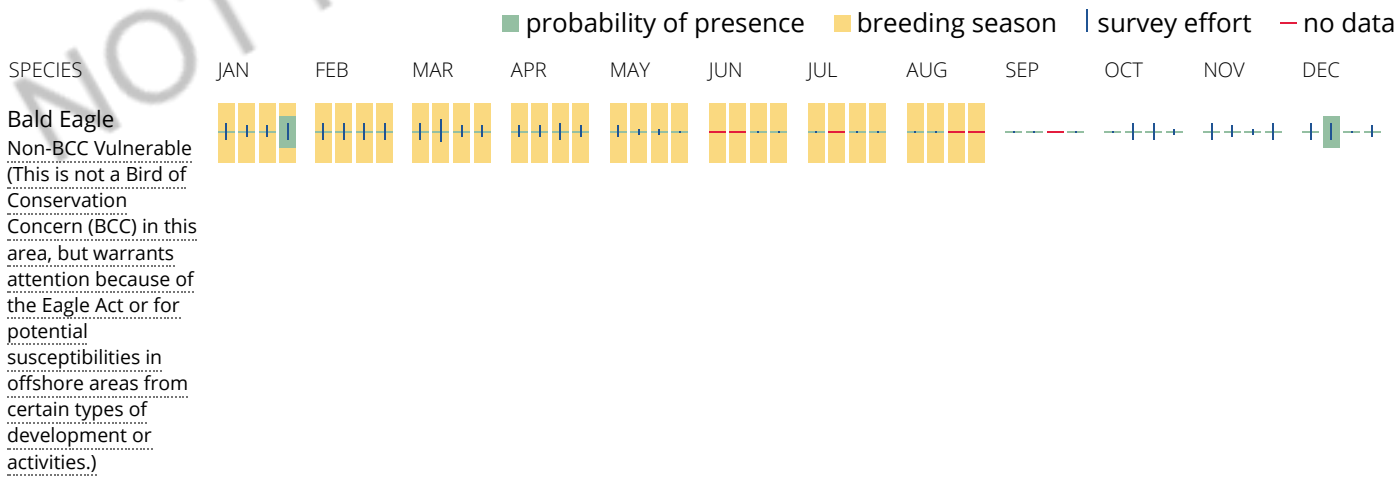
**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

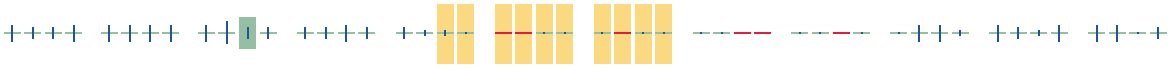
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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

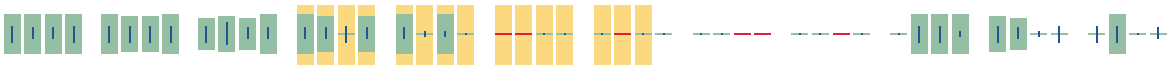
**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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

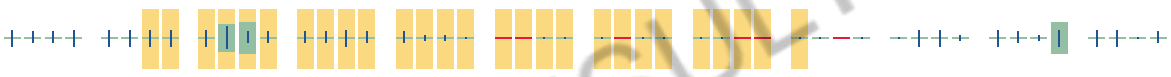


Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

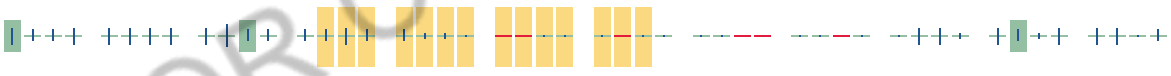


Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

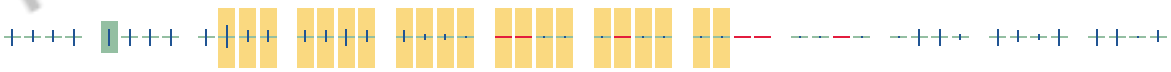
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



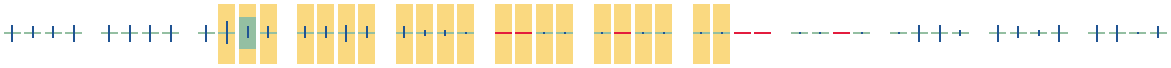
Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



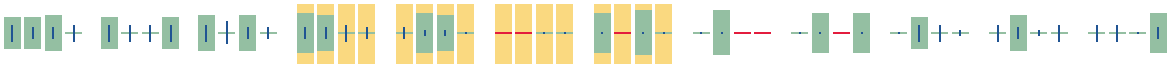
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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



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



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

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures 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 AKN Phenology Tool.

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

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

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

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

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

**What are the levels of concern for migratory birds?**

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

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

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

**Details about birds that are potentially affected by offshore projects**

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

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

**What if I have eagles on my list?**

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

**Proper Interpretation and Use of Your Migratory Bird Report**

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



# Facilities

# National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

# Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

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

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

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 tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

**Data precautions**

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

# ATTACHMENT B

Representative Site Photos

Southern Portion of WTP Looking East, September 19, 2019

Entrance to WTP Looking West, September 19, 2019

Southwestern Portion of WTP Looking North, September 19, 2019

Eastern Portion of WTP Looking North, September 19, 2019

Western Portion of Backwater Basin Looking North, September 19, 2019

Northern Portion of WTP Looking West, September 19, 2019

Backwater Basin Looking Northwest, September 19, 2019

Detention Basin in Southeastern Portion of WTP, September 19, 2019