

# **Valley Ranch Subdivision Unit #4**

## ***Biological Resources Assessment***

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## **1 INTRODUCTION**

At the request of the City of Williams, Mr. Greg Matuzak was retained to prepare a Biological Resources Assessment Report (Biological Report) for the Valley Ranch Subdivision Unit #4 (Project) located in Williams, Colusa County, California (see Appendix A). The Biological Report includes an evaluation of sensitive biological resources within the Project area, including sensitive biological resources under the jurisdiction of the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (Corps), and the City of Williams Planning Department. Preparation of the Biological Report included background research, field biological resources surveys, and reporting as detailed herein.

Mr. Greg Matuzak, Principal and owner of Greg Matuzak Environmental Consulting LLC is a wetlands ecologist and wildlife biologist with 20 years of experience conducting aquatic resources delineations and biological resources assessments in Northern California. Mr. Matuzak is 40-hour Wetland Delineation Certified (Wetland Training Institute) and has conducted aquatic resources delineations for 100's of linear miles of projects and 1000s of acres of site development projects. Additionally, Mr. Matuzak has conducted special-status biological resources surveys and developed biological resources assessments for dozens of projects in northern California, including projects in the City of Williams and Colusa County. Mr. Matuzak is responsible for the field data collection and assessment developed as part of the development of this Biological Report.

### **1.1 Project Setting**

The Biological Report includes a full coverage assessment of the Project area; see Appendix A for Project Area Overview Figures. The Project area is bordered by Interstate 5 along the western boundary, E Street along the southern boundary, and the GCID Eastside Canal along the northern boundary. The Project area is approximately 19.007 acres in size. Access into the Project area is proposed off of E Street onto Vann Street along the southern section of the Project area.

### **1.2 Project Understanding**

The Project site plan (see Appendix H) comprises of creating 12 lots, including 2 that will be zoned commercial (lots 7 & 8) and 10 that will be zoned business park (lots 1-6 & 9-12). See the attached Project site plan depicting the proposed layout of the proposed commercial and business park lots within the Project area.

### **1.3 Biological Resources Assessment Purpose**

The purpose of the Biological Report is to identify the location and extent of sensitive biological resources within the Project area, including special-status plant and wildlife species. Additionally, this Biological Report includes an impact assessment to such sensitive biological resources based on the Project Understanding outlined in Section 1.2 above. Section 6 includes avoidance, minimization, and mitigation measures to ensure that the Project area disturbance, based on the Project Understanding, would not have a significant impact on such sensitive biological resources. This Biological Report also satisfies the City of Williams General Plan requirements for the development of such biological resource assessments.

## 2 REGULATORY OVERVIEW

### 2.1 Federal Regulations

#### 2.1.1 Section 404 of the Clean Water Act

The U.S. Army Corps of Engineers ("Corps") and the Environmental Protection Agency ("EPA") regulate the discharge of dredge or fill material into "waters of the U.S." under Section 404 of the Clean Water Act. "Waters of the U.S." include wetlands and lakes, rivers, streams, and their tributaries. Wetlands are defined for regulatory purposes as areas "...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 solid conditions" as specified in 33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3.

Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as "other waters of the U.S." Jurisdictional limits of these features are typically noted by the Ordinary High Water Mark ("OHWM"). The OHWM is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as mark a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328 and 33 CFR 329).

Isolated ponds or seasonal depressions had been previously regulated as waters of the U.S. However, in *Solid Waste Agency of Northwestern Cook County (SWANCC) v. USACE et al.* (January 8, 2001), the U.S. Supreme Court ruled that certain "isolated" wetlands (e.g., non-navigable, isolated, and intrastate) do not fall under the jurisdiction of the CWA and are no longer under the jurisdiction of the Corps. Some circuit courts (e.g., *U.S. v. Deaton*, 2003; *U.S. Rapanos*, 2003; *Northern California River Watch v. City of Healdsburg*, 2006), though, have ruled that SWANCC does not prevent CWA jurisdiction if a "significant nexus" such as a hydrologic connection exists, whether it be man-made (e.g., roadside ditch) or natural tributary to navigable waters, or direct seepage from the wetland to the navigable water, a surface or underground hydraulic connection, an ecological connection (e.g., the same bird, mammal, and fish populations are supported by both the wetland and the navigable water), and changes to chemical concentrations in the navigable water is present due to water from the wetland.

Areas considered to be non-jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions with no outlet for drainage (33 CFR, Part 328).

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The *Clean Water Rule* is a 2015 regulation published by the EPA and Corps to clarify water resources management in the United States under a provision of the CWA. The regulation defined the scope of federal water protection in a more consistent manner, particularly over streams and wetlands, which have a significant hydrological and ecological connection to traditional navigable waters, interstate waters, and territorial seas. It is also referred to as the *Waters of the United States* rule, which defines all bodies of water that fall under U.S. federal jurisdiction. The rule has been contested in litigation and in 2017 the Trump administration announced its intent to review and rescind or revise the rule. Following a Supreme Court ruling on January 22, 2018 that lifted a nationwide stay on the rule, the Trump administration formally suspended the rule until February 6, 2020, thereby giving the EPA time to issue a draft proposal of replacement water regulatory requirements.

On October 22, 2019, the EPA and the Corps published a final rule to repeal the 2015 Clean Water Rule: Definition of "Waters of the United States" ("2015 Rule"), which amended portions of the Code of Federal Regulations (CFR), and to restore the regulatory text that existed prior to the 2015 Rule. The final rule will become effective on December 23, 2019. The EPA and the Corps will implement the pre-2015 Rule regulations informed by applicable agency guidance documents and consistent with Supreme Court decisions and longstanding agency practice.

However, on April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule to define "Waters of the United States" in the *Federal Register*. For the first time, the agencies have streamlined the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. Congress, in the CWA, explicitly directed the Agencies to protect "navigable waters." The Navigable Waters Protection Rule regulates traditional navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

Under the final rule, four clear categories of waters are federally regulated:

- The territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries to those waters,
- Certain lakes, ponds, and impoundments, and
- Wetlands adjacent to jurisdictional waters

Therefore, as of June 22, 2020, the final rule details 12 categories of exclusions, features that are not "waters of the United States," such as features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and waste treatment systems. The final rule clarifies key elements

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related to the scope of federal CWA jurisdiction, including:

- Providing clarity and consistency by removing the proposed separate categories for jurisdictional ditches and impoundments.
- Refining the proposed definition of “typical year,” which provides important regional and temporal flexibility and ensures jurisdiction is being accurately determined in times that are not too wet and not too dry.
- Defining “adjacent wetlands” as wetlands that are meaningfully connected to other jurisdictional waters, for example, by directly abutting or having regular surface water communication with jurisdictional waters.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of “waters of the United States” consistent with the February 2017 Presidential Executive Order entitled “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States.’” This final rule became effective on June 22, 2020 and will replace the Step One Rule published in October, 2019 as outlined above.

### **2.1.2 Section 401 of the Clean Water Act**

Section 401 of the CWA requires an applicant, for any federal permit which may result in a discharge into waters of the U.S., to obtain a certification from the state that the discharge will comply with provisions of the CWA. The nine regions of the State Water Quality Control Board administer this program. Any condition of water quality certification would be incorporated into the Corps permit. California has a policy of no-net-loss of wetlands and typically requires mitigation for impacts to wetlands before it will issue a water quality certification. This Project is located under the jurisdiction of Region 5, the Central Valley Regional Water Quality Control Board (“RWQCB”).

### **2.1.3 Endangered Species Act of 1973**

For the proposed Project, consultation with the USFWS would be necessary if a proposed action may affect a federally listed species or occupied habitat. This consultation would proceed under Section 7 of the Endangered Species Act (ESA) if a federal action is part of the proposed action or through Section 10 of the ESA if no such nexus were available (USFWS, 1973).

### **2.1.4 Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act (BAGEPA) (16 USC Section 668) protects bald and golden eagles and their nests from direct “take” (i.e. harm or harassment as described above). BAGEPA prohibits the take or commerce of any part of the bald or

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golden eagles (USFWS, 1940). The USFWS administers the Act and reviews actions that may affect species protected under the Act.

## **2.2 State Regulations**

### **2.2.1 California Endangered Species Act**

The California Department of Fish and Wildlife (CDFW) has jurisdiction over plant and wildlife species listed as threatened or endangered under section 2080 of the CDFW Code. The California Endangered Species Act (CESA) prohibits take of state-listed threatened and endangered species. The state Act differs from the federal Act in that it does not include habitat destruction in its definition of *take*. The CDFW defines *take* as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CDFW may authorize *take* under the CESA through Section 2081 agreements. If the results of a biological survey indicate that a state-listed species would be affected by the project, the CDFW would issue an Agreement under Section 2081 of the CDFW Code and would establish a Memorandum of Understanding for the protection of state-listed species. CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species.

### **2.2.2 Streambed Alteration Agreements: CDFG Code Section 1600 et seq.**

CDFW has jurisdictional authority over substantial alterations to the bed or bank of rivers, streams, and lakes under Sections 1600–1616. CDFW has the authority to regulate all work under the jurisdiction of the State of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

### **2.2.3 Porter-Cologne Water Quality Control Act & Section 1601 and Section 1607 of CDFG Code**

These acts and codes pertain to projects with potential impacts to water quality or waterways. The subject parcel does contain waters of the State as defined by the State Water Resources Board (State Board 2014).

### **2.2.4 State Water Resources Control Board Wetland Policy (April 2019)**

On April 2, 2019, the State Water Resources Control Board (State Water Board) adopted rules to protect wetlands and other environmentally sensitive waterways throughout the state. More than 90 percent of California’s historic wetlands have been lost to development and other human activity. Wetlands are a critical natural resource that

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protect and improve water quality, provide habitat for fish and wildlife, and buffer developed areas from flooding and sea-level rise. The newly adopted rules provide a common, statewide definition of what constitutes a wetland. They also provide consistency in the way the State Water Board and nine regional water boards regulate activities to protect wetlands and other waterways, such as rivers and streams, and bays and estuaries. The State of California waters of the state are, by definition, broader than “waters of the United States” covered by federal regulation. The newly adopted rules do not change that and will ensure that waters of the state will continue to be protected even if protections for federal waters are narrowed by administrative actions or the courts.

The new definition clarifies what is considered a wetland – and what is not – for the entire state, provides a common framework for monitoring and reporting the quality of California's remaining wetlands, helps ensure no overall net loss, and promote an increase, in the quantity, quality, and sustainability of waters of the state, including wetlands, improves transparency and consistency across the State Water Board and the nine Regional Water Quality Control Boards in how discharges of dredged or fill material in sensitive waterways are monitored and regulated, and avoids duplicative work and streamline requirements to cover all waters of the state, so both state and federal environmental concerns are addressed at once.

### **2.2.5 California Department of Fish and Game Code Sections 3503, 3503.5, and 3800: Nesting Migratory Bird and Raptors**

Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance within active nesting territories be reduced or eliminated during critical phases of the nesting cycle (approximately March 1 – August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g. killing or abandonment of eggs or young), or the loss of habitat upon which birds are dependent, is considered “taking”, and is potentially punishable by fines and/or imprisonment (LCC 2013).

### **2.2.6 California Special Species of Concern, Fully Protected, and Special Status Species**

California designates Species of Special Concern (SSC) as species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational or educational values. These species do not have the same legal protection as listed species but may be added to official lists in the future (CDFW 2014).

In the 1960's California created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those listed "may not be taken or possessed at any time" (CDFW 2014).

California special status species are identified by the California Natural Diversity Database (CNDDDB) and includes those species considered to be of greatest conservation need by the CDFW.

### **2.2.7 California Environmental Quality Act Guidelines Section 15380**

California Environmental Quality Act (CEQA) Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria. This section was included in the guidelines to deal primarily with situations in which a public agency is reviewing a project that may have a significant effect on, for example a "candidate species" that has not yet been listed by the USFWS or CDFW. CEQA, therefore, enables an agency to protect a species from significant project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted (CNRA 2012).

Plants appearing on the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) are considered to meet CEQA's Section 15380 criteria. Ranks include: 1A) plants presumed extirpated in California and either rare or extinct elsewhere, 1B) plant rare, threatened, or endangered in California and elsewhere, 2A) plants presumed extirpated in California, but more common elsewhere, and 2B) plants rare, threatened, or endangered in California, but more common elsewhere. Impacts to these species would therefore be considered "significant" requiring mitigation.

### **2.2.8 State Oak Woodland Regulations**

State laws that regulate protection of oak woodlands include Professional Forester's Law (PFL) and CEQA according to Public Resources Code Section 21083.4. Oak woodlands are defined as areas having 10% oak canopy cover or greater. "Oaks" are defined in Public Resources Code Section 21083.4 as a native tree species in the genus *Quercus*, that is 5 inches diameter at breast height (DBH) or greater. The Oak Woodlands Conservation Act (SB 1334) provides funding for the conservation and protection of oak woodlands in California. Oak trees and oak woodland habitats are protected under the State. The Project area does not contain any protected oak trees or oak resources per the State of California policies for the protection of oak woodlands.

## **2.3 Local Regulations**

### **2.3.1 City of Williams General Plan (WGP)**

The City of Williams General Plan states the following policy about the use of wetlands and vegetation: Development in wetlands areas shall be conditioned on the developer receiving a 404 permit. Additional WGP policy regarding biological resources includes protection of sensitive habitats and species, including threatened and endangered species.

### **3 METHODOLOGY**

In order to evaluate the Project area for the presence of any sensitive biological resources, baseline information from databases and reporting for similar projects in the City of Williams and Colusa County was collected and reviewed prior to conducting reconnaissance-level field biological surveys. The database searches, background research, and habitat level field surveys characterized the baseline conditions of the subject parcel.

Based on the baseline conditions of the Project area, an assessment was implemented to determine if any special-status plant or wildlife species use the subject parcel at any time during their life cycle.

#### **3.1 Sensitive Biological Resources Background Review**

The following information was used to identify potential sensitive biological resources, including the presence of special-status plant and wildlife species that could be found to use the subject parcel:

- California Department of Fish and Wildlife's California Natural Diversity Database records search of 3-mile buffer around the Project area (CDFW, 2021);
- The California Native Plant Society's online Inventory of Rare and Endangered Plants of California for the Project area and Colusa County (CNPS, 2021);
- The U.S. Fish and Wildlife Service Information, Planning, and Consultation System (IPaC) for endangered, threatened, and proposed listed species for the Project area (USFWS, 2021);
- National Wetland Inventory map of the Project area (NWI, 2021);
- United States Department of Agriculture (USDA) Soils Mapper of the Project area (USDA, 2021);
- Natural Resources Conservation Service (NRCS) Hydric Soils List for Colusa County (NRCS, 2021); and
- City of Williams General Plan (City of Williams, 2012).

#### **3.2 Biological Resources Field Surveys**

Biological resources field surveys were conducted on foot for the entirety of the Project area by Greg Matuzak, Principal Biologist and owner of Greg Matuzak Environmental Consulting LLC on May 7<sup>th</sup>, 2021. The purpose of the surveys was to identify habitat and vegetation types and to determine the potential for any special-status plant and wildlife species identified in the desktop analysis and background research to occur within the

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Project area. Additionally, given the biological resources surveys were conducted during the blooming period for each of the special-status plant species with the potential to occur within the Project area, the surveys focused on the identification of special-status plant species to identify their presence/absence within the Project area.

The entirety of the Project area was surveyed on foot and a list of plant and wildlife species observed during the field surveys was compiled (see Appendix E for species lists). A Photo Log is included in Appendix G, which documents the Project area during the field surveys.

## **4 ENVIRONMENTAL SETTING**

### **4.1 Environmental Setting**

The Project is located in Colusa County in the Great Central Valley Bioregion (USDA US Forest Service, 1997). This region contains the alluvial plains of the Sacramento and San Joaquin Valleys. The northern portion, the broad flat Sacramento Valley Subregion, touches nine counties extending from Sacramento to Shasta, including Colusa County where the project is located. The project is located approximately 15 miles west of the Sacramento River in the Colusa drainage basin, adjacent to the east flowing Salt Creek.

The Colusa Basin subsection of the Sacramento Valley, where the project is located, is on the overflow plain of the Sacramento River. This basin lies between the levees of the Sacramento River and alluvial fans from the northern California Coast Ranges (USDA Forest Service, 1997). The area is underlain by a nearly level basin floor with alluvial fans along the western edge of the subsection, west of the project site. The soils are mostly moderately well to poorly drained (USDA Forest Service, 1997).

The Colusa Basin elevation range is from about 20 to about 120 feet above mean sea level. The project site is in the central portion of this region at approximately 65 feet above sea level. The climate is hot and sub-humid. The mean annual precipitation is about 14 to 18 inches; it is practically all rain. Mean annual temperature ranges from approximately 60° to 62° Fahrenheit (F). The mean freeze-free period is about 250 to 275 days (USDA Forest Service, 1997). The changing of the seasons is evident in the Sacramento Valley. Summer heat waves have temperatures over 100° F, occasionally for several consecutive days. Winter is characterized by cool air and winter fog between December and February.

Historically, the Sacramento River (before it was controlled by dams, artificial levees, and diversions) overflowed onto portions of the Colusa basin when it flooded. Today, the river is contained by levees and streams draining eastward from the northern California Coastal Ranges, which are diverted southward in overflow channels that run parallel to the Sacramento River. Most of the streams are generally dry during the summer. There are no lakes, but winter ponding occurs.

The Sacramento Valley is a prominent site for winter fowl, attracting more than 1.5 million ducks and 750,000 geese to the marshes along the Pacific Flyway (USDA Forest Service, 1997). Now predominantly agricultural, the biological communities of the Sacramento Valley once supported vast areas of grassland, marshes, riparian habitat, and woodlands. Specifically, the predominant natural plant communities in the Colusa Basin are needlegrass grasslands. Fremont cottonwood series occurs along streams. Emergent aquatic communities are common (USDA Forest Service, 1997).

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Today, Colusa County still contains seasonal marshes, oak woodlands, riparian forests, vernal pools and grasslands. However, the project site is located in a principally agricultural setting. Colusa County itself ranks among the top 20 agricultural producers yielding primarily rice, tomatoes and olives among other prominent crops (CCGP, 1987).

## 4.2 Project Area Vegetation Communities

Vegetation community types within the Project area are described below.

### Disturbed

Much of the areas along the edges of the Project area contain a mix of fill material, asphalt, and gravel that have created a mix of non-native ruderal grassland vegetation and areas of barren ground. The Project area is mainly devoid of trees; however along the GCID Irrigation Canal along the northern border of the Project area two large willow trees (*Salix* sp.) occur adjacent to the proposed lots. These trees do contain suitable habitat for nesting raptors and other bird species and if the trees will be removed or encroached upon, the mitigation measures covering the protection of nesting birds should be implemented (See Section 6.0 for mitigation measures).

### Non-Native Annual Grassland

Non-native annual grassland are open vegetation types that are dominated by annual plant species, often nonnative. These species can occur within the understory of other vegetation types like oak woodlands, but where non-native annual grasslands occur within the entirety of the Project area there is no overstory or shrub cover. This vegetation type is common throughout the Project area where there has been historic agricultural disturbance within the entirety of the Project area for many years.

The annual exposed grasslands on the site are surrounded by disturbed habitats that have undergone extensive grading. This extensive vegetative series is composed of many non-native and native annual species. The most common valley grasses are now annuals, whereas their native counterparts were often perennial grasses. In annual grasslands of Colusa County, *Avena barb* and *A. fatua* are common oats. Bromes include ripgut brome and red brome (*Bromus rubens*) as well as soft chess and foxtail chess. Common filarees include *Erodium botrys* and *E. cicutarium*. *Lasthenia californica* is the common goldfield and *Lupinus bicolor* the common lupine. *Lolium multiflorum* is the common ryegrass.

Many wildlife species forage and hunt in annual grasslands of Colusa County; however, grasslands are most productive (in terms of wildlife) when they are associated with woodlands, wetlands and/or riparian habitat, which tend to provide better cover and nesting habitat than exposed grassland (Department of Forestry, 1988). Colusa County's grassland communities support bird species such as the

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red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), American crow (*Corvus brachyrhynchos*), and yellow-billed magpie jay (*Pica nuttalli*). Common mammals include mule deer (*Odocoileus hemionus*), striped skunk (*Mephitis mephitis*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*) (CCGP, 1987). However, many of these species are not likely found at the Project site because of its relative isolation; it is a small area surrounded by development and several roads, including Husted Road, E Street, Alta Lane, and Margurite Drive, beyond which are extensive tilled agricultural fields and development. Grasses such as wild oats (*Avena fatua*), soft chess brome, ripgut brome, and cheatgrass dominate annual grassland.

## 5 RESULTS

Special-status species were considered for the Project area based on a current review of the CNDDDB and database information provided by the United States Fish and Wildlife Service and California Native Plant Society as well as the biological resources surveys.

For the purposes of this Biological Report, special-status species are defined as:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register [FR] for proposed species);
- Species that are candidates for possible future listing as threatened or endangered under ESA (67 FR 40657, June 13, 2002);
- Species that are federal species of concern;
- Species that are listed or proposed for listing by California as threatened or endangered under the CESA (14 CCR 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code 1900 et seq.);
- Plants considered by CNPS to be "rare, threatened, or endangered in California and elsewhere" (CNPS List 1B species);
- Species that meet the definitions of "rare" or "endangered" under State CEQA *Guidelines* Section 15380;
- Animal species of special concern to CDFW; and
- Animals fully protected in California (California Fish and Wildlife Code Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

A list of special-status plant and animal species that have the potential to occur within the Project region was compiled based on data in the CNDDDB (CDFW, 2021), CNPS database, and USFWS List of Federal Endangered and Threatened Species that may be Affected by Projects in the USGS 7.5-minute quadrangles within five miles of the project (i.e. the Arbuckle, Cortina Creek, Williams and Colusa quadrangles). Appendix G illustrates the occurrences of special status species in the CNDDDB, which includes 4 special-status plant species and 5 special-status wildlife species previously identified within 3 miles of the Project area. However, a total of 14 plant and 21 wildlife special-status species were identified from these databases combined as potentially occurring in this portion of the Sacramento Valley (USFWS, CNPS, CDFW, 2021) and are in the attached species evaluation in Appendix F. The list served as a starting point in

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determining if there were known locations of sensitive species or whether suitable habitat might actually be found in the Project area.

The study area does not contain any mapped CDFW sensitive communities (see Appendix G for a CDFW CNDDDB map of the study area and a 3-mile buffer). Therefore, CDFW sensitive communities are not discussed within this reporting effort further given the lack of mapping provided for such sensitive communities by CDFW within and adjacent to the Project area.

Based on project maps, aerial photography, and reconnaissance site visits many of the 35 species identified in databases for the region were eliminated from further consideration for one or more of the following reasons:

- Lack of suitable habitat in the project study area
- Outside of species range
- Avoidance of suitable habitat during the City's project planning phase

The result of this evaluation indicates that four sensitive plant species and five sensitive wildlife species are known to occur within three miles of the Project area based on the most up to date review of the CNDDDB (2021). There is no Designated Critical Habitat (DCH) mapped for any federally listed species within 3 miles of the Project area. Site specific surveys were conducted to determine the presence or absence of these species or their habitat in the Project study area. Conclusions regarding habitat suitability and species occurrence are based on the biological resources surveys conducted and existing literature and databases described previously.

The species evaluation table in the attached Appendix F identifies the special-status plant and wildlife species that are known to occur or have a potential to occur within three miles of the Project area. For each of these species the "potential for occurrence" at the project site was evaluated as follows:

- **Unlikely:** The Project area and/or immediate area do not support suitable habitat for a particular species. Project is outside the species known range.
  - **Low Potential:** Project area and/or immediate area only provide limited habitat for a particular species. In addition, the known range for a particular species may be outside the immediate project area.
  - **Medium Potential:** The Project area and/or immediate area provide suitable habitat for a particular species, and habitat for the species may be impacted.
  - **High Potential:** The Project area and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in the immediate area and within the potential area of impact.
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A description of the special-status plants and wildlife species identified as known to occur or having a potential to occur with the Project area is provided in Appendix F for Special-Status Plant Species That Are Known to Occur or Have Potential in the Region around the Project Area.

## **6 CONCLUSIONS AND RECOMMENDATIONS:**

These conclusions and recommendations are based on the findings of this Biological Report and the impact assessment based on the Project Understanding outlined in Section 1.3 above and the site plan attached in Appendix H. Therefore, the impact assessment and recommendations below are based on the proposed disturbance included in the Site Plan attached in Appendix H. For sensitive biological resources that have the potential to be impacted by such disturbance, avoidance, minimization, and mitigation measures are proposed to ensure that such disturbance does not cause a significant impact on any sensitive biological resources within the Project area.

### **Proposed Avoidance, Minimization, and Mitigation Measures**

#### **6.1 Potential Impacts to Special-Status Plant Species**

Special-status plant surveys were conducted in May 2021, which is within the blooming period for each of the special-status plant species with potential to occur within the Project area. No special-status plants were documented within the Project area during the site visit and survey conducted as part of the development of this Biological Report. Therefore, the Project area does not contain any special-status plant species listed by CNPS based on the results of the May 2021 surveys of the Project area.

Therefore, no additional special-status plant surveys are required prior to the implementation of future ground disturbing activities within the Project area. The proposed Project would have no impact on any CNPS special-status plant species and therefore, no mitigation is required.

#### **6.2 Potential Impacts to Special-Status Wildlife Species**

Special-status wildlife surveys were conducted in May 2021 and those surveys focused on direct observations of wildlife within the Project area and suitable habitat for such special-status species within the Project area. No special-status wildlife species were documented within the Project area during the site visit and survey conducted as part of the development of this Biological Report. Additionally, the Project area does not provide suitable habitat for any of the special-status wildlife species that have the potential to occur regionally and within 3 miles of the Project area. Given there is a lack of seasonal wetland and vernal pool habitat within the Project area, vernal pool listed species and California tiger salamander would not occur within the Project area. Additionally, the lack of aquatic habitat within the Project area would preclude the presence of giant garter snake, California red-legged frog, and special-status fish species.

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The Project area does not contain suitable upland giant garter snake habitat given a lack of required burrows within 218 feet of giant garter snake aquatic habitat. Therefore, the Project area does not contain any special-status wildlife species listed by CDFW or USFWS based on the results of the May 2021 surveys of the Project area and the special-status wildlife species with potential to occur regionally and within three miles of the Project area.

Nesting raptors and other bird species have some potential to occur within the Project area as discussed in detail below. Given the Project area contains two willow trees adjacent to the GCID Irrigation Canal and those trees contain suitable habitat for nesting raptors and other protected bird species, removal of such trees should be done outside the breeding season, if required, to avoid potential impacts to such nesting raptor and other protected bird species. Bird species are unlikely to nest within the non-native annual grasslands within the Project area given the high level of disturbance within the Project area. The breeding season for raptors and MBTA protected bird species in the vicinity of the Project area is generally from March 1 to August 30. Vegetation clearing or tree removal outside of the breeding season for such bird species would not require the implementation of any avoidance, minimization, or mitigation measures. However, construction or development activities during the breeding season could disturb or remove occupied nests of raptors and would require the implementation of a pre-construction survey within 500 feet of the any disturbance area within the Project area for nesting raptors within 14 days prior to disturbance.

**Occurrence:** The Project area contains some small to medium sized trees adjacent to the proposed areas of disturbance within the Project area and many of those trees contain suitable habitat for nesting raptors and other protected bird species. In addition, the Project area also includes grasslands that provide suitable nesting habitat for other protected bird species. The breeding season for raptors and other protected bird species in the vicinity of the Project area is generally from March 1 to August 31 but varies depending on the species and localized weather patterns.

**Avoidance:** Vegetation clearing or tree removal outside of the breeding season for such bird species and/or avoidance of such potential nesting habitat would not require the implementation of any avoidance, minimization, or mitigation measures.

**Mitigation:** Construction or disturbance activities during the breeding season could disturb or remove occupied nests of raptors and/or protected bird species and would require the implementation of a pre-construction survey within and adjacent to any proposed disturbance area within the Project area for nesting raptors and other protected bird species within fourteen (14) days prior to disturbance. The nesting survey radius around the proposed disturbance would be identified prior to the implementation of the protected bird nesting surveys by a CDFW qualified biologist and

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would be based on the habitat type, habitat quality, and type of disturbance proposed within or adjacent to nesting habitat but would be a minimum of 500 feet from any area of disturbance.

If any nesting raptors or protected birds are identified during such pre-construction surveys, trees or shrubs or grasslands with active nests should not be removed or disturbed and a no-disturbance buffer should be established around the nesting site to avoid disturbance or destruction of the nest site until after the breeding season or after a qualified wildlife biologist determines that the young have fledged. The extent of these buffers would be determined by a CDFW qualified wildlife biologist and would depend on the special-status species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors should be analyzed by a qualified wildlife biologist to make an appropriate decision on buffer distances based on the species and level of disturbance proposed in the vicinity of an active nest.

### **6.3 Potential Impacts to Clean Water Act Regulated “Waters of the U.S.,” Including Wetlands**

There are no resources within the Project area that would be regulated under the Clean Water Act. Therefore, additional wetland related surveys are not required prior to the implementation of future ground disturbing activities within the Project area. The proposed Project would have no impact on any Clean Water Act regulated “waters of the U.S.,” including wetlands, and therefore, no additional permitting or mitigation is required.

### **6.4 Potential Impacts to Stream and Riparian Zones Under CDFW Jurisdiction**

Substantial alteration to perennial, intermittent, and ephemeral streams within the Project area would likely fall under CDFW jurisdiction and any proposed alteration of any stream would most likely require a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et. seq.* of the California Fish and Wildlife Code prior to construction. However, the Project area does not contain any CDFW regulated streams. The irrigation canals along the southern and eastern borders of the Project area are not regulated by CDFW given they do not meet the definition of a stream by CDFW. Furthermore, none of the irrigation canals would be impacted by the proposed disturbance and the City of Williams will create an adequate buffer between the proposed parcels along those canals to avoid any impact to them.

Therefore, no additional stream related surveys are required prior to the implementation of future ground disturbing activities within the Project area. The

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proposed Project would have no impact on any CDFW regulated stream and therefore, no additional permitting or mitigation is required.

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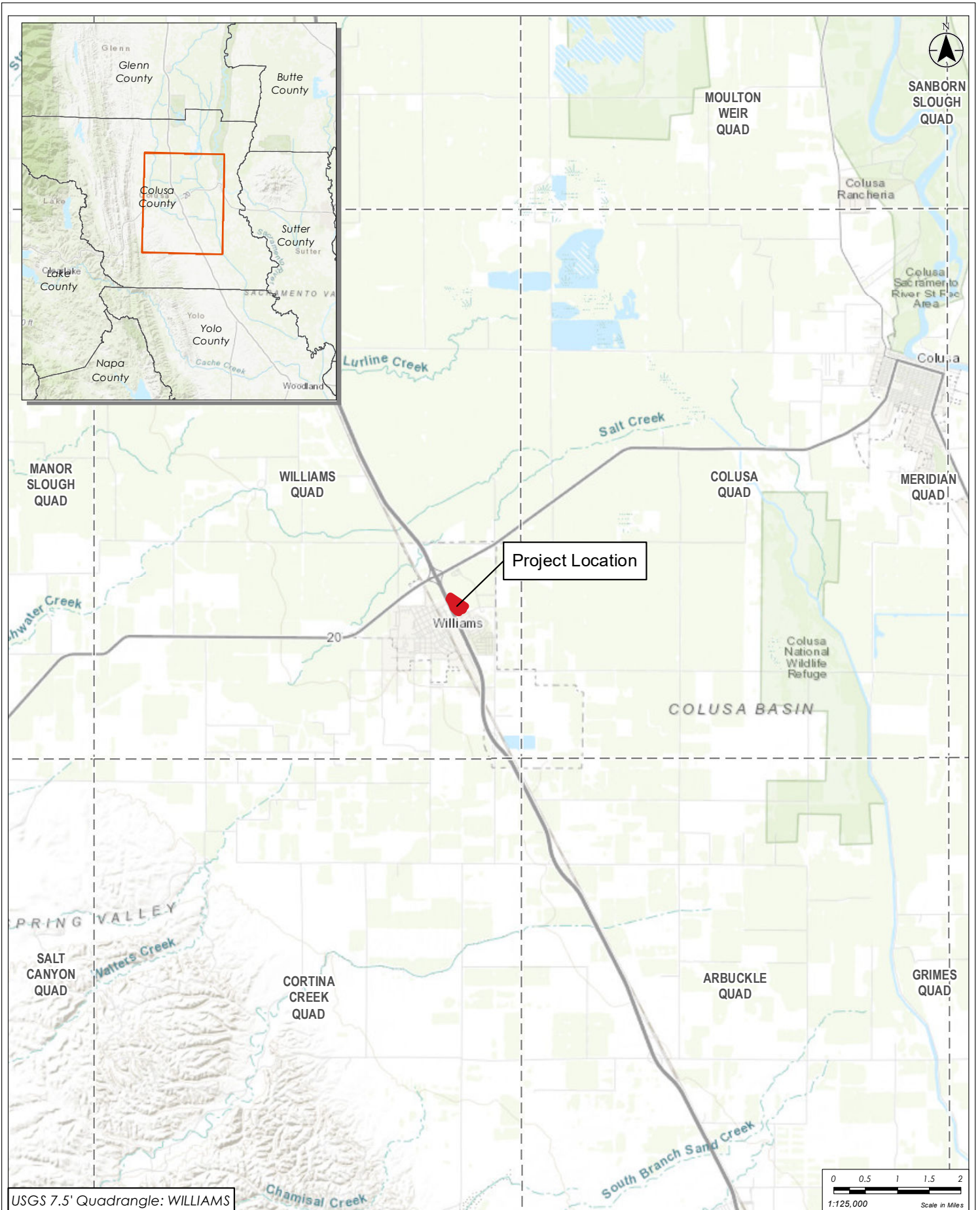
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## **Appendix A**

### **Project Overview Area Figures**



**GREG MATUZAK**  
 Environmental Consulting LLC  
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Valley Ranch Unit 4

Figure 1. Vicinity Map



Aerial Imagery: NAIP 8/15/2019

**GREG MATUZAK**  
 Environmental Consulting LLC  
 Nevada City, CA

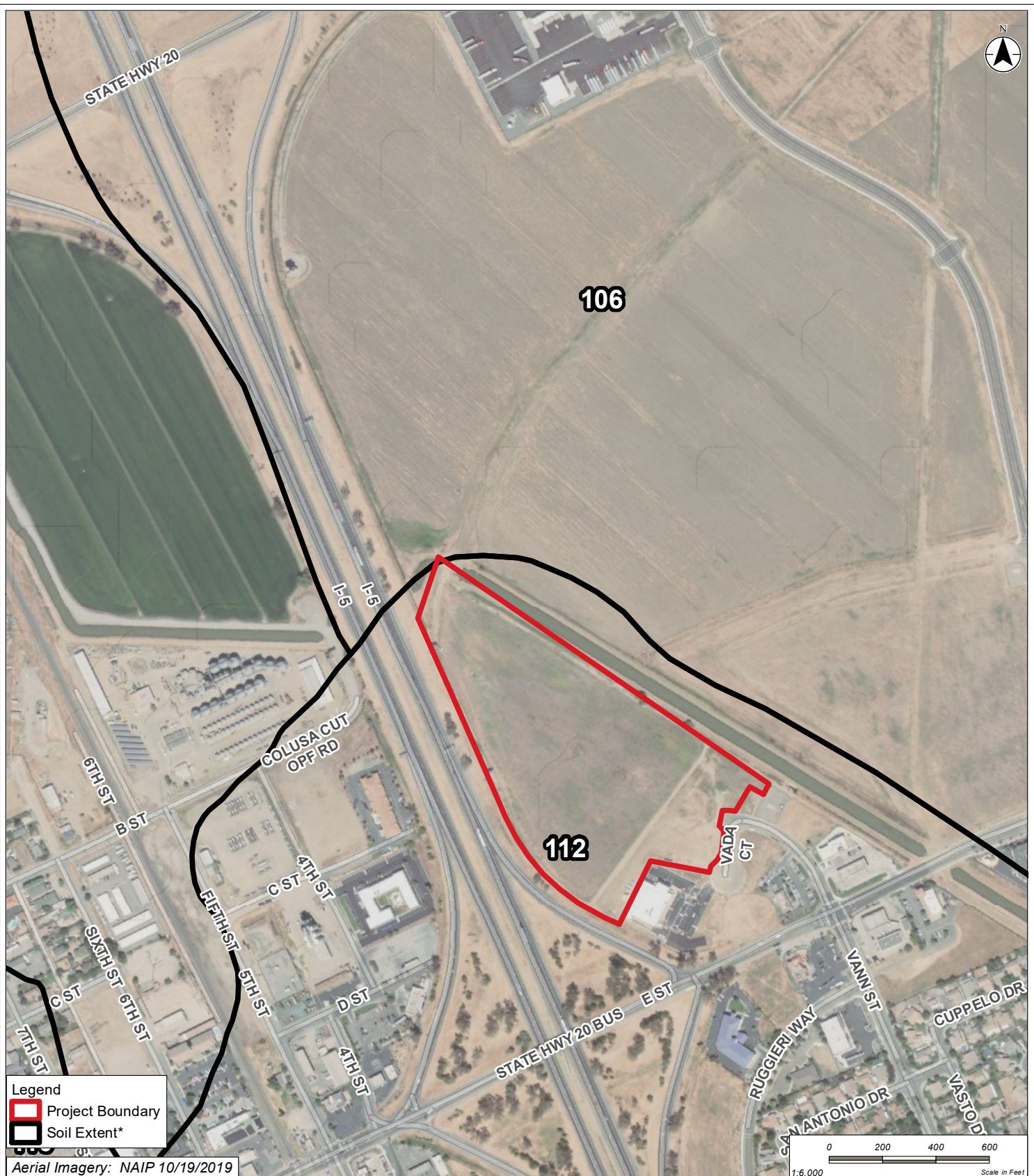
Valley Ranch Unit 4

**Figure 2. Project Location Map**

## **Appendix B**

### **USDA Soils Maps**





**Legend**

- Project Boundary
- Soil Extent\*

Aerial Imagery: NAIP 10/19/2019

**SOIL TYPE\***  
 106 - Willows silty clay, 0 to 1 percent slopes  
 112 - Westfan loam, 0 to 2 percent slopes

\* Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. Accessed 11/11/2020

**GREG MATUZAK**  
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 Nevada City, CA

Valley Ranch Unit 4

**Figure 4. Soils Map**

## **Appendix C**

### **National Wetland Inventory (NWI) Maps**

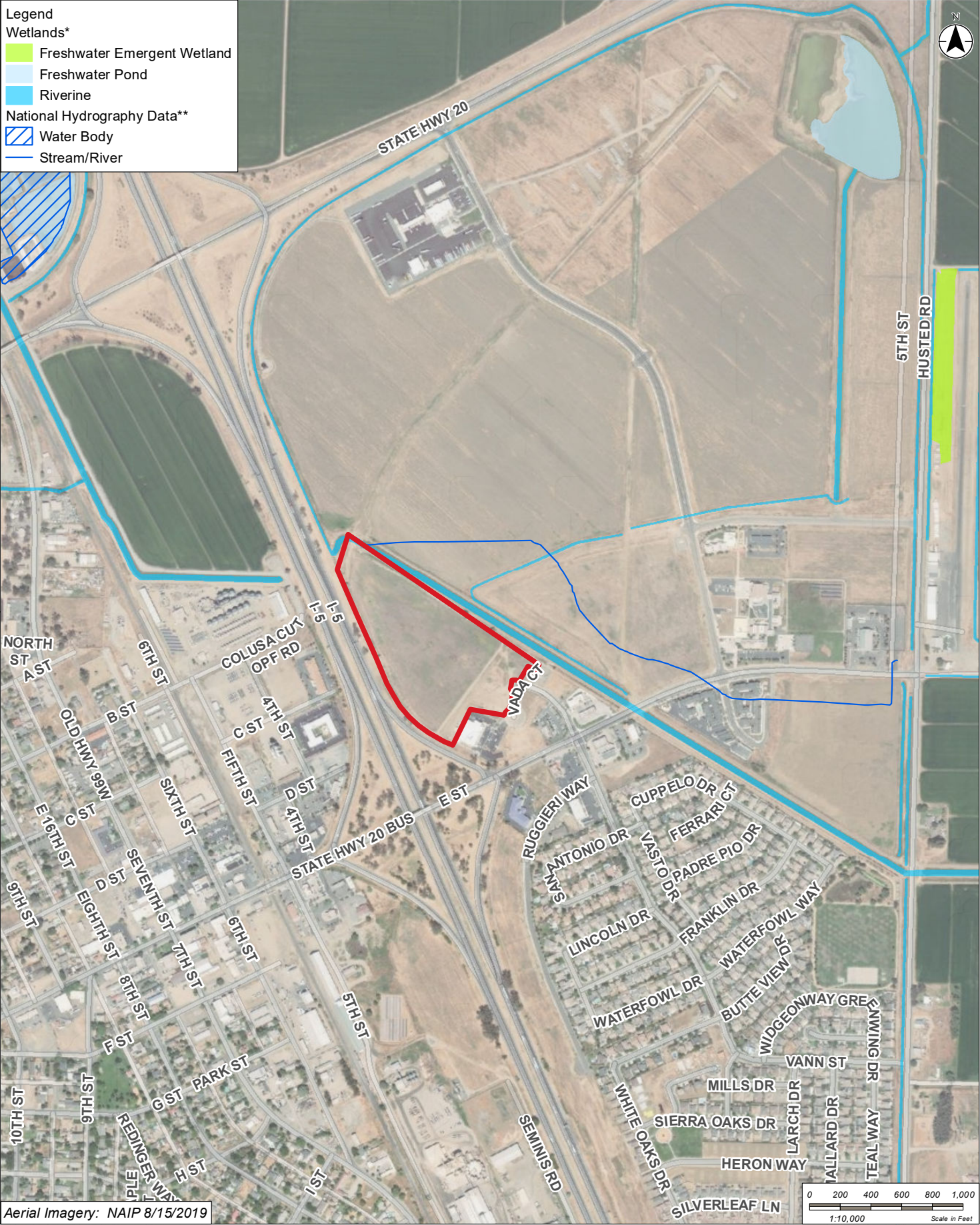
**Legend**

**Wetlands\***

- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine

**National Hydrography Data\*\***

- Water Body
- Stream/River



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Valley Ranch Unit 4

**Figure 5. Wetlands and Water Features Map**

\* Data downloaded from <https://www.fws.gov/wetlands/Data/Data-Download.html> 3/6/2019  
 \*\* National Hydrography Dataset (NHD) downloaded from <http://nhd.usgs.gov> March, 2019  
 Prepared: Melissa Nugent 4/29/2021 E:\2020\_GIS\_Matuzak\20210429\_ColusaCounty\_ValleyRanchUnit4.mxd\Fig5\_NWI-NHD\_ColusaCounty\_ValleyRanchUnit4.mxd

## **Appendix D**

### **Plants Observed During Site Surveys**

Scientific Name	Common Name	Origin	Form	Rarity Status	Wetland Status (WMVC 2014)	CAL-IPC Status
<i>Avena sp.</i>	Wild oats	non-native (invasive)	annual grass	-	FACU	Limited
<i>Brodiaea minor</i>	Low brodiaea	native	perennial herb	-	-	-
<i>Bromus hordeaceus</i>	Soft chess	non-native (invasive)	annual grass	-	FACU	Limited
<i>Bromus madritensis</i>	Foxtail chess, foxtail brome	non-native	annual grass	-	FACU	-
<i>Bromus tectorum</i>	Downy chess	non-native (invasive)	annual grass	-	-	High
<i>Centaurea solstitialis</i>	Yellow starthistle	non-native (invasive)	annual herb	-	-	High
<i>Cirsium vulgare</i>	Bullthistle	non-native (invasive)	perennial herb	-	FACU	Moderate
<i>Dactylis glomerata</i>	Orchardgrass	non-native (invasive)	perennial grass	-	FACU	Limited
<i>Danthonia californica</i>	California oatgrass	native	perennial grass	-	FAC	-
<i>Daucus carota</i>	Carrot	non-native (invasive)	perennial herb	-	FACU	-
<i>Elymus caput-medusae</i>	Medusa head	non-native	annual grass	-	-	-
<i>Elymus hispidus</i>	Intermediate wheatgrass	non-native	perennial grass	-	-	-
<i>Eriophyllum lanatum</i>	Wooly sunflower	native	perennial herb	-	-	-
<i>Erodium cicutarium</i>	Coastal heron's bill	non-native (invasive)	annual herb	-	-	Limited
<i>Iris sp.</i>	-	-	-	-	-	-
<i>Lathyrus latifolius</i>	Sweet pea	non-native	perennial herb	-	-	-
<i>Lepidium campestre</i>	Field pepper grass	non-native	annual, perennial herb	-	-	-
<i>Muhlenbergia rigens</i>	Deergrass	native	perennial grass	-	UPL	-
<i>Rubus armeniacus</i>	Himalayan blackberry	non-native (invasive)	shrub	-	FACU	High
<i>Rumex crispus</i>	Curly dock	non-native (invasive)	perennial herb	-	FAC	Limited
<i>Salix sp.</i>	Willow sp.	native	tree	-	FACW	-
<i>Taraxacum officinale</i>	Red seeded dandelion	non-native (invasive)	perennial herb	-	FACU	-
<i>Typha sp.</i>	Cattail	native	perennial herb	-	OBL	-
<i>Vinca major</i>	Vinca	non-native (invasive)	perennial herb	-	-	Moderate

## **Appendix E**

### **Photo Log**

**Photos of the May 7<sup>th</sup>, 2021 Field Surveys of the Project Area**



**Photo 1: Southern entrance into the Project area off of Vann Street. Project area within area to the right in the photo.**



**Photo 2: Looking west within the eastern section of the Project area along Vann Street. Project area within large open area to the right of Grocery Outlet.**



**Photo 3: Looking north from the southeastern section of the Project area next to Grocery Outlet with the entrance to the right off of Vann Street.**



**Photo 4: Looking south along the western edge of the Project area with Interstate 5 to the right and the Project area to the left in the photo.**





**Photo 5: Looking east from the northwestern section of the Project area. The GCID Irrigation Canal runs along the northern border of the Project area.**



**Photo 6: Looking north from the southern section of the Project area. The open agricultural field is dominated by non-native annual grassland species and is highly disturbed. Large trees along the GCID Irrigation Canal are willow trees.**



**Photo 7: Looking north along the western edge of the Project area with Interstate 5 to the left and the Project area to the right in the photo.**



**Photo 8: Looking southwest from the northeastern section of the Project area. The open agricultural field to the right is dominated by non-native annual grassland species.**

## **Appendix F**

### **Species Table for Special-Status Plant and Wildlife Species**

The following table identifies the special-status plant and wildlife species that could occur in the *project region*. Based on a review of the CNDDDB (2021), the USFWS and CNPS special-status species lists and other technical reports, **14** special-status plants and **21** special status wildlife species have the potential to occur in the project region.

**Special-Status Plant Species That Are Known to Occur or Have Potential in the Region around the Project Area  
(CNDDDB/USFWS/CNPS, 2021)**

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa l	State	CNP S				
<b>Plants</b>							
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	-	-	1b.2	3 - 500 meters	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland	Mar-Jun	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Astragalus rattanii</i> <i>var. jepsonianus</i> Jepson's milk-vetch	-	-	1b.2	320 - 700 meters	Valley and foothill grassland/often serpentine. Meadows. Subalkaline flats on overflow land in the Central Valley; usually seen in dry adobe soil.	Apr-Jun	Low. Limited undisturbed or otherwise suitable habitat in the project area. Last known registered sighting was 1926 approximately 4 miles from the project site; however, this area has since been converted to agricultural land and the population is presumed extant (CNDDDB, 2021). Project site was surveyed for rare plants and no specimens were observed.
<i>Astragalus tener var.</i> <i>ferrisiae</i> Ferris's milk vetch	-	-	1b	5 - 75 meters	Meadows and seeps (vernally mesic), Valley and foothill grassland (subalkaline flats)	Apr-May	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa I	State	CNP S				
<i>Atriplex depressa</i> Brittlescale	-	-	1b	1 - 320 meters	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland. Usually associated with alkali scalds or alkali clay in meadows or annual grassland. Rarely associate with riparian, marshes or vernal pools.	May-Oct	Low. The project site does not contain suitable alkali habitat. Nearest registered specimen is in the Colusa National Wildlife Refuge in alkali soils with salt crusts. Project site was surveyed for rare plants and no specimens were observed.
<i>Atriplex joaquiniana</i> San Joaquin spearscale	-	-	1b	1 - 835 meters	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland/alkaline. Most often found in seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> .	Apr-Oct	Low. The site is not considered a chenopod scrub or sink scrub and the soils are clayey but lack salt stains of an alkali flat. Nearest known specimen is located in Colusa NWR. Project site was surveyed for rare plants and no specimens were observed.
<i>Castilleja rubicundula ssp. rubicundula</i> pink creamsacs	-	-	1b.2	20 - 900 meters	Chaparral (openings), Cismontane woodland, Meadows and seeps, Valley and foothill grassland/serpentinite	Apr-Jun	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Cordylanthus palmatus</i> Palmate-bracted bird's beak	E	E	1b	5 - 155 meters	Chenopod scrub, Valley and foothill grassland/alkaline	May-Oct	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Delphinium recurvatum</i> Recurved larkspur	-	-	1b	3 - 750 meters	Chenopod scrub, Cismontane woodland, Valley and foothill grassland/alkaline	Mar-Jun	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa l	State	CNP S				
<i>Erodium macrophyllum</i> Round-leaved filaree	-	-	2	15 - 1200 meters	Cismontane woodland, Valley and foothill grassland/clay	Mar-May	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Fritillaria pluriflora</i> adobe-lily	-	-	1b.2	60 - 705 meters	Chaparral, Cismontane woodland, Valley and foothill grassland/often adobe	Feb-Apr	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Lasthenia glabrata</i> <i>ssp. Coulteri</i> Coulter's Goldfields	-	-	1b	1 - 1220 meters	Marshes and swamps (coastal salt), Playas, Vernal pools	Feb-Jun	Low. Limited suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Layia septentrionalis</i> Colusa layia	-	-	1b	100 - 1095 meters	Chaparral, Cismontane woodland, Valley and foothill grassland/sandy, serpentinite	Apr-May	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Navarretia</i> <i>leucocephala ssp.</i> <i>Bakeri</i> Baker's navarretia	-	-	1b	5 - 1740 meters	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools/mesic	Apr-Jul	Low. Limited undisturbed or otherwise suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.
<i>Streptanthus breweri</i> <i>var. Hesperidis</i> green jewel-flower	-	-	1b.2	130 - 760 meters	Chaparral (openings), Cismontane woodland/serpentinite, rocky	May-Jul	Low. Limited suitable habitat in the project area. Project site was surveyed for rare plants and no specimens were observed.

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa l	State	CNP S				
<b>Invertebrates</b>							
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	E		n/a	Northern, central, and portions of southern California	Ephemeral freshwater habitats, such as vernal pools and swales	Nov-Apr	Nil
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	T		n/a	Populations located in an area extending from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County, and along the central coast range from northern Solano County to Pinnacles in San Benito County (Eng et al. 1990; M. Fugate, pers. comm., 1991; Sugnet & Associates 1993b).	Ephemeral freshwater habitats, such as vernal pools and swales	Dec-May	Nil
<i>Cincindela hirticollis abrupta</i> Sacramento Valley tiger beetle	-	-	n/a	-	-	-	Nil
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	T	-	n/a	Central California Valleys	Riverside freshwater habitats	-	Nil
<i>Lepidurus packardi</i> Vernal pool tadpole shrimp (critical habitat)	T	-	n/a	Northern Central Valley of California, and seasonal vernal pools throughout California	Vernal pools and swales containing clear to highly turbid waters	Winter and spring lasting until June	Nil

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa I	State	CNP S				
<b>Amphibians</b>							
<i>Ambystoma californiense</i> California tiger salamander	T			3 meters to 1,054 meters	Annual grassland, grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats	Year round, late spring early summer	Nil- Site lacks suitable habitat.
<i>Rana aurora draytonii</i> Red-legged frog	T	SC		Isolated populations have been documents in the Sierra Nevada, northern Coast, and northern Traverse Ranges. They are still locally abundant within portions of the San Francisco Bay area (including Marin county) and the central coast.	Breeds in slow moving streams and ponds, and marches with emergent vegetation and an absence or low occurrence of predators	Year round depending on stage of life	Nil- Site lacks suitable habitat.
<b>Reptiles</b>							
<i>Thamnophis gigas</i> Giant garter snake	T	T	n/a	Sacramento and San Joaquin valleys	Marshes and sloughs	Mid-March until October	Nil- Site lacks suitable habitat.
<b>Fish</b>							
<i>Hypomesus transpacificus</i> Delta smelt	T		n/a	Sacramento Delta	Pelagic estuarine waters	Year round	Nil - Site lacks suitable habitat.
<i>Oncorhynchus mykiss</i> Central Valley Steelhead (&CH)	T		n/a	Sacramento Valley	Bay-Delta estuary	Year round	Nil- Site lacks suitable habitat.



Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa I	State	CNP S				
<i>Oncorhynchus tshawytscha</i> Spring-run chinook salmon (& CH)	T		n/a	Arctic, Northwest to Northeast Pacific	Freshwater streams, estuaries, and the open ocean	Year round depending on stage of life	Nil- Site lacks suitable habitat.
<i>Oncorhynchus tshawytscha</i> Winter-run chinook salmon (& CH)	E		n/a	Arctic, Northwest to Northeast Pacific	Freshwater streams, estuaries, and the open ocean	Year round depending on stage of life	Nil - Site lacks suitable habitat.
<i>Oncorhynchus tshawytscha</i> Fall/late-fall chinook salmon (& CH)	C		n/a	Arctic, Northwest to Northeast Pacific	Freshwater streams, estuaries, and the open ocean	Year round depending on stage of life	Nil - Site lacks suitable habitat.
<b>Birds</b>							
<i>Agelaius tricolor</i> Tricolor blackbird	-	SC	n/a	Largely endemic to California. Most numerous in Central Valley and Vicinity	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Nesting colonies highly colonial with numbers into the 100s of thousands.	Winter In project region	Low. No suitable habitat (cattail-dominated wetlands) at the project site. The nearest colonies have been located along Husted Road to the north of the project area. Some may forage along creek corridors, not affected by the project.
<i>Athene cunicularia</i> Burrowing owl	-	SC	n/a	Off coast islands and in open dry grassland habitats	Burrow sites are located in open dry, annual or perennial grasslands, deserts and scrublands. Subterranean nesters dependant on burrowing mammals, most notably the California ground squirrel.	-	Low. The nearest known burrowing owl site is located 5 miles southwest of the project. The project site does not contain suitable habitat for this species.

Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federal	State	CNP S				
<i>Buteo swainsoni</i> Swainson's hawk	-	T	n/a	Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savanna. Requires adjacent suitable foraging areas such as grasslands or alfalfa/grain fields supporting rodent populations.		Low. No suitable trees for breeding. The nearest known nest is located approximately 2 miles southeast of the project site along Hwy 5. Nest and fledged young most recently reported in 2000. No swainson's hawks were observed during site visits.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed Cuckoo	C	E	n/a	Valley foothill and desert riparian habitats in scattered locations in California	Riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps.	Summer	Low - Site lacks suitable habitat.
<i>Plegadis chihi</i> White-faced ibis	-	SC	n/a	No longer breeds regularly anywhere in California, although more widespread during migration	Prefers to nest in dense marsh vegetation near foraging areas in shallow water or muddy fields.		Low - Site lacks suitable habitat.
<i>Haliaeetus leucocephalus</i> Bald eagle	T		n/a	Northern California	Requires large, old-growth trees or snags in remote, mixed stands near water		Low - Site lacks suitable habitat.

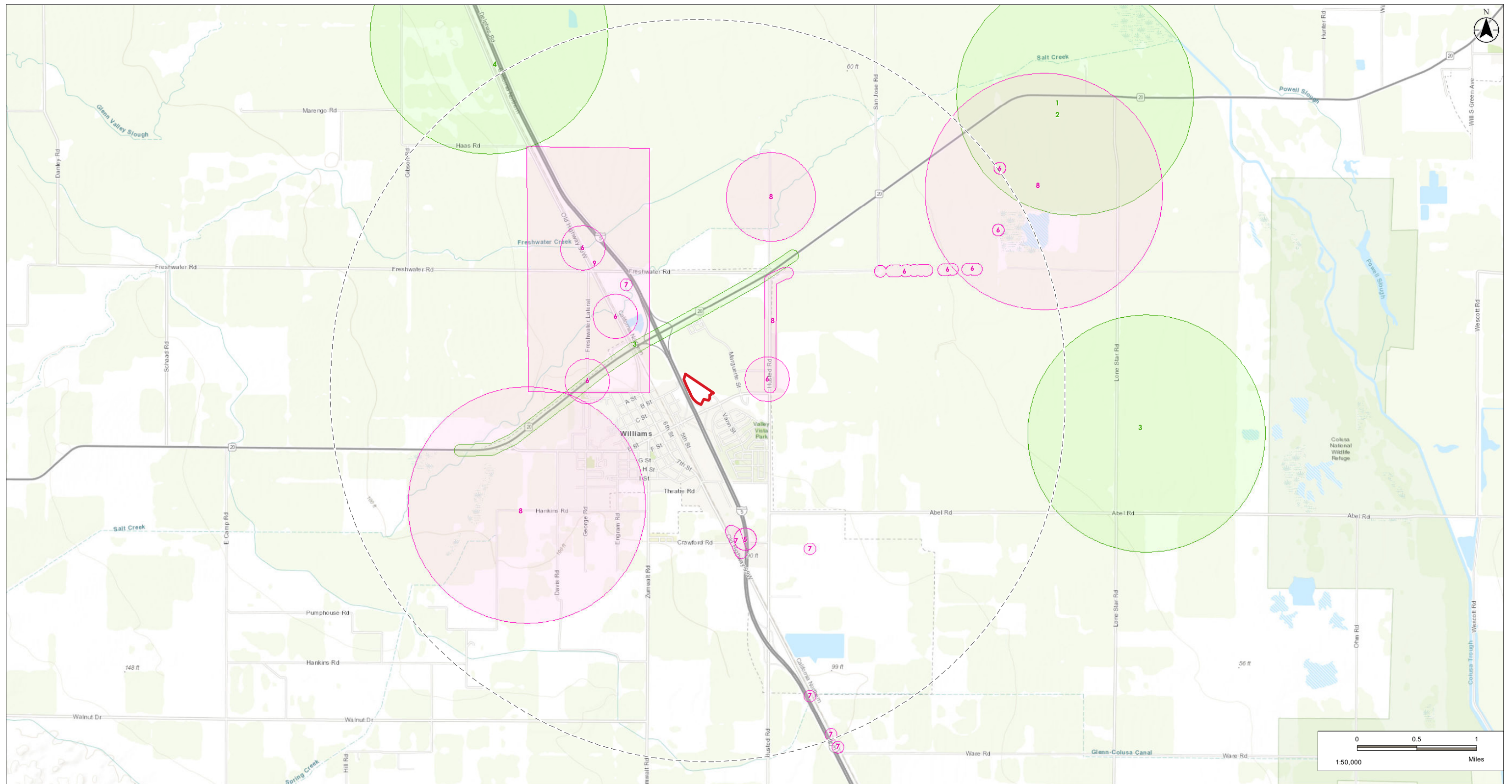
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Common Name Scientific Name	Legal Status <sup>a</sup>			Geographic Distribution/Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence
	Federa l	State	CNP S				
<i>Riparia riparia</i> Bank swallow	-	T	n/a	California, breeding in Northern Central Valley	Requires banks vertical and cliffs with fine- textured or sandy soils near streams, rivers, ponds, lakes, and the ocean for nesting. Feeds primarily over grassland, shrubland, savannah, and open riparian areas during breeding season and over grassland, brushland, wetlands, and cropland during migration.	March-August	Nil - Site lacks suitable habitat.
<i>Strix occidentalis caurina</i> Northern spotted owl	T		n/a	Northern California	Dense, old-growth, multi- layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 m (0-7600 ft)		Nil - Site lacks suitable habitat.

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## Appendix G

### CNDDDB 3-Mile Buffer Figure



**Legend**

- Project Location
- 3 mile Buffer on Project
- CNDDB Plant Occurrence\* (none)
- CNDDB Wildlife Occurrence\*
- Critical Plant Habitat\*\*
- Critical Wildlife Habitat\*\* (none)

**CNDDB OCCURRENCES\***

- Plant Species**
1. Coulter's goldfields
  2. Ferris' milk-vetch
  3. San Joaquin spearscale
  4. Water star-grass

**Wildlife Species**

5. American badger
6. Giant gartersnake
7. Swainson's hawk
8. Tricolored blackbird
9. Vernal pool tadpole shrimp

**CRITICAL HABITAT OCCURRENCES\*\***

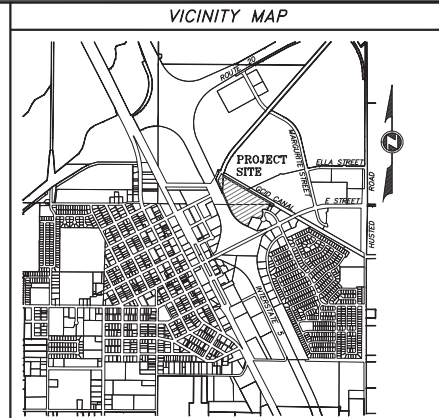
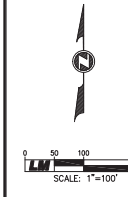
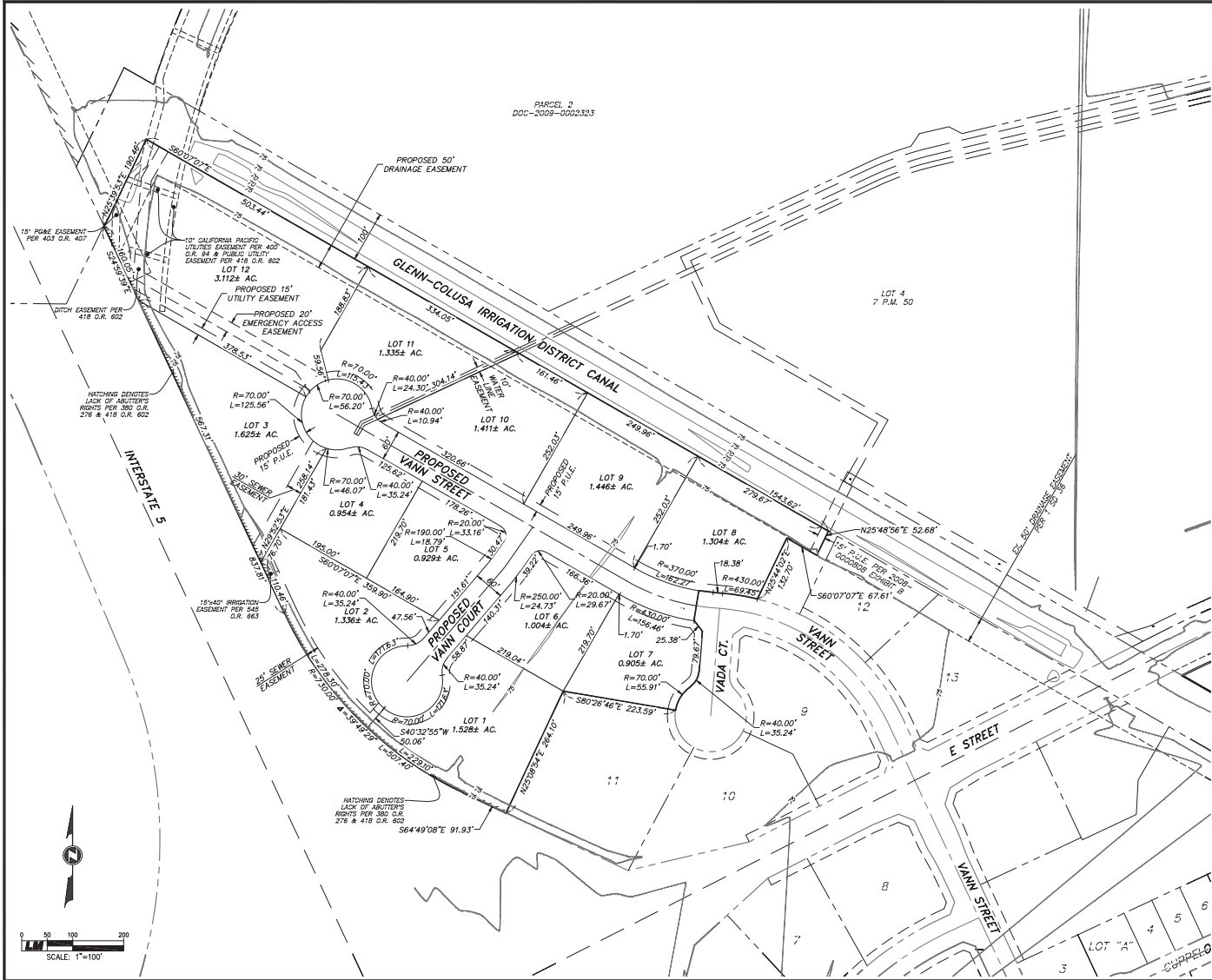
- Plant Habitat**  
None
- Wildlife Habitat**  
None

\* California Natural Diversity Database (CNDDDB) Data: Downloaded January 5, 2021, from the California Department of Fish and Wildlife  
 \*\* United States Fish and Wildlife Service (USFWS) Critical Habitat Data: Downloaded February 2020 from: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

Figure 3. CNDDB and Critical Habitat Map

## **Appendix H**

### **Site Plan**



**NOTES**

OWNER/SUBDIVIDER: V & R VALLEY RANCH, LLC  
365 RUGGERI WAY  
WILLIAMS, CA 95987

ENGINEER/SURVEYOR: LAUGENOUR AND MEIKLE  
CIVIL ENGINEERS  
608 COURT STREET  
WOODLAND, CA 95695  
PHONE: (530) 662-1755

ASSESSOR'S PARCEL NUMBERS: 005-270-026 & 005-440-028

EXISTING ZONING: C - COMMERCIAL  
BP - BUSINESS PARK

PROPOSED ZONING: C - COMMERCIAL (LOTS 7& 8)  
BP - BUSINESS PARK (LOTS 1-6, 9-12)

EXISTING USE: VACANT

PROPOSED USE: LIGHT INDUSTRIAL

PROPOSED IMPROVEMENTS: CITY OF WILLIAMS STANDARDS

WATER SERVICE: CITY OF WILLIAMS

SEWER SERVICE: CITY OF WILLIAMS

STORM DRAINAGE: CITY OF WILLIAMS

FIRE PROTECTION: CITY OF WILLIAMS

ELECTRICAL SERVICE: PG&E

GAS SERVICE: PG&E

TELEPHONE SERVICE: FRONTIER COMMUNICATIONS

CABLE TV: COMCAST

SCHOOL DISTRICT: WILLIAMS UNIFIED SCHOOL DISTRICT

FLOOD DESIGNATION: ZONE AH (ELEVATION 77 FEET) PER FEMA FIRM NO. 06011005177, EFFECTIVE DATE 05/15/2003

LOCATION: PORTION OF SECTIONS 12 & 13, TOWNSHIP 15 NORTH, RANGE 3 WEST, M.D.M.

ACREAGE: 19.007± ACRES

**SETBACK REQUIREMENTS**

USE	FRONT	SIDE (MIN./TOTAL)	REAR	MAX. BUILDING HEIGHT
OFFICE	15'	15'/30'	30'	55'
INDUSTRIAL/WAREHOUSE	15'	15'/30'	30'	50'
SMOKE STACK/GRAIN ELEVATORS	15'	10'/20'	10'	90'
ALL OTHER USES	15'	10'/20'	10'	50'

DESIGNED BY	BBB			
DRAWN BY	JB			
CHECKED BY	BBB			
REV.	DATE	DESCRIPTION	BY	APP'D.

**LAUGENOUR AND MEIKLE**  
CIVIL ENGINEERING - LAND SURVEYING - PLANNING  
608 COURT STREET, WOODLAND, CALIFORNIA 95695 PHONE: (530) 662-1755  
P.O. BOX 828, WOODLAND, CALIFORNIA 95778 FAX: (530) 662-4602

BY: BRYAN P. BONINO  
DATE: 12/19/19 P.E. 41804



TENTATIVE SUBDIVISION MAP FOR VALLEY RANCH UNIT 4  
CITY OF WILLIAMS CALIFORNIA  
TITLE SHEET

SCALE 1"=100'  
SHEET 1 OF 3  
DATE: 02-05-2021  
JOB NO. 3201-3-1

X:\Vanno Projects\3201-3-1\Vanno\3201-3-1-TM1.dwg

## **Appendix I**

### **CNDDDB and USFWS iPac Reports**





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** E0ndx<span style='color:Red'> IS </span>(104609<span style='color:Red'> OR </span>104660<span style='color:Red'> OR </span>104661<span style='color:Red'> OR </span>104662<span style='color:Red'> OR </span>14659<span style='color:Red'> OR </span>2362<span style='color:Red'> OR </span>2363<span style='color:Red'> OR </span>24799<span style='color:Red'> OR </span>27575<span style='color:Red'> OR </span>30646<span style='color:Red'> OR </span>43804<span style='color:Red'> OR </span>43807<span style='color:Red'> OR </span>64750<span style='color:Red'> OR </span>67579<span style='color:Red'> OR </span>7558<span style='color:Red'> OR </span>89254<span style='color:Red'> OR </span>89266<span style='color:Red'> OR </span>89267<span style='color:Red'> OR </span>90374<span style='color:Red'> OR </span>92023<span style='color:Red'> OR </span>95617<span style='color:Red'> OR </span>97679<span style='color:Red'> OR </span>97696)

<b>Map Index Number:</b> 43804	<b>EO Index:</b> 43804
<b>Key Quad:</b> Arbutle (3912211)	<b>Element Code:</b> ABNKC19070
<b>Occurrence Number:</b> 922	<b>Occurrence Last Updated:</b> 2013-05-02

<b>Scientific Name:</b> <i>Buteo swainsoni</i>	<b>Common Name:</b> Swainson's hawk
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b>
<b>CNDDDB Element Ranks:</b>	BLM_S-Sensitive
<b>Global:</b> G5	IUCN_LC-Least Concern
<b>State:</b> S3	USFWS_BCC-Birds of Conservation Concern

<b>General Habitat:</b> BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.	<b>Micro Habitat:</b> REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.
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<b>Last Date Observed:</b> 2006-05-14	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2006-08-06	<b>Occurrence Rank:</b> Fair
<b>Owner/Manager:</b> CALTRANS	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
EAST SIDE OF ROAD 99W (I-5 N FRONTAGE) JUST NORTH OF WARE ROAD, ABOUT 2.3 MILES SE OF WILLIAMS.

**Detailed Location:**  
MAPPED TO UTMS GIVEN ON FIELD SURVEY FORMS FOR RESSEGUIE'S ARBUCKLE 1 (NORTH, ACTIVE 2000) & ARBUCKLE 7 (SOUTH, ACTIVE 2006) SITES.

**Ecological:**  
NEST TREES IN ROW OF DECIDUOUS TREES SHOWING SIGNS OF PAST/RECENT TRIMMING. 2000 NEST AT 90% HEIGHT ON SOUTH SIDE OF A DECIDUOUS TREE. 2006 NEST NEAR TOP OF FIRST TREE NORTH OF WARE ROAD. SURVEYOR REPORTED REPEATED MOBBING BY CROWS.

**Threats:**  
THREATENED BY TREE TRIMMING.

**General:**  
NESTING ACTIVITY OBSERVED BETWEEN 20 APR-8 AUG 2000; NO YOUNG FLEDGED. NESTING PAIR OBS 21 APR-14 MAY; NEST LATER ABANDONED.

<b>PLSS:</b> T15N, R02W, Sec. 30, SE (M)	<b>Accuracy:</b> specific area	<b>Area (acres):</b> 10
<b>UTM:</b> Zone-10 N4330065 E575914	<b>Latitude/Longitude:</b> 39.11644 / -122.12187	<b>Elevation (feet):</b> 95

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Arbutle (3912211)
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**Sources:**  
RES00F0081 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-08-08  
RES06F0003 RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2006-08-06



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 43807	<b>EO Index:</b> 43807
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ABNKC19070
<b>Occurrence Number:</b> 923	<b>Occurrence Last Updated:</b> 2013-02-25

<b>Scientific Name:</b> <i>Buteo swainsoni</i>	<b>Common Name:</b> Swainson's hawk
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b> BLM_S-Sensitive
<b>CNDDDB Element Ranks:</b>	IUCN_LC-Least Concern
<b>Global:</b> G5	USFWS_BCC-Birds of Conservation Concern
<b>State:</b> S3	

<b>General Habitat:</b> BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.	<b>Micro Habitat:</b> REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.
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<b>Last Date Observed:</b> 2009-06-20	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2009-06-20	<b>Occurrence Rank:</b> Good
<b>Owner/Manager:</b> PVT	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ON EAST SIDE OF HWY 99W AT CRAWFORD ROAD, WEST SIDE OF I-5, SE OF WILLIAMS.

**Detailed Location:**  
MAPPED TO UTMS GIVEN ON FIELD SURVEY FORMS FOR RESSEGUIE'S X SITE (2000), COORDINATES FROM CDFW NEST RECORDS (2002, 2003), AND POINT FROM CDFW SHAPEFILE OF NESTS RECORDED IN 2009. 2003 NEST SOUTH OF CRAWFORD RD, OTHER NESTS TO NORTH.

**Ecological:**  
2000 NEST TREE WAS A COTTONWOOD. 2002 NEST IN SAME OR ADJACENT COTTONWOOD. 2003 NEST IN 60' VALLEY OAK JUST N OF I-5 OVERPASS, NEAR DIRT PARKING LOT. RED-TAILED HAWKS ALSO OBSERVED. 2009 NEST IN 40' WILLOW SURROUNDED BY FALLOW LAND.

**Threats:**  
**General:**  
2 YOUNG FLEDGED IN 2000. 2 YOUNG PRODUCED IN 2002, PRESUMED FLEDGED. 2 FLEDGED IN 2003. NEST WITH YOUNG OBSERVED ON 20 JUN 2009, FLEDGING SUCCESS UNKNOWN.

<b>PLSS:</b> T15N, R03W, Sec. 24, NE (M)	<b>Accuracy:</b> specific area	<b>Area (acres):</b> 19
<b>UTM:</b> Zone-10 N4332958 E574484	<b>Latitude/Longitude:</b> 39.14263 / -122.13809	<b>Elevation (feet):</b> 90

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**

DFG05U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX
DFG09D0001	CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX
RES00F0114	RESSEGUIE, L. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-08-08



**Occurrence Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Map Index Number:</b> 88242	<b>EO Index:</b> 89254
<b>Key Quad:</b> Cortina Creek (3912212)	<b>Element Code:</b> ABNKC19070
<b>Occurrence Number:</b> 2081	<b>Occurrence Last Updated:</b> 2013-02-19

<b>Scientific Name:</b> <i>Buteo swainsoni</i>	<b>Common Name:</b> Swainson's hawk
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b> BLM_S-Sensitive
<b>CNDDB Element Ranks:</b>	IUCN_LC-Least Concern
<b>Global:</b> G5	USFWS_BCC-Birds of Conservation Concern
<b>State:</b> S3	

<b>General Habitat:</b>	<b>Micro Habitat:</b>
BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.	REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

<b>Last Date Observed:</b> 2009-05-22	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2009-05-22	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
E SIDE OF I-5 JUST N OF GLENN-COLUSA CANAL CROSSING ABOUT 0.5 MI SE OF HUSTED RD OVERPASS & 0.6 MI NNW OF WARE RD.

**Detailed Location:**  
MAPPED TO POINT FROM CDFW SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009.

**Ecological:**  
NEST IN 45' TREE CODED AS "OTHER EXOTIC" (NOT WALNUT OR EUCALYPTUS).

**Threats:**  
**General:**  
NEST WITH YOUNG OBSERVED ON 22 MAY 2009; FLEDGING SUCCESS UNKNOWN.

<b>PLSS:</b> T15N, R02W, Sec. 30, SW (M)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4330759 E575525	<b>Latitude/Longitude:</b> 39.12272 / -122.12628	<b>Elevation (feet):</b> 100

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Arbuckle (3912211), Cortina Creek (3912212)

**Sources:**  
DFG09D0001 CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Map Index Number:** 88254

**EO Index:** 89266

**Key Quad:** Williams (3912222)

**Element Code:** ABNKC19070

**Occurrence Number:** 2093

**Occurrence Last Updated:** 2013-02-20

**Scientific Name:** *Buteo swainsoni*

**Common Name:** Swainson's hawk

**Listing Status:** **Federal:** None

**Rare Plant Rank:**

**State:** Threatened

**Other Lists:** BLM\_S-Sensitive  
IUCN\_LC-Least Concern  
USFWS\_BCC-Birds of Conservation Concern

**CNDDB Element Ranks:** **Global:** G5

**State:** S3

**General Habitat:**

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

**Micro Habitat:**

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

**Last Date Observed:** 2009-05-15

**Occurrence Type:** Natural/Native occurrence

**Last Survey Date:** 2009-05-15

**Occurrence Rank:** Unknown

**Owner/Manager:** UNKNOWN

**Trend:** Unknown

**Presence:** Presumed Extant

**Location:**

WEST SIDE OF I-5 ABOUT 0.1 MI S OF FRESHWATER RD OVERPASS AND 0.5 MI NNW OF HWY 20 INTERCHANGE, N OF WILLIAMS.

**Detailed Location:**

MAPPED TO COORDINATES FOM CDFW NEST RECORDS FROM 2000-2004 AND POINT FROM CDFW SHAPEFILE OF NEST RECORDS FROM 2009.

**Ecological:**

2004 NEST IN 25' WILLOW SURROUNDED BY FALLOW LAND. 2009 NEST IN 60' COTTONWOOD SURROUNDED BY FALLOW LAND.

**Threats:**

**General:**

NEST MONITORED IN 2004 PRODUCED 2 YOUNG, BOTH PRESUMED FLEDGED. NEST WITH YOUNG OBSERVED ON 15 MAY 2009, FLEDGING SUCCESS UNKNOWN.

**PLSS:** T15N, R03W, Sec. 11, NE (M)

**Accuracy:** 80 meters

**Area (acres):** 0

**UTM:** Zone-10 N4336280 E572986

**Latitude/Longitude:** 39.17269 / -122.15506

**Elevation (feet):** 70

**County Summary:**

**Quad Summary:**

Colusa

Williams (3912222)

**Sources:**

DFG05U0001 CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX

DFG09D0001 CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - SHAPEFILE OF SWAINSON'S HAWK NEST RECORDS FROM 2009. 2009-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 88255	<b>EO Index:</b> 89267
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ABNKC19070
<b>Occurrence Number:</b> 2094	<b>Occurrence Last Updated:</b> 2013-02-20

<b>Scientific Name:</b> <i>Buteo swainsoni</i>	<b>Common Name:</b> Swainson's hawk
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b> BLM_S-Sensitive
<b>CNDDB Element Ranks:</b>	IUCN_LC-Least Concern
<b>Global:</b> G5	USFWS_BCC-Birds of Conservation Concern
<b>State:</b> S3	

<b>General Habitat:</b> BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.	<b>Micro Habitat:</b> REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.
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<b>Last Date Observed:</b> 2003-07-21	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2003-07-21	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ABOUT 0.3 MILE E OF HUSTED RD AT CRAWFORD RD AND 1.6 MILES SE OF 7TH ST & E ST IN WILLIAMS.

**Detailed Location:**  
MAPPED TO COORDINATES FROM CDFW 2000-2004 NEST RECORDS.

**Ecological:**  
NEST IN 50' VALLEY OAK WITH FALLOW LAND TO THE EAST AND CROPLAND TO THE WEST.

**Threats:**  
**General:**  
NEST MONITORED APR-JUL 2003; 1 FLEDGED.

<b>PLSS:</b> T15N, R02W, Sec. 19, NW (M)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4332747 E575504	<b>Latitude/Longitude:</b> 39.14064 / -122.12631	<b>Elevation (feet):</b> 80

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Colusa (3912221), Williams (3912222)
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**Sources:**  
DFG05U0001 CALIFORNIA DEPARTMENT OF FISH & GAME - REGION 2 - ACCESS DATABASE & EXCEL TABLE OF SWAINSON'S HAWK NEST RECORDS FROM 2000-2004. 2005-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Map Index Number:** 09656

**EO Index:** 14659

**Key Quad:** Williams (3912222)

**Element Code:** ABPBXB0020

**Occurrence Number:** 1

**Occurrence Last Updated:** 2015-06-30

**Scientific Name:** *Agelaius tricolor*

**Common Name:** tricolored blackbird

**Listing Status:** **Federal:** None

**Rare Plant Rank:**

**State:** Threatened

**Other Lists:** BLM\_S-Sensitive

**CNDDDB Element Ranks:** **Global:** G1G2

**State:** S1S2

CDFW\_SSC-Species of Special Concern

IUCN\_EN-Endangered

NABCI\_RWL-Red Watch List

USFWS\_BCC-Birds of Conservation Concern

**General Habitat:**

HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro Habitat:**

REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

**Last Date Observed:** 1981-05-19

**Occurrence Type:** Natural/Native occurrence

**Last Survey Date:** 2014-04-19

**Occurrence Rank:** Unknown

**Owner/Manager:** PVT

**Trend:** Unknown

**Presence:** Presumed Extant

**Location:**

VICINITY OF HWY 20 & HUSTED RD INTERSECTION, 0.9 MI E OF I-5 & HWY 20 INTERSECTION, 1.3 MI NE OF WILLIAMS POST OFFICE.

**Detailed Location:**

MAPPED TO PROVIDED LOCATION DESCRIPTION OF "RICHMOND GUN CLUB, HWY. 20 & HAUSTED RD, T 15N, R 2/3W, SECTIONS 7/12." COULD NOT LOCATE "RICHMOND GUN CLUB" IN THE VICINITY. "HAUSTED RD" PRESUMED TO BE HUSTED RD.

**Ecological:**

1981 NESTS BUILT IN CATTAILS ALONG CANALS & CULVERTS. COLONY DATA STORED IN UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME "HUSTED ROAD AT HIGHWAY 20."

**Threats:**

POTENTIAL THREAT DUE TO HERBICIDE SPRAYING.

**General:**

COLONY OF 239 BIRDS OBSERVED ON 19 MAY 1981; NESTS ABANDONED WHEN CATTAILS STARTED DYING, POSSIBLY FROM HERBICIDE SPRAYING. 0 BIRDS OBSERVED ON 15 APR 2011 AND 19 APR 2014.

**PLSS:** T15N, R02W, Sec. 07 (M)

**Accuracy:** non-specific area

**Area (acres):** 72

**UTM:** Zone-10 N4335726 E574935

**Latitude/Longitude:** 39.16753 / -122.13257

**Elevation (feet):** 65

**County Summary:**

Colusa

**Quad Summary:**

Williams (3912222)

**Sources:**

- BEE91R0001 BEEDEY, E.C., S.D. SANDERS & D. BLOOM - BREEDING STATUS, DISTRIBUTION, AND HABITAT ASSOCIATIONS OF THE TRICOLORED BLACKBIRD (AGELAIUS TRICOLOR), 1850-1989. 1991-06-XX
- HOS86R0001 HOSEA, R.C. - A POPULATION CENSUS OF THE TRICOLORED BLACKBIRD, AGELAIUS TRICOLOR (AUDUBON), IN FOUR COUNTIES IN THE NORTHERN CENTRAL VALLEY OF CALIFORNIA. M.A. THESIS, CSU-SACRAMENTO. 1986-08-14
- TRI14D0001 TRICOLORED BLACKBIRD PORTAL - ICE (UNIVERSITY OF CALIFORNIA, DAVIS) - 1907-2014 TRICOLORED BLACKBIRD RECORDS FROM UC DAVIS TRICOLORED BLACKBIRD PORTAL, INFORMATION CENTER FOR THE ENVIRONMENT (ICE) 2014-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Map Index Number:** 09767  
**Key Quad:** Colusa (3912221)  
**Occurrence Number:** 2

**EO Index:** 24799  
**Element Code:** ABPBXB0020  
**Occurrence Last Updated:** 2015-06-29

**Scientific Name:** *Agelaius tricolor*

**Common Name:** tricolored blackbird

**Listing Status:** **Federal:** None  
**State:** Threatened  
**CNDDDB Element Ranks:** **Global:** G1G2  
**State:** S1S2

**Rare Plant Rank:**  
**Other Lists:** BLM\_S-Sensitive  
 CDFW\_SSC-Species of Special Concern  
 IUCN\_EN-Endangered  
 NABCI\_RWL-Red Watch List  
 USFWS\_BCC-Birds of Conservation Concern

**General Habitat:**

HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro Habitat:**

REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

**Last Date Observed:** 1981-05-19  
**Last Survey Date:** 1992-07-01  
**Owner/Manager:** PVT  
**Presence:** Extirpated

**Occurrence Type:** Natural/Native occurrence  
**Occurrence Rank:** None  
**Trend:** Decreasing

**Location:**

NEAR THE INTERSECTION OF HIGHWAY 20 AND LONE STAR ROAD, APPROXIMATELY 3 MILES SW OF COLUSA.

**Detailed Location:**

MAPPED GENERALLY TO PROVIDED LOCATION DESCRIPTIONS. 1932: "FOUR MILES NORTHEAST OF WILLIAMS." 1981: "HWY 20 & LONE STAR RD." EXACT LOCATION UNKNOWN.

**Ecological:**

IN 1932, NESTING IN CATTAIL MARSH. IN 1981, NESTS BUILT IN CATTAILS IN PONDS AND ALONG CANALS/CULVERTS. IN 1992, POND DRIED UP, NO HABITAT PRESENT. COLONY PRESUMED EXTIRPATED BY BEEDY (1991).

**Threats:**

**General:**  
 APPROXIMATELY 20,000 NESTS OBSERVED ON 1 MAY 1932 (NEFF 1937). APPROXIMATELY 1330 BIRDS OBSERVED ON 19 MAY 1981; NESTING ABANDONED. 0 OBSERVED ON 1 JUL 1992.

<b>PLSS:</b> T15N, R02W, Sec. 04 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4337600 E578603	<b>Latitude/Longitude:</b> 39.18409 / -122.08989	<b>Elevation (feet):</b> 50

**County Summary:**

Colusa

**Quad Summary:**

Colusa (3912221)

**Sources:**

- BEE91R0001 BEEDEY, E.C., S.D. SANDERS & D. BLOOM - BREEDING STATUS, DISTRIBUTION, AND HABITAT ASSOCIATIONS OF THE TRICOLORED BLACKBIRD (AGELAIUS TRICOLOR), 1850-1989. 1991-06-XX
- HOS82R0001 HOSEA, B. - AN INTERIM STATUS REPORT ON THE PRESENT BREEDING POPULATION NUMBERS OF THE TRICOLORED BLACKBIRD IN NORTHERN CALIFORNIA. 1982-XX-XX
- HOS86R0001 HOSEA, R.C. - A POPULATION CENSUS OF THE TRICOLORED BLACKBIRD, AGELAIUS TRICOLOR (AUDUBON), IN FOUR COUNTIES IN THE NORTHERN CENTRAL VALLEY OF CALIFORNIA. M.A. THESIS, CSU-SACRAMENTO. 1986-08-14
- HOS86U0002 HOSEA, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - COMPILATION, COUNTY BY COUNTY, OF TRICOLORED BLACKBIRD NESTING OBSERVATIONS 1986-XX-XX
- NEF37R0001 NEFF, J.A. - DISTRIBUTION OF THE TRICOLORED RED WING. THE CONDOR 39(2):61-81. 1937-03-XX
- SCH92F0029 SCHNEIDER, ET AL. - FIELD SURVEY FORM FOR AGELAIUS TRICOLOR (NESTING COLONY) 1992-07-01
- TRI14D0001 TRICOLORED BLACKBIRD PORTAL - ICE (UNIVERSITY OF CALIFORNIA, DAVIS) - 1907-2014 TRICOLORED BLACKBIRD RECORDS FROM UC DAVIS TRICOLORED BLACKBIRD PORTAL, INFORMATION CENTER FOR THE ENVIRONMENT (ICE) 2014-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 96515	<b>EO Index:</b> 97679
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ABPBXB0020
<b>Occurrence Number:</b> 531	<b>Occurrence Last Updated:</b> 2015-07-29

<b>Scientific Name:</b> <i>Agelaius tricolor</i>	<b>Common Name:</b> tricolored blackbird
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b>
<b>CNDDB Element Ranks:</b>	BLM_S-Sensitive
<b>Global:</b> G1G2	CDFW_SSC-Species of Special Concern
<b>State:</b> S1S2	IUCN_EN-Endangered
	NABCI_RWL-Red Watch List
	USFWS_BCC-Birds of Conservation Concern

<b>General Habitat:</b> HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.	<b>Micro Habitat:</b> REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.
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<b>Last Date Observed:</b> 1936-05-28	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2014-04-18	<b>Occurrence Rank:</b> None
<b>Owner/Manager:</b> UNKNOWN, PVT	<b>Trend:</b> Unknown
<b>Presence:</b> Possibly Extirpated	

**Location:**  
VICINITY OF WILLIAMS, ABOUT 1.8 MILES SW OF I-5 AND HWY 20 INTERSECTION.

**Detailed Location:**  
COLONY DATA STORED IN UC DAVIS TRBL PORTAL; SITE NAME "WILLIAMS." EXACT LOCATION UNKNOWN, LOCATION DESCRIPTION WAS ONLY "NEAR WILLIAMS." MAPPED GENERALLY TO POSSIBLE MARSH AREA DEPICTED ON A 1952 USGS TOPO MAP FOR WILLIAMS QUAD.

**Ecological:**  
CATTAIL MARSH (1936). COLONY PRESUMED EXTIRPATED BY BEEDY (1991).

**Threats:**

**General:**  
TWO NESTING COLONIES OBSERVED ON 28 MAY 1936 (NEFF 1937); ONE COLONY ESTIMATED AT 2,000 NESTS, THE SECOND COLONY ESTIMATED AT 3,000 NESTS. 0 OBSERVED ON 18 APR 2014.

<b>PLSS:</b> T15N, R03W, Sec. 15 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4333294 E571680	<b>Latitude/Longitude:</b> 39.14589 / -122.17049	<b>Elevation (feet):</b> 90

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**

BEE91R0001	BEEDY, E.C., S.D. SANDERS & D. BLOOM - BREEDING STATUS, DISTRIBUTION, AND HABITAT ASSOCIATIONS OF THE TRICOLORED BLACKBIRD (AGELAIUS TRICOLOR), 1850-1989. 1991-06-XX
NEF37R0001	NEFF, J.A. - DISTRIBUTION OF THE TRICOLORED RED WING. THE CONDOR 39(2):61-81. 1937-03-XX
TRI14D0001	TRICOLORED BLACKBIRD PORTAL - ICE (UNIVERSITY OF CALIFORNIA, DAVIS) - 1907-2014 TRICOLORED BLACKBIRD RECORDS FROM UC DAVIS TRICOLORED BLACKBIRD PORTAL, INFORMATION CENTER FOR THE ENVIRONMENT (ICE) 2014-XX-XX





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 96525	<b>EO Index:</b> 97696
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ABPBXB0020
<b>Occurrence Number:</b> 532	<b>Occurrence Last Updated:</b> 2016-10-11

<b>Scientific Name:</b> <i>Agelaius tricolor</i>	<b>Common Name:</b> tricolored blackbird
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> Threatened	<b>Other Lists:</b>
<b>CNDDB Element Ranks:</b>	BLM_S-Sensitive
<b>Global:</b> G1G2	CDFW_SSC-Species of Special Concern
<b>State:</b> S1S2	IUCN_EN-Endangered
	NABCI_RWL-Red Watch List
	USFWS_BCC-Birds of Conservation Concern

<b>General Habitat:</b> HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.	<b>Micro Habitat:</b> REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.
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<b>Last Date Observed:</b> 1992-07-01	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2014-04-19	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN, PVT	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ABOUT 0.5 MI N OF FRESHWATER RD & HWY 20 INTERSECTION, 1.4 MI NE OF HWY 20 & I-5 INTERSECTION, NE OF WILLIAMS.

**Detailed Location:**  
MAPPED GENERALLY TO 1992 LOCATION DESCRIPTION OF "0.5 MILE NORTH OF HUSTED ROAD/HIGHWAY 20 INTERSECTION." COLONY DATA STORED IN UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME "HUSTED ROAD."

**Ecological:**  
NESTING IN CATTAILS IN IRRIGATION DITCH (2012). STUBBLED RICE FIELDS, GRASS, AND MUSTARD ON CHECKS (2014). ONLY RED-WINGED AND BREWER'S BLACKBIRDS OBSERVED IN 2011.

**Threats:**  
**General:**  
APPROXIMATELY 700 OBSERVED ON 1 JUL 1992. 0 OBSERVED ON 15 APR 2011 AND 19 APR 2014.

<b>PLSS:</b> T15N, R02W, Sec. 06 (M)	<b>Accuracy:</b> 2/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4337486 E574925	<b>Latitude/Longitude:</b> 39.18339 / -122.13249	<b>Elevation (feet):</b> 65

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Colusa (3912221), Williams (3912222)
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**Sources:**

DFG04U0002	CALIFORNIA DEPARTMENT OF FISH & GAME - TRICOLORED BLACKBIRD BREEDING OBSERVATIONS 1980-2000, BIOS DS20. 2004-XX-XX
SCH92F0089	SCHNEIDER ET. AL. - FIELD SURVEY FORM FOR AGELAIUS TRICOLOR 1992-07-01
TR114D0001	TRICOLORED BLACKBIRD PORTAL - ICE (UNIVERSITY OF CALIFORNIA, DAVIS) - 1907-2014 TRICOLORED BLACKBIRD RECORDS FROM UC DAVIS TRICOLORED BLACKBIRD PORTAL, INFORMATION CENTER FOR THE ENVIRONMENT (ICE) 2014-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> A2989	<b>EO Index:</b> 104609
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> AMAJF04010
<b>Occurrence Number:</b> 532	<b>Occurrence Last Updated:</b> 2016-12-14

<b>Scientific Name:</b> <i>Taxidea taxus</i>	<b>Common Name:</b> American badger
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> None	
<b>State:</b> None	<b>Other Lists:</b> CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G5	
<b>State:</b> S3	

<b>General Habitat:</b> MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.	<b>Micro Habitat:</b> NEEDS SUFFICIENT FOOD, FRIABLE SOILS AND OPEN, UNCULTIVATED GROUND. PREYS ON BURROWING RODENTS. DIGS BURROWS.
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<b>Last Date Observed:</b> 2016-08-29	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2016-08-29	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
SOUTHBOUND I-5 ABOUT 0.2 MILES N OF OLD HWY 99 (7TH ST) OVERPASS & 0.7 MILES SE OF OLD HWY 99W AT J STREET, WILLIAMS.

**Detailed Location:**  
MAPPED TO PROVIDED COORDINATES.

**Ecological:**  
HIGHWAY PASSING THROUGH AN AREA OF ROW CROPS AND INDUSTRIAL BUILDINGS WITH RESIDENTIAL DEVELOPMENT NEARBY.

**Threats:**  
VEHICULAR TRAFFIC.

**General:**  
1 ADULT OBSERVED DEAD ON SHOULDER OF ROAD ON 29 AUG 2016.

<b>PLSS:</b> T15N, R03W, Sec. 24, NE (M)	<b>Accuracy:</b> 1/10 mile	<b>Area (acres):</b> 18
<b>UTM:</b> Zone-10 N4332866 E574630	<b>Latitude/Longitude:</b> 39.14179 / -122.13642	<b>Elevation (feet):</b> 90

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**  
ELL16F0002 ELLIOTT, R. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-CALIFORNIA NATURAL DIVERSITY DATABASE) - FIELD SURVEY FORM FOR TAXIDEA TAXUS 2016-08-29



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 09653	<b>EO Index:</b> 27575
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 57	<b>Occurrence Last Updated:</b> 2005-06-27

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 1981-05-21	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1987-XX-XX	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
HUSTED ROAD, 0.1 MILE NORTH OF E STREET, WILLIAMS.

**Detailed Location:**

**Ecological:**

**Threats:**

**General:**

ONE SUBADULT FOUND DOR (LSU #45410).

<b>PLSS:</b> T15N, R03W, Sec. 12, SE (M)	<b>Accuracy:</b> 1/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4335031 E574901	<b>Latitude/Longitude:</b> 39.16127 / -122.13304	<b>Elevation (feet):</b> 70

**County Summary:**

Colusa

**Quad Summary:**

Williams (3912222)

**Sources:**

HAN88R0001	HANSEN, G.E. - DRAFT FOR REVIEW OF THE STATUS OF THE GIANT GARTER SNAKE (THAMNOPHIS COUCHII GIGAS) AND ITS SUPPORTING HABITAT DURING 1986-1987. 1988-XX-XX
HAN96R0001	HANSEN, G. - GPS COORDINATES FOR LOCATIONS OF THE GIANT GARTER SNAKE (THAMNOPHIS GIGAS) IN THE SACRAMENTO VALLEY AT THE TIME OF FEDERAL LISTING 1996-09-12
LSU05S0001	LOUISIANA STATE UNIVERSITY MUSEUM OF ZOOLOGY - PRINTOUT OF THAMNOPHIS GIGAS RECORDS. 2005-06-21
STE82U0001	STEWART, G.R. - LETTER TO JOHN BRODE, DFG REGARDING 2 DOR GIANT GARTER SNAKES FOUND IN COLUSA COUNTY. 1982-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 32409	<b>EO Index:</b> 7558	
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ARADB36150	
<b>Occurrence Number:</b> 114	<b>Occurrence Last Updated:</b> 2006-05-03	

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 1991-XX-XX	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1991-XX-XX	<b>Occurrence Rank:</b> Excellent
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
FRESHWATER CREEK; APPROX. 0.3 KM UPSTREAM FROM THE INTERSTATE ROUTE 5 OVERPASS; NNW OF WILLIAMS.

**Detailed Location:**

**Ecological:**

SLOW FLOWING WATER WITH SILT SUBSTRATE IN SUMMER SEASON; SUNNY EXPANSES WITH LOW GROWING EMERGENT AND STREAMSIDE VEGETATION FOR BASKING; OVERWINTERING HABITAT UPLAND OR ADJACENT TO SUMMER HABITAT.

**Threats:**

**General:**

SNAKE OBSERVED AT SITE DURING THE 1986-87 STUDY. UNKNOWN NUMBER OBSERVED DURING 1991.

<b>PLSS:</b> T15N, R03W, Sec. 02, SW (M)	<b>Accuracy:</b> 1/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4336771 E572398	<b>Latitude/Longitude:</b> 39.17716 / -122.16183	<b>Elevation (feet):</b> 73

**County Summary:**

Colusa

**Quad Summary:**

Williams (3912222)

**Sources:**

- HAN88R0001 HANSEN, G.E. - DRAFT FOR REVIEW OF THE STATUS OF THE GIANT GARTER SNAKE (THAMNOPHIS COUCHII GIGAS) AND ITS SUPPORTING HABITAT DURING 1986-1987. 1988-XX-XX
- HAN96R0001 HANSEN, G. - GPS COORDINATES FOR LOCATIONS OF THE GIANT GARTER SNAKE (THAMNOPHIS GIGAS) IN THE SACRAMENTO VALLEY AT THE TIME OF FEDERAL LISTING 1996-09-12



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 64671	<b>EO Index:</b> 64750
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 241	<b>Occurrence Last Updated:</b> 2006-05-11

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 1986-XX-XX	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1986-XX-XX	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
SALT CREEK AT OLD HWY 99 W, 0.5 MILE NORTH OF WILLIAMS.

**Detailed Location:**  
MAPPED ACCORDING TO PROVIDED LOCATION DESCRIPTION OF "SALT CK AT OLD HWY 99 W, 0.5 MILES N OF WILLIAMS."

**Ecological:**  
**Threats:**

**General:**  
UNKNOWN NUMBER OF SNAKES OBSERVED DURING 1986.

<b>PLSS:</b> T15N, R03W, Sec. 11, NE (M)	<b>Accuracy:</b> 1/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4335853 E572847	<b>Latitude/Longitude:</b> 39.16885 / -122.15671	<b>Elevation (feet):</b> 75

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**  
HAN96R0001 HANSEN, G. - GPS COORDINATES FOR LOCATIONS OF THE GIANT GARTER SNAKE (THAMNOPHIS GIGAS) IN THE SACRAMENTO VALLEY AT THE TIME OF FEDERAL LISTING 1996-09-12



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 94493	<b>EO Index:</b> 95617
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 398	<b>Occurrence Last Updated:</b> 2014-11-20

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 1973-09-29	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1973-09-29	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ABOUT 0.7 MILE SW OF I-5 AND HWY 20 INTERSECTION, 0.7 MILE NW OF WILLIAMNS POST OFFICE, SW OF COLUSA.

**Detailed Location:**  
MAPPED ACCORDING TO PROVIDED LOCATION DESCRIPTION OF "HWY 20 AT FRESHWATER LATERAL JCT, W OF I-5."

**Ecological:**

**Threats:**

**General:**

AT LEAST 1 COLLECTED ON 29 SEP 1973; J. BRODE FG #756.

<b>PLSS:</b> T15N, R03W, Sec. 11, S (M)	<b>Accuracy:</b> 1/5 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4334977 E572477	<b>Latitude/Longitude:</b> 39.16099 / -122.16109	<b>Elevation (feet):</b> 75

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**  
BRO80U0001 BRODE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - GEOGRAPHIC REFERENCE CARD CATALOG OF SPECIMENS AND FIELD NOTE RECORDS COMPILED BY JOHN BRODE (DFG) 1980-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> A3037	<b>EO Index:</b> 104660
<b>Key Quad:</b> Colusa (3912221)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 412	<b>Occurrence Last Updated:</b> 2016-12-19

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 2015-07-22	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2015-07-22	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
FROM THE CORNER OF FRESHWATER RD & SAN JOSE RD TO ABOUT 0.8 MI E, 2.3 MILES NE OF WILLIAMS.

**Detailed Location:**  
MAPPED TO PROVIDED COORDINATES. BRANSFORD SITE; SEE ALSO OCC #413 & 414.

**Ecological:**

**Threats:**

**General:**

12 CAPTURES, 28 RECAPTURES, AND 4 SIGHTINGS DURING 2015 STUDY.

<b>PLSS:</b> T15N, R02W, Sec. 8, N (M)	<b>Accuracy:</b> specific area	<b>Area (acres):</b> 47
<b>UTM:</b> Zone-10 N4336523 E577037	<b>Latitude/Longitude:</b> 39.17452 / -122.10816	<b>Elevation (feet):</b> 60

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Colusa (3912221)

**Sources:**

HAL15D0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - TABLE OF COLLECTED GIANT GARTERSNAKES IN 2015 [SC-010779] 2015-XX-XX
HAL15R0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - 2015 ANNUAL SUMMARY REPORT TO USFWS (TE-157216-2) 2015-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> A3038	<b>EO Index:</b> 104661
<b>Key Quad:</b> Colusa (3912221)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 413	<b>Occurrence Last Updated:</b> 2016-12-19

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 2015-05-16	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2015-05-16	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ABOUT 2.1 MILES NE OF FRESHWATER RD AT HWY 20, 3.5 MILES NE OF WILLIAMS.

**Detailed Location:**  
MAPPED TO PROVIDED COORDINATES. BRANSFORD SITE; SEE ALSO OCC #412 & 414.

**Ecological:**

**Threats:**

**General:**

1 CAPTURED DURING 2015 STUDY.

<b>PLSS:</b> T15N, R02W, Sec. 5, NE (M)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 5
<b>UTM:</b> Zone-10 N4337911 E578005	<b>Latitude/Longitude:</b> 39.18695 / -122.09679	<b>Elevation (feet):</b> 60

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Colusa (3912221)

**Sources:**

HAL15D0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - TABLE OF COLLECTED GIANT GARTERSNAKES IN 2015 [SC-010779] 2015-XX-XX
HAL15R0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - 2015 ANNUAL SUMMARY REPORT TO USFWS (TE-157216-2) 2015-XX-XX





# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> A3039	<b>EO Index:</b> 104662
<b>Key Quad:</b> Colusa (3912221)	<b>Element Code:</b> ARADB36150
<b>Occurrence Number:</b> 414	<b>Occurrence Last Updated:</b> 2016-12-19

<b>Scientific Name:</b> <i>Thamnophis gigas</i>	<b>Common Name:</b> giant gartersnake
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Threatened	
<b>State:</b> Threatened	<b>Other Lists:</b> IUCN_VU-Vulnerable
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G2	
<b>State:</b> S2	

<b>General Habitat:</b> PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS AND IRRIGATION DITCHES.	<b>Micro Habitat:</b> THIS IS THE MOST AQUATIC OF THE GARTERSNAKES IN CALIFORNIA.
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<b>Last Date Observed:</b> 2015-05-24	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2015-05-24	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
ABOUT 1.9 MILES ENE OF FRESHWATER RD AT HWY 20, 3.2 MILES NE OF WILLIAMS.

**Detailed Location:**  
MAPPED TO PROVIDED COORDINATES. BRANSFORD SITE; SEE ALSO OCC #412 & 414.

**Ecological:**  
**Threats:**

**General:**  
1 CAPTURED DURING 2015 STUDY.

<b>PLSS:</b> T15N, R02W, Sec. 5, SE (M)	<b>Accuracy:</b> 80 meters	<b>Area (acres):</b> 5
<b>UTM:</b> Zone-10 N4337072 E577994	<b>Latitude/Longitude:</b> 39.17939 / -122.09701	<b>Elevation (feet):</b> 55

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Colusa (3912221)

**Sources:**

HAL15D0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - TABLE OF COLLECTED GIANT GARTERSNAKES IN 2015 [SC-010779] 2015-XX-XX
HAL15R0001	HALSTEAD, B. (U.S. GEOLOGICAL SURVEY) - 2015 ANNUAL SUMMARY REPORT TO USFWS (TE-157216-2) 2015-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 33665	<b>EO Index:</b> 30646
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> ICBRA10010
<b>Occurrence Number:</b> 80	<b>Occurrence Last Updated:</b> 2005-01-07

<b>Scientific Name:</b> <i>Lepidurus packardii</i>	<b>Common Name:</b> vernal pool tadpole shrimp
<b>Listing Status:</b>	<b>Rare Plant Rank:</b>
<b>Federal:</b> Endangered	
<b>State:</b> None	<b>Other Lists:</b> IUCN_EN-Endangered
<b>CNDDB Element Ranks:</b>	
<b>Global:</b> G4	
<b>State:</b> S3S4	

<b>General Habitat:</b> INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.	<b>Micro Habitat:</b> POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.
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<b>Last Date Observed:</b> 1993-03-11	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1993-03-11	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
FROM WILLIAMS TO DELPHOS.

**Detailed Location:**  
3 FEATURES INSPECTED SOMEWHERE IN SECTIONS 2 & 11. TWO CONTAINED LEPIDURUS PACKARDI. NO BRANCHINECTA LYNCHI OBSERVED.

**Ecological:**  
MANMADE ROADSIDE DITCHES.

**Threats:**  
**General:**

SUGNET RECORD NUMBERS 189 & 190. 8 INDIVIDUALS COLLECTED 21 FEB 1971, DEPOSITED IN SHASTA COLLEGE COLLECTION.

<b>PLSS:</b> T15N, R03W, Sec. 11 (M)	<b>Accuracy:</b> non-specific area	<b>Area (acres):</b> 1,346
<b>UTM:</b> Zone-10 N4336481 E572482	<b>Latitude/Longitude:</b> 39.17454 / -122.16088	<b>Elevation (feet):</b> 75

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Williams (3912222)

**Sources:**

ROG01A0001	ROGERS, D. - REVISION OF THE NEARCTIC LEPIDURUS (NOTOSTRACA). JOURNAL OF CRUSTACEAN BIOLOGY 21(4):991-1006. 2001-XX-XX
SUG93U0001	SUGNET & ASSOCIATES - PRINTOUT OF LOCATION (T-R-S) OF FAIRY SHRIMP SAMPLING. (OBTAINED FROM THE U.S. FISH AND WILDLIFE SERVICE) 1993-XX-XX



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 31517	<b>EO Index:</b> 2362
<b>Key Quad:</b> Colusa (3912221)	<b>Element Code:</b> PDAST5L0A1
<b>Occurrence Number:</b> 56	<b>Occurrence Last Updated:</b> 2010-12-20

<b>Scientific Name:</b> <i>Lasthenia glabrata ssp. coulteri</i>	<b>Common Name:</b> Coulter's goldfields
<b>Listing Status:</b>	<b>Rare Plant Rank:</b> 1B.1
<b>Federal:</b> None	<b>Other Lists:</b> BLM_S-Sensitive
<b>State:</b> None	SB_CalBG/RSABG-California/Rancho Santa Ana
<b>CNDDDB Element Ranks:</b>	Botanic Garden
<b>Global:</b> G4T2	SB_SBBG-Santa Barbara Botanic Garden
<b>State:</b> S2	

<b>General Habitat:</b> COASTAL SALT MARSHES, PLAYAS, VERNAL POOLS.	<b>Micro Habitat:</b> USUALLY FOUND ON ALKALINE SOILS IN PLAYAS, SINKS, AND GRASSLANDS. 1-1375 M.
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<b>Last Date Observed:</b> 1926-04-22	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 1926-04-22	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
3 MILES WEST OF COLUSA.

**Detailed Location:**  
MAPPED BY CNDDDB AROUND HIGHWAY 20. TWO COLLECTIONS ATTRIBUTED TO THIS SITE: "3 MILES WEST OF COLUSA" AND "4 MILES EAST OF WILLIAMS". SITE MAPPED TO REPRESENT BOTH COLLECTIONS.

**Ecological:**  
IN TULE LAND AT THE "WEST OF COLUSA" SITE AND IN ALKALI PLAINS AT THE "EAST OF WILLIAMS" SITE.

**Threats:**  
MUCH OF THIS AREA HAS UNDERGONE INTENSIVE AGRICULTURE SINCE 1926.

**General:**  
BOTH SPECIMENS ANNOTATED TO L. GLABRATA COULTERI BY ORNDUFF IN 1961. ANNOTATION ON 1917 COLLECTION SAYS "POSSIBLY A HYBRID DERIVATIVE X L. CHRYSANTHEA". ANNOTATION ON 1926 COLLECTION SAYS "RESERVATIONS ABOUT THE SSP".

<b>PLSS:</b> T16N, R02W, Sec. 33 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4338879 E579011	<b>Latitude/Longitude:</b> 39.19558 / -122.08502	<b>Elevation (feet):</b> 50

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Colusa (3912221)

**Sources:**

FER17S0002	FERRIS, R. - FERRIS #503 DS #84892, CAS-BOT-BC #328109, POM #53876 1917-04-12
FER26S0001	FERRIS, R. - FERRIS #6288 DS #179174, POM #163441, DS #328107, CAS-BOT-BC #328107 1926-04-22



**Occurrence Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Map Index Number:** 67411  
**Key Quad:** Colusa (3912221)  
**Occurrence Number:** 88

**EO Index:** 67579  
**Element Code:** PDCHE041F3  
**Occurrence Last Updated:** 2006-12-13

**Scientific Name:** *Extriplex joaquinana*

**Common Name:** San Joaquin spearscale

**Listing Status:**       **Federal:** None  
                               **State:** None  
**CNDDDB Element Ranks:** **Global:** G2  
                                   **State:** S2

**Rare Plant Rank:** 1B.2  
**Other Lists:** BLM\_S-Sensitive  
 SB\_CalBG/RSABG-California/Rancho Santa Ana  
 Botanic Garden

**General Habitat:**

CHENOPOD SCRUB, ALKALI MEADOW, PLAYAS, VALLEY AND  
 FOOTHILL GRASSLAND.

**Micro Habitat:**

IN SEASONAL ALKALI WETLANDS OR ALKALI SINK SCRUB WITH  
 DISTICHLIS SPICATA, FRANKENIA, ETC. 0-800 M.

**Last Date Observed:** 1917-04-12  
**Last Survey Date:** 1917-04-12  
**Owner/Manager:** UNKNOWN  
**Presence:** Presumed Extant

**Occurrence Type:** Natural/Native occurrence  
**Occurrence Rank:** Unknown  
**Trend:** Unknown

**Location:**  
 4 MILES EAST OF WILLIAMS.

**Detailed Location:**  
 MAPPED BY CNDDDB AS BEST GUESS 4 AIR MILES EAST OF WILLIAMS.

**Ecological:**  
 ALKALI PLAINS.

**Threats:**  
 MOST OF THIS AREA HAS BEEN CONVERTED TO AGRICULTURE, BUT THERE MAY STILL BE SUITABLE HABITAT WITHIN THE COLUSA NWR.

**General:**  
 ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1917 COLLECTION BY FERRIS. NEEDS FIELDWORK.

<b>PLSS:</b> T15N, R02W, Sec. 15 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4334350 E580023	<b>Latitude/Longitude:</b> 39.15467 / -122.07384	<b>Elevation (feet):</b>

<b>County Summary:</b>	<b>Quad Summary:</b>
Colusa	Colusa (3912221)

**Sources:**  
 FER17S0006 FERRIS, R. - FERRIS #505 POM #164903 1917-04-12



**Occurrence Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



**Map Index Number:** 89387

**EO Index:** 90374

**Key Quad:** Williams (3912222)

**Element Code:** PDCHE041F3

**Occurrence Number:** 115

**Occurrence Last Updated:** 2013-06-10

**Scientific Name:** *Extriplex joaquinana*

**Common Name:** San Joaquin spearscale

**Listing Status:** **Federal:** None

**Rare Plant Rank:** 1B.2

**State:** None

**Other Lists:** BLM\_S-Sensitive  
SB\_CalBG/RSABG-California/Rancho Santa Ana  
Botanic Garden

**CNDDDB Element Ranks:** **Global:** G2

**State:** S2

**General Habitat:**

CHENOPOD SCRUB, ALKALI MEADOW, PLAYAS, VALLEY AND  
FOOTHILL GRASSLAND.

**Micro Habitat:**

IN SEASONAL ALKALI WETLANDS OR ALKALI SINK SCRUB WITH  
DISTICHLIS SPICATA, FRANKENIA, ETC. 0-800 M.

**Last Date Observed:** 1916-06-09

**Occurrence Type:** Natural/Native occurrence

**Last Survey Date:** 1916-06-09

**Occurrence Rank:** Unknown

**Owner/Manager:** UNKNOWN

**Trend:** Unknown

**Presence:** Presumed Extant

**Location:**

NEAR WILLIAMS, ALONG THE STATE HIGHWAY.

**Detailed Location:**

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB ALONG STATE ROUTE 20 IN THE VICINITY OF WILLIAMS.

**Ecological:**

LOW GROUND IN SALINE SOIL ALONG THE STATE HIGHWAY.

**Threats:**

**General:**

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1916 COLLECTION BY HELLER. NEEDS FIELDWORK.

**PLSS:** T15N, R03W, Sec. 11, S (M)

**Accuracy:** non-specific area

**Area (acres):** 213

**UTM:** Zone-10 N4335405 E573083

**Latitude/Longitude:** 39.16479 / -122.15403

**Elevation (feet):**

**County Summary:**

Colusa

**Quad Summary:**

Williams (3912222)

**Sources:**

HEL16S0006 HELLER, A. - HELLER #12394 DAV #97461 1916-06-09



**Occurrence Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Map Index Number:</b>	31517	<b>EO Index:</b>	2363
<b>Key Quad:</b>	Colusa (3912221)	<b>Element Code:</b>	PDFAB0F8R3
<b>Occurrence Number:</b>	4	<b>Occurrence Last Updated:</b>	2011-02-22

<b>Scientific Name:</b>	<i>Astragalus tener var. ferrisiae</i>	<b>Common Name:</b>	Ferris' milk-vetch
<b>Listing Status:</b>	<b>Federal:</b> None <b>State:</b> None	<b>Rare Plant Rank:</b>	1B.1
<b>CNDDB Element Ranks:</b>	<b>Global:</b> G2T1 <b>State:</b> S1	<b>Other Lists:</b>	

<b>General Habitat:</b>	MEADOWS AND SEEPS, VALLEY AND FOOTHILL GRASSLAND.	<b>Micro Habitat:</b>	SUBALKALINE FLATS ON OVERFLOW LAND IN THE CENTRAL VALLEY; USUALLY SEEN IN DRY, ADOBE SOIL. 4-80 M.
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<b>Last Date Observed:</b>	1926-04-21	<b>Occurrence Type:</b>	Natural/Native occurrence
<b>Last Survey Date:</b>	2002-05-02	<b>Occurrence Rank:</b>	None
<b>Owner/Manager:</b>	UNKNOWN	<b>Trend:</b>	Unknown
<b>Presence:</b>	Possibly Extirpated		

**Location:**  
3 MILES WEST OF COLUSA.

**Detailed Location:**

**Ecological:**

OVERFLOWED LAND. IN 2002 THIS AREA OF COLUSA COUNTY WAS UNDER INTENSIVE AGRICULTURE, PRIMARILY FLOODED RICE FIELDS, AND IS OFTEN MANAGED FOR WATERFOWL AND PRIVATE HUNTING CLUBS. NO NATURAL HABITAT OBSERVED IN VICINITY.

**Threats:**

AREA UNDER INTENSIVE AGRICULTURE, PRIMARILY FLOODED RICE FIELDS.

**General:**

TYPE COLLECTION. ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1926 FERRIS COLLECTION. IN 2002, NO NATURAL HABITAT OBSERVED IN VICINITY. NO PLANTS OBSERVED, PROBABLY EXTIRPATED.

<b>PLSS:</b> T16N, R02W, Sec. 33 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4338879 E579011	<b>Latitude/Longitude:</b> 39.19558 / -122.08502	<b>Elevation (feet):</b> 40

**County Summary:**

Colusa

**Quad Summary:**

Colusa (3912221)

**Sources:**

FER26S0003	FERRIS, R. - FERRIS #6281 NY #5728, POM #163169, DS (ALSO CITED IN LIS90A0001) 1926-04-21
LIS90A0001	LISTON, A. - TAXONOMIC NOTES ON ASTRAGALUS SECTION LEPTOCARPI SUBSECTION CALIFORNICI (FABACEAE). BRITTONIA, 42(2):100-104. 1990-XX-XX
WIT02R0001	WITHAM, C. - ALKALINE VERNAL POOL MILK-VETCH STATUS SURVEY REPORT 2002-09-11



# Occurrence Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



<b>Map Index Number:</b> 90975	<b>EO Index:</b> 92023
<b>Key Quad:</b> Williams (3912222)	<b>Element Code:</b> PMPON03010
<b>Occurrence Number:</b> 4	<b>Occurrence Last Updated:</b> 2013-12-02

<b>Scientific Name:</b> <i>Heteranthera dubia</i>	<b>Common Name:</b> water star-grass
<b>Listing Status:</b>	<b>Rare Plant Rank:</b> 2B.2
<b>Federal:</b> None	<b>Other Lists:</b>
<b>State:</b> None	
<b>CNDDDB Element Ranks:</b>	
<b>Global:</b> G5	
<b>State:</b> S2	

<b>General Habitat:</b> MARSHES AND SWAMPS.	<b>Micro Habitat:</b> ALKALINE, STILL OR SLOW-MOVING WATER. REQUIRES A PH OF 7 OR HIGHER, USUALLY IN SLIGHTLY EUTROPHIC WATERS. 15-1510 M.
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<b>Last Date Observed:</b> 1976-10-XX	<b>Occurrence Type:</b> Natural/Native occurrence
<b>Last Survey Date:</b> 2013-09-06	<b>Occurrence Rank:</b> Unknown
<b>Owner/Manager:</b> UNKNOWN	<b>Trend:</b> Unknown
<b>Presence:</b> Presumed Extant	

**Location:**  
3 MILES NORTH OF WILLIAMS, GLENN-COLUSA CANAL IRRIGATION DISTRICT.

**Detailed Location:**  
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB IN THE GENERAL VICINITY OF CANALS 3 ROAD MILES NNW OF WILLIAMS.

**Ecological:**

**Threats:**

**General:**

OCCURRENCE IS BASED ON A 1976 COLLECTION BY YEO. VICINITY SEARCHED BY TAYLOR IN 2013; NO PLANTS FOUND, BUT TAYLOR BELIEVES THAT HETERANTHERA MAY STILL BE PRESENT.

<b>PLSS:</b> T16N, R03W, Sec. 34 (M)	<b>Accuracy:</b> 1 mile	<b>Area (acres):</b> 0
<b>UTM:</b> Zone-10 N4339623 E571101	<b>Latitude/Longitude:</b> 39.20296 / -122.17653	<b>Elevation (feet):</b> 75

<b>County Summary:</b> Colusa	<b>Quad Summary:</b> Williams (3912222)
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**Sources:**

TAY13U0002	TAYLOR, D. - CNPS RARE PLANT STATUS REVIEW FORUM POSTING FOR HETERANTHERA DUBIA 2013-09-11
YEO76S0001	YEO, R. - YEO SN SBBG #115923, DAV #19075, UCR #141657 1976-10-XX

# 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

Colusa 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<sup>1</sup> 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<sup>2</sup>).

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

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

## Birds

NAME

STATUS

## Northern Spotted Owl *Strix occidentalis caurina* Threatened

Wherever found

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

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

## Reptiles

NAME

STATUS

### Giant Garter Snake *Thamnophis gigas* Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4482>

## Amphibians

NAME

STATUS

### California Red-legged Frog *Rana draytonii* Threatened

Wherever found

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

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

### California Tiger Salamander *Ambystoma californiense* Threatened

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

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

## Fishes

NAME

STATUS

### Delta Smelt *Hypomesus transpacificus* Threatened

Wherever found

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

<https://ecos.fws.gov/ecp/species/321>

## Insects

NAME

STATUS

### Valley Elderberry Longhorn Beetle *Desmocerus californicus* Threatened

*dimorphus*

Wherever found

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

<https://ecos.fws.gov/ecp/species/7850>

# Crustaceans

NAME	STATUS
<p>Conservancy Fairy Shrimp <i>Branchinecta conservatio</i></p> <p>Wherever found</p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p><a href="https://ecos.fws.gov/ecp/species/8246">https://ecos.fws.gov/ecp/species/8246</a></p>	Endangered
<p>Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i></p> <p>Wherever found</p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p><a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a></p>	Threatened
<p>Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i></p> <p>Wherever found</p> <p>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p><a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a></p>	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<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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*

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

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

Breeds Jan 1 to Aug 31

**Burrowing Owl** *Athene cunicularia*

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

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

Breeds Mar 15 to Aug 31

<p><b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a></p>	Breeds May 20 to Jul 31
<p><b>Long-billed Curlew</b> <i>Numenius americanus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/5511">https://ecos.fws.gov/ecp/species/5511</a></p>	Breeds elsewhere
<p><b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>	Breeds Apr 1 to Jul 20
<p><b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	Breeds elsewhere
<p><b>Song Sparrow</b> <i>Melospiza melodia</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Feb 20 to Sep 5
<p><b>Tricolored Blackbird</b> <i>Agelaius tricolor</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3910">https://ecos.fws.gov/ecp/species/3910</a></p>	Breeds Mar 15 to Aug 10
<p><b>Whimbrel</b> <i>Numenius phaeopus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9483">https://ecos.fws.gov/ecp/species/9483</a></p>	Breeds elsewhere
<p><b>Yellow-billed Magpie</b> <i>Pica nuttalli</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9726">https://ecos.fws.gov/ecp/species/9726</a></p>	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.

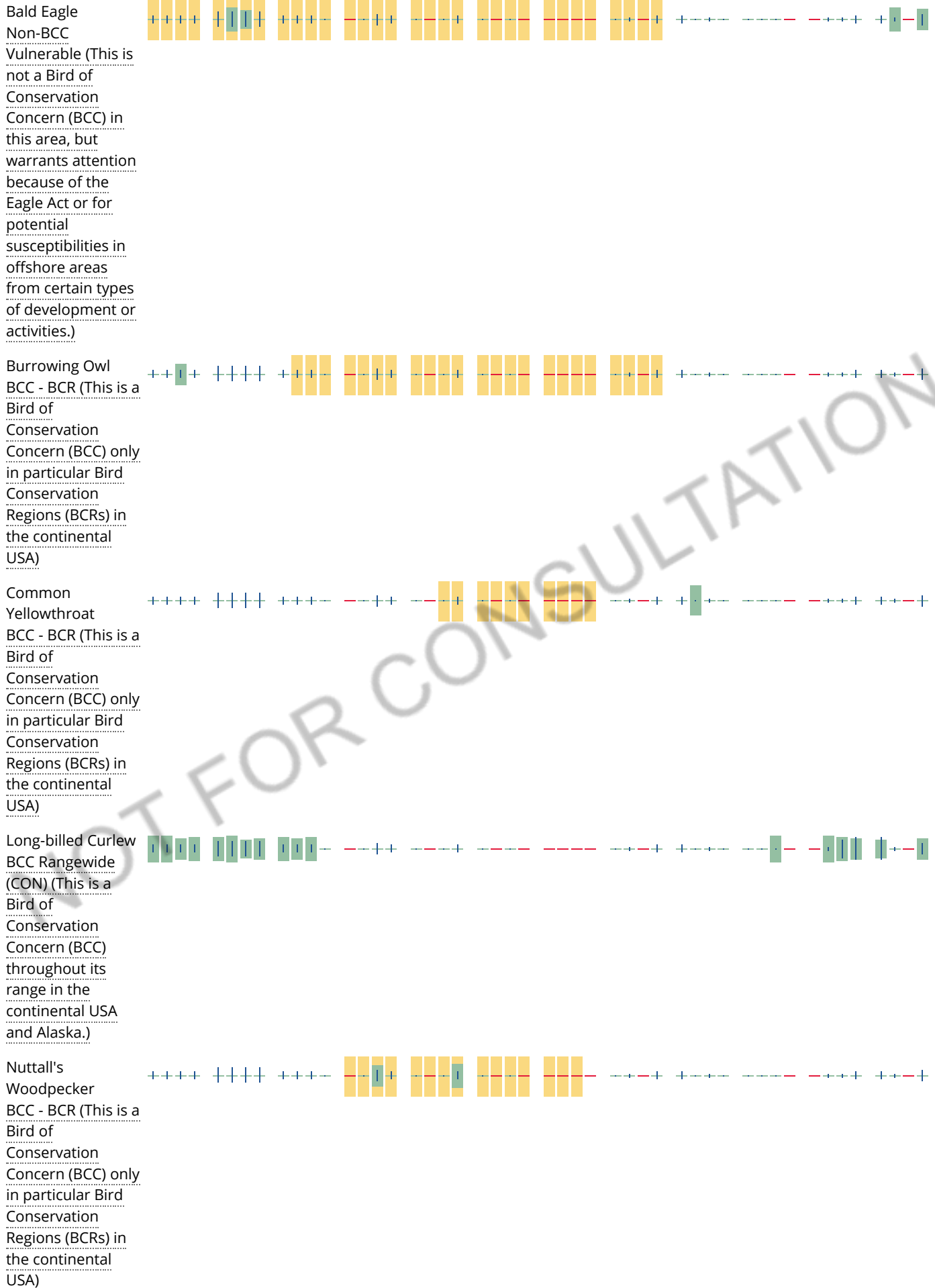
### No Data (—)

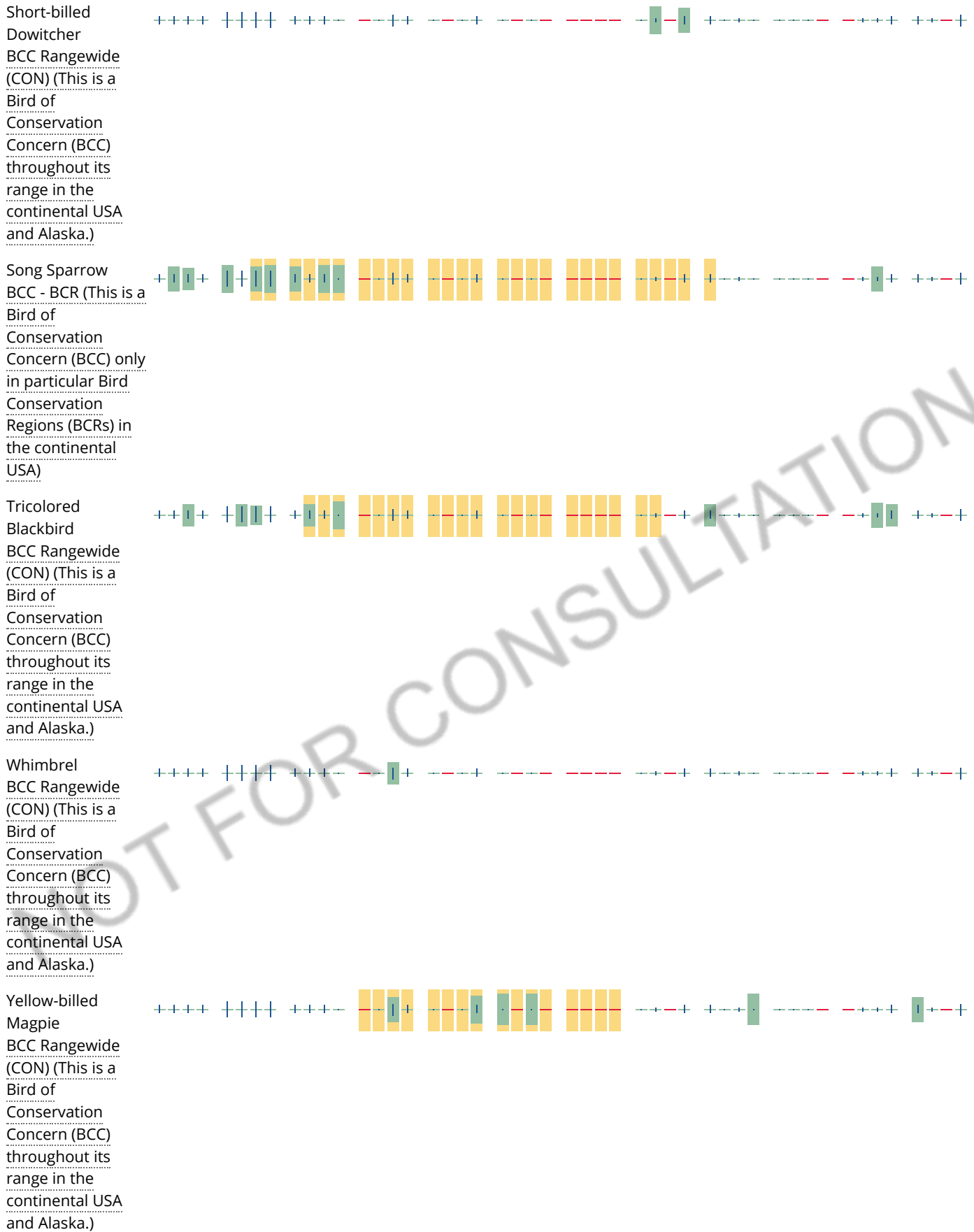
A week is marked as having no data if there were no survey events for that week.

### 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.







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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Facilities

### National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

RIVERINE

[R2UBHx](#)

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

### Data limitations

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

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

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

### Data exclusions

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

**Data precautions**

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

NOT FOR CONSULTATION