
BIOLOGY

INTRODUCTION

This chapter provides information on biological resources in the Plan area and a discussion of federal, state, and local laws, policies, and regulations that influence the protection of such biological resources. The chapter identifies impacts on biological resources that may result from site grading and construction, and habitat conversion, reduction or elimination. The chapter also identifies mitigation measures to avoid, minimize, or compensate for potential significant impacts to biological resources.

Information for this chapter came from Moore Biological Consultants, who conducted field surveys on March 7 and June 12, 2008 and California Department of Fish and Game's (CDFG) California Natural Diversity Database searches. The complete Biological Resources Assessment is included as Appendix C.

REGULATORY SETTING

This section describes the local, state, and federal plans, policies, and laws that are relevant to biological, resources and that are applicable to the Plan.

FEDERAL GOVERNMENT

Federal Endangered Species Act (FESA)

Federally listed threatened and endangered species and their habitats are protected under provisions of the FESA. "Take" under FESA includes activities that would harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect listed species. Harm specifically includes significant habitat modification or degradation of habitat of a listed species. The US Fish and Wildlife Service (USFWS) regulates activities that may result in "take" of individuals. Candidates and species proposed for listing also receive special attention from federal agencies during their review.

Clean Water Act Section 404

The U.S. Army Corps of Engineers (Corps) has jurisdiction over Waters of the U.S. under Section 404 of the Clean Water Act and navigable waters of the U.S. under Section 10 of the Rivers and Harbors Act of 1899. Waters of the U.S. (jurisdictional waters) under Section 404 include all waters used, or potentially used, for interstate commerce. Such waters include wetlands, tidal waters, tributary waters, and other waters such as lakes. Wetlands include marshes, meadows, swamps, bogs, floodplains, basins, and seeps. Wetlands may also include less obvious areas such as seasonal ponds, seasonally wet pastures, or seasonal meadows. Navigable waters of the U.S. subject to Corps jurisdiction under Section 10 include all lands below mean high water. Plan development activities that would result in placement of fill, dredging, destruction, or alteration of Waters of the U.S. must be in compliance with permit requirements of the Corps. A Water Quality Certification pursuant to

Section 401 of the Clean Water Act is required for Federal Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or Waiver thereof) from the Regional Water Quality Control Board (RWQCB).

Federal Migratory Bird Treaty Act (MBTA)

The Federal Migratory Bird Treaty Act (MBTA, 16 U.S.C., Sec. 703, Supp I) prohibits any person to:

*"pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird."*¹

The list of migratory birds includes almost every native bird in the United States. This law also extends to parts of birds, nests, and eggs. It is therefore a violation of the MBTA to directly kill or destroy an active nest of any bird species. The MBTA is typically applied on domestic projects to prevent injury or death of nesting birds and their chicks.

STATE OF CALIFORNIA

California Endangered Species Act (CESA)

State-listed rare, threatened, and endangered species are protected under provisions of CESA. Activities that may result in take of individuals (e.g., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by the California Department of Fish and Game (CDFG). CDFG has interpreted take to include the destruction of nesting and foraging habitat necessary to maintain viable breeding populations of relevant state threatened or endangered species.

California Species of Special Concern

The CDFG recently changed its policy concerning California *Species of Special Concern*. Originally, the CDFG defined species of special concern as those animal species whose California breeding populations may face extirpation (extinction) in the near future. The CDFG has redefined species of special concern as a management designation used to track population trends of certain animal species. Species of special concern do not receive protection under the CESA or any section of the California Fish and Game Code, and do not necessarily meet CEQA Guidelines Section 15380 criteria as rare, threatened, endangered, or of other public concern. Like federal species of concern, the determination of significance for California species of special concern must be made on a case-by-case basis.

California Fully Protected Species

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as "fully protected." Fully protected species,

¹ Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755) as amended by Chapter 634; June 20, 1936; 49 Stat. 1556; P.L. 86-732; September 8, 1960; 74 Stat. 866; P.L. 90-578; October 17, 1968; 82 Stat. 1118; P.L. 91-135; December 5, 1969; 83 Stat. 282; P.L. 93-300; June 1, 1974; 88 Stat. 190; P.L. 95-616; November 8, 1978; 92 Stat. 3111; P.L. 99-645; November 10, 1986; 100 Stat. 3590 and P.L. 105-312; October 30, 1998; 112 Stat. 2956.

or parts thereof, cannot be taken or possessed at any time. The California Fish and Game Commission, however, may authorize the collecting of such species for necessary scientific research. Section 3511 of the California Fish and Game Code may authorize the live capture and relocation of fully protected birds pursuant to a permit for the protection of livestock. Legally imported and fully protected species or parts thereof may be possessed only under a permit issued by CDFG.

California Fish and Game Code – Protection of Raptors

Birds of prey are protected in California under the California Fish and Game Code, §3503.5. Under §3503.5, it is unlawful to take, possess or destroy any raptors including owls, or to take, possess, or destroy the nest or eggs of raptors or owls. The CDFG considers a disturbance that causes nest abandonment or loss of reproductive effort as a “taking.” Construction disturbance during the breeding season can result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Any losses of fertile eggs or nesting raptors or any activities resulting in nest abandonment are significant impacts.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, in part, implements the federal Clean Water Act (CWA) to provide a mechanism for protecting the quality of the state’s waters through the State Water Quality Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

California Fish and Game Code Section 1601-1606

Jurisdictional authority of the CDFG over wetland areas and streams is established under Sections 1601-1606 of the Fish and Game Code. This code pertains to activities which would disrupt the natural flow or alter the channel, bed or bank of any lake, river or stream, and requires an agreement identifying appropriate mitigation before any disturbance is allowed by the CDFG.

LOCAL REGULATIONS

The local regulations applicable to biological resources in the site vicinity include the policies of the City of Ceres General Plan (Agricultural and Natural Resources Element) for the protection of sensitive species and habitat, and trees.

- **Policy 6.C.1.** The City shall support preservation of habitats of rare, threatened, endangered, and/or other special status species. The City shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.
- **Policy 6.C.3.** Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the City shall require, as part of the environmental review process, a biotic resources evaluation of the site by a wildlife biologist. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the City shall determine the feasibility of the identified mitigation measures. Significant ecological resource areas shall, at a minimum, include the following:
 - a. Any habitat for rare, threatened or endangered animals or plants.
 - b. Riparian and wetland habitats associated with the Tuolumne River.

- **Policy 6.C.4:** The City shall support and cooperate with efforts of other local, state, and federal agencies and private entities engaged in the preservation and protection of significant biological resources from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, wildlife migration corridors, and locally-important species/communities.
- **Policy 6.D.3:** The City shall establish procedures for identifying and preserving rare, threatened, and endangered plant species and their habitats that may be adversely affected by public or private development projects. A biotic resources evaluation, as outlined under Policy 6.C.3, shall be conducted by a qualified plant biologist for these species and shall include a review of lists maintained by various resource agencies which identify known occurrences of rare, threatened, and endangered plants in the Ceres area.
- **Policy 6.D.5:** The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

ENVIRONMENTAL SETTING

LOCAL SETTING

West of Crows Landing Road, the site primarily consists of almond orchards, alfalfa fields, and grain fields (**Figures 7.1** through **7.4**). There is also a small pistachio orchard, a few residences and agricultural shops, and a flea market. The part of the site that is east of Crows Landing Road is almost fully developed. There is a large wine labeling facility east of Crows Landing Road and south of Whitmore Road; the remainder of the east part of the Plan Area is almost fully developed in County services buildings and related facilities.

Surrounding land uses in this semi-rural portion of Stanislaus County are primarily agricultural, interspersed with areas of residential, industrial, and commercial development. Residential subdivisions are located to the north and east of the Specific Plan area, while orchards and agricultural fields occur to the south and west of the site.

Vegetation

Virtually all of the Plan Area is developed or intensively farmed in orchard and grain crops. The orchard floors, road shoulders, and other ruderal areas in the site are vegetated with various native and non-native annual grass and weed species. Grasses including oats (*Avena* sp.), Bermuda grass (*Cynodon dactylon*), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), foxtail barley (*Hordeum murinum*), and perennial ryegrass (*Lolium perenne*) are dominant grass species on-site. Other grassland species such as fiddleneck (*Amsinckia menziesii*), black mustard (*Brassica nigra*), milk thistle (*Silybum marianum*), prickly lettuce (*Lactuca serriola*), pigweed (*Amaranthus albus*), dove weed (*Eremocarpus setigerus*), common mallow (*Malva neglecta*), and filaree (*Erodium botrys*) are intermixed with the grasses. A complete list of plant species observed in the Plan Area is included as Table 1 in Appendix C.

There are a few coastal live oaks (*Quercus agrifolia*) in the landscaped entry to the G3 Enterprises facility and there may be a few more within the landscaped areas around some of the County services buildings. No other notable oaks were observed in the Specific Plan area, and further survey was not performed as a) no change is proposed to these landscaped areas for existing uses and b) the City of

Ceres has no policies related specifically to oaks. In addition to thousands of orchard trees, the site also contains trees including mulberry (*Morus alba*), California fan palm (*Washingtonia filifera*), pines (*Pinus* sp.), redwoods (*Sequoia sempervirens*), tree of heaven (*Ailanthus altissima*), and black locust (*Robinia pseudoacacia*). These ornamentals are primarily growing around the homes and other buildings. One blue elderberry (*Sambucus* sp.) shrub was observed within the Plan Area.



Figure 7.1: Almond orchard in the north-central part of the site, looking northeast, 3/7/08.



Figure 7.2: Pistachio orchard in the west part of the site, looking southeast, 3/7/08.



Figure 7.3: Alfalfa field in the northwest part of the site, looking northwest, 3/7/08.



Figure 7.4: Newly planted grain in the west-central part of the site, looking southeast, 3/7/08.

Wildlife

A limited number of wildlife species were observed in the Plan Area. A complete list is included as Table 2 in Appendix C. Some of the more common birds observed include red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), northern mockingbird (*Mimus polyglottos*), western scrub jay (*Aphelocoma coerulescens*), mourning dove (*Zenaidura macroura*), and house finch (*Carpodacus mexicanus*). All of these are species commonly found in rural areas of central Stanislaus County.

There are only a few trees within the Specific Plan area that are large enough to be suitable for nesting raptors, including Swainson's hawk. During both of the surveys, a pair of red-tailed hawks was observed flying over a cluster of ornamental trees in the west-central part of the site making

alarm calls suggesting a nest site was nearby. During the second survey, a stick nest was located in one of the trees and an adult was perched nearby. Given the size of the Plan Area and the presence of trees and high-quality raptor foraging habitat (grain fields) in and near the site, it is likely one or more pairs of raptors, plus a variety of songbirds, nest in the Plan Area each year.

A limited variety of mammals common to agricultural and semi-rural areas occur in the Plan Area. California ground squirrels (*Spermophilus beecheyi*) were observed in the site; evidence of raccoon (*Procyon lotor*) was also observed. Coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*) and Virginia opossum (*Didelphis virginiana*) are expected to occur in the Specific Plan area. A number of species of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and voles (*Microtus californicus*) are also likely occur.

Based on habitat types present, a limited variety of amphibians and reptiles are expected to use habitats in the Specific Plan area. Western fence lizard (*Sceloporus occidentalis*) was the only reptile observed in the site; no amphibians were observed. Although none were observed, the site provides suitable habitat for species including Pacific chorus frog (*Pseudacris regilla*), Gilbert's skink (*Eumeces gilbertii*), western toad (*Bufo boreas*), coast horned lizard (*Phrynosoma coronatum*), gopher snake (*Pituophis melanoleucus*), and common garter snake (*Thamnophis sirtalis*).

Waters of the U.S. and Wetlands

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into waters of the U.S. Both CDFG and ACOE have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE Wetlands Delineation Manual (ACOE, 1987; 2008). Waters of the U.S. are drainage features or water bodies as described in 33 CFR 328.4. Currently, ACOE and the U.S. Environmental Protection Agency (EPA) share authority to determine the jurisdictional status of waters of the U.S., including wetlands.

In the past, ACOE has asserted jurisdiction over isolated wetlands, as well as ephemeral and intermittent streams, in cases where there is a downstream tributary connection to jurisdictional Waters of the U.S. However, in the 2001 SWANCC case, the U.S. Supreme Court concluded that isolated wetlands must have a connection to interstate or foreign commerce to fall within ACOE jurisdiction. In 2006, one of the Supreme Court opinions in the Rapanos case stated that a tributary is subject to ACOE jurisdiction only if it is a relatively permanent, standing or flowing body of water, not a channel containing merely intermittent or ephemeral flow. A concurring opinion further clarified that a wetland or a tributary must have a "significant nexus" with a traditionally navigable water of the U.S. in order to be subject to ACOE jurisdiction.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

No potential jurisdictional Waters of the U.S. or wetlands were observed in the Specific Plan area. The site consists of developed parcels and leveled upland orchards and fields with sandy and apparently well-draining soils. No areas were observed within or adjacent to the site appearing to have any potential to fall under ACOE jurisdiction. Specifically, no vernal pools, seasonal wetlands, marshes, ponds, creeks, or lakes of any type were observed in or adjacent to the site.

There are also no surface irrigation canals or laterals in the Specific Plan area; the orchards and fields are either sprinkler- or flood-irrigated. A Turlock Irrigation District (TID) irrigation lateral historically ran through the southeast part of the site. No evidence of this lateral was found in the field and a farmer explained that the lateral had been piped underground many years ago. The orchards and fields continue to be irrigated from the underground pipe, which delivers water derived from the Tuolumne River many miles east of the site.

Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take being broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants include species that are designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS). Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2001). Finally, sensitive plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 7.1 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater Plan vicinity or for which there is potentially suitable habitat in the Plan area. This table also includes an assessment of the likelihood of occurrence of each of these species within the Specific Plan area. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

Table 7.1: Special-Status Species Documented or Potentially Occurring in the Project Vicinity

| Common Name | Scientific Name | Federal Status ¹ | State Status ² | CNPS List ³ | Habitat | Likelihood of Occurrence in the Specific Plan |
|-----------------------------------|---|-----------------------------|---------------------------|------------------------|--|---|
| PLANTS | | | | | | |
| Big tarplant | <i>Blepharizonia plumosa ssp. plumosa</i> | None | None | 1B | Valley and foothill grassland. | Extremely low: the orchards, grain fields, and ruderal habitats along road edges are not suitable habitat for this species. The CNDDDB (2008) reports the closest occurrence of big tarplant approximately 8 miles northwest of the Specific Plan area. |
| WILDLIFE | | | | | | |
| Birds | | | | | | |
| Swainson's hawk | <i>Buteo swainsoni</i> | None | T | N/A | Nesting: large trees, usually within riparian corridors. Foraging: agricultural fields and annual grasslands. | Low: there are only a few suitable Swainson's hawk nest trees within the Specific Plan area. Swainson's hawks may use the open grassland and cropland in the site for foraging. The nearest occurrence of nesting Swainson's hawks in the CNDDDB (2008) is approximately 3 miles northeast of the Specific Plan area. |
| Burrowing owl | <i>Athene cunicularia</i> | None | SC | N/A | Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. | Low: there are a few ground squirrel burrows along the edges of some of the fields. However, no burrowing owls or evidence of occupancy were found during the 2008 surveys. The nearest occurrence of this species recorded in the CNDDDB (2008) is approximately 10 miles northeast of the Specific Plan area. |
| Tricolored blackbird | <i>Agelaius tricolor</i> | None | SC | N/A | Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat. | Very low: there is no suitable nesting habitat for tricolored blackbirds within the Specific Plan area. This species may occasionally fly through the area. The nearest occurrence of tricolored blackbird recorded in the CNDDDB (2008) is approximately 4 miles southwest of the site. |
| Suisun song sparrow | <i>Melospiza melodia maxillaris</i> | None | SC | N/A | Resident of brackish water marshes surrounding Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs | Extremely low: there is no suitable habitat for this species within the Specific Plan area. The only occurrence of Suisun song sparrow recorded in the CNDDDB (2008) within the 240-square mile search area is a 1915 record with the general location description "Modesto". This species may fly over the area on occasion. |
| Amphibians | | | | | | |
| California tiger salamander | <i>Ambystoma californiense</i> | T | SC | N/A | Seasonal water bodies without fish (i.e., vernal pools and stock ponds) near grassland/ woodland habitats with summer refugia (i.e., burrows). | Extremely low: there is no suitable habitat within or near the site for California tiger salamander. The only occurrence of this species recorded in the CNDDDB (2008) within the 240-square mile search area is approximately 10 miles northwest of the site; this population is described in the CNDDDB as extirpated (i.e., it no longer exists). The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a). |
| Invertebrates | | | | | | |
| Vernal pool fairy shrimp | <i>Branchinecta lynchi</i> | T | None | N/A | Vernal pools and seasonally wet depressions within the Central Valley. | Extremely low: There is no suitable habitat in the site for vernal pool fairy shrimp. The nearest occurrence of vernal pool fairy shrimp recorded in the CNDDDB (2008) is approximately 8 miles northeast of the Specific Plan area. The site is not within designated critical habitat for vernal pool species (USFWS, 2005b). |
| Vernal pool tadpole shrimp | <i>Lepidurus packardii</i> | E | None | N/A | Vernal pools in the Central Valley. | Extremely low: There is no suitable habitat along the alignment for vernal pool tadpole shrimp. The nearest occurrence of vernal pool tadpole shrimp recorded in the CNDDDB (2008) is approximately 8 miles northeast of the Specific Plan area. The site is not within designated critical habitat for vernal pool species (USFWS, 2005b). |
| Valley elderberry longhorn beetle | <i>Desmocerus californicus dimorphus</i> | T | None | N/A | Elderberry shrubs within the Central Valley of California. | Extremely low: No blue elderberry shrubs were observed in or adjacent to the alignment. The nearest occurrence of valley elderberry longhorn beetle recorded in the CNDDDB (2008) is approximately 3 miles northeast of the site. |

¹ T = Threatened; E = Endangered.

² T = Threatened; SC= State of California Species of Special Concern.

³ CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere.

Special-Status Plants

Special-status plants found within the greater Plan vicinity generally occur in relatively undisturbed areas and are largely found within vegetation communities such as marshes, swamps, and riparian scrub, which are not found within the Specific Plan area. The only special-status plant identified in the CNDDDB (2008) 240-square mile search area is big tarplant (*Blepharizonia plumosa* ssp. *plumosa*).

Based on the ongoing level of disturbance from past and ongoing farming practices, the likelihood of occurrence of listed, candidate, and other special-status plant species in the Plan area is very low. No sensitive plant species were observed during the surveys and the intensively cultivated orchards, grain fields, and developed parcels in the site do not provide suitable habitat for special-status plant species. Due to lack of suitable habitat, no special-status plant species are expected to occur within the Specific Plan area.

Special-Status Wildlife

The potential for intensive use of habitats within the Specific Plan area by special-status wildlife species is low. Sensitive wildlife species that have been recorded in greater Plan vicinity in the CNDDDB (2008) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), Suisun song sparrow (*Melospiza melodia maxillaris*), California tiger salamander (*Ambystoma californiense*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

While the Plan area and surrounding areas may have provided habitat for the special-status wildlife species listed in **Table 5.1** at some time in the past, farming and development in the site and surrounding parcels have substantially modified natural habitats within the greater Plan vicinity. Of the wildlife species identified in the CNDDDB, Swainson's hawk, burrowing owl, and Valley elderberry longhorn beetle (VELB) are the only species that have potential to occur within the Specific Plan area on more than a transitory or very occasional basis. These species are discussed in the impact section because they could be adversely affected by conversion of habitat to development and/or disturbed by construction noise.

IMPACT ANALYSIS

STANDARDS OF SIGNIFICANCE

State CEQA Guidelines and standard professional practice determine whether the proposed Specific Plan would have a significant environmental effect. The Plan would have a significant impact on biological resources if it would:

1. Result in a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations or by CDFG or USFWS;
2. Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USWFS;
3. Result in a substantial adverse effect on wetlands as defined by the Corps under Section 404 of the Clean Water Act or the Regional Water Quality Control Board under the Porter-Cologne Act through direct removal, filling, hydrological interruption, or other means;

4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
7. Result in impacts to biological resources that are individually limited, but cumulatively considerable (i.e., the incremental effects of the project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

SPECIAL STATUS SPECIES

Plants

The likelihood of occurrence of special-status plant species in the site is considered extremely low due to a lack of suitable habitat. Future development in the Specific Plan area is expected to have less than significant impacts to special-status plants.

Wildlife

The likelihood of occurrence of sensitive wildlife species in the site is also considered very low. With the exception of Swainson's hawk, burrowing owl, and Valley elderberry longhorn beetle, no sensitive wildlife species are expected to occur in the site on more than a very occasional or transitory basis.

Swainson's Hawk

The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Impact Bio-1: Disturbance of Nesting Swainson's Hawks. Construction activities associated with buildout of the Plan Area could adversely affect nesting Swainson's hawks.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDDB (2008) contains several records of nesting Swainson's hawk in the greater Plan vicinity; the nearest occurrence of nesting Swainson's hawks in the CNDDDB is approximately 3 miles northeast of the Specific Plan area. There are areas of open grassland and cropland in and adjacent to the site that may be used by foraging Swainson's hawks; there are also a few relatively large trees

within and surrounding the Plan site. However, no Swainson’s hawks were observed in or near the Specific Plan area during the 2008 surveys. While the somewhat urban setting reduces the suitability of trees in and near the Specific Plan area for nesting, the likelihood of Swainson’s hawks nesting in some of these trees in the future is possible.

Mitigation Measure

Bio-1: Pre-Construction Swainson’s Hawk Survey. Pre-construction surveys for nesting Swainson’s hawks within 0.25 miles of the Plan area shall be conducted if construction commences between March 1 and September 15. If active nests are found, a qualified biologist shall determine the need (if any) for temporal restrictions on construction or through setbacks from active nests. The determination should be pursuant to criteria set forth by CDFG (1994).

Implementation of Mitigation Measure Bio-2 will reduce the impact related to potential disturbance of nesting Swainson’s hawks to a level of *less than significant*.

Impact Bio-2: Loss of Swainson Hawk Foraging Habitat. Conversion of the alfalfa fields, grain fields, and annual cropland within the Specific Plan area to development will result in a minor, yet permanent loss of potential Swainson’s hawk foraging habitat, and contribute to the cumulative loss of potential Swainson’s hawk foraging habitat in the greater Plan vicinity.

The CNDDDB (2008) contains several records of nesting Swainson’s hawk in the greater Plan vicinity; the nearest occurrence of nesting Swainson’s hawks in the CNDDDB is approximately 3 miles northeast of the Specific Plan area. There are areas of open grassland and cropland in and adjacent to the site that may be used by foraging Swainson’s hawks.

CDFG’s Staff Report regarding Mitigation for Impacts to Swainson’s hawks (*Buteo Swainsoni*) in the Central Valley of California (1994) provides a framework for assessing project impacts and guidance on habitat mitigation in the form of easements on off-site lands. As various parcels are developed over time consultation with CDFG is recommended on a project-by-project basis to determine the need for compensatory habitat mitigation.

Mitigation Measure

Bio-2: Swainson’s Hawk Foraging Easements. Pursuant to CDFG guidelines for development located near an active nest, development projects within the Plan area proposing conversion of alfalfa fields, grain fields, and annual cropland shall provide habitat to be protected in perpetuity for every acre of foraging habitat impacted according to the ratios presented below and/or consult with CDFG to determine appropriate compensatory habitat mitigation.

| Distance to an active nest | Habitat to be protected per acre impacted |
|----------------------------|---|
| 1 mile | 1.5 acres |
| 1 to 5 miles | 0.75 acres |
| 5 to 10 miles | 0.5 acres |
| Over 10 miles | 0 acres |

Unless a different distance can be demonstrated by subsequent nesting studies, development in the Plan area shall be assumed to be within 1 to 5 miles of an active nest, requiring 0.75 acres to be protected for each acre of alfalfa fields, grain fields, and annual cropland converted.

The mitigation will be accomplished either by developing a project-specific mitigation agreement that would be submitted to CDFG for approval or by purchasing Swainson's Hawk mitigation credits at a CDFG-approved mitigation bank.

Implementation of Mitigation Measure Bio-1 will reduce the impact related to loss of Swainson's hawk foraging habitat to a level of *less than significant* by requiring compensatory habitat mitigation for loss of foraging habitat.

Burrowing Owl

The Migratory Bird Treaty Act and Fish and Game Code of California protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

Impact Bio-3: Burrowing Owl Disturbance. Site grading and other forms of construction disturbance could result in the direct loss or injury to burrowing owls or the forced evacuation from their burrows.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. The nearest occurrence of this species recorded in the CNDDB (2008) is approximately 10 miles northeast of the Specific Plan area.

No burrowing owls were observed in or near the Specific Plan area during the 2008 surveys. Further, none of the ground squirrel burrows had any evidence of burrowing owl occupancy (i.e. whitewash, feathers and/or pellets). Intensive agriculture and development within and surrounding the Specific plan area substantially reduce the likelihood of owls potentially using the site for foraging and nesting. However, this species could conceivably move into and nest in the site in the future.

CDFG's Staff Report on Burrowing Owl Mitigation (1995) provides the framework for minimizing potential construction impacts to burrowing owls through setbacks from active nests and relocation of any non-nesting owls that move into construction areas. Pre-construction surveys for burrowing owls within the Specific Plan areas should be conducted if construction commences between February 1 and August 31.

Mitigation Measure

Bio-3: Pre-construction Burrowing Owl Survey. Pre-construction surveys for burrowing owls within the Specific Plan area should be conducted if construction commences between February 1 and August 31. If occupied burrows are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction. The determination should be pursuant to criteria set forth by CDFG (1995). If owls need to be moved, they should be passively relocated prior to February 1 or after August 31 using standard methodologies (CDFG, 1995).

Implementation of Mitigation Measure Bio-3 will reduce the impact related to potential disturbance of burrowing owls to a level of *less than significant*.

Impact Bio-4: Loss of Burrowing Owl Habitat. If a burrowing owl is found within the Specific Plan area, conversion of habitat surrounding the burrow would result in a minor, yet permanent loss of burrowing owl foraging habitat.

Alfalfa fields, grain fields, and annual cropland within the Specific Plan area provide burrow and foraging habitat for burrowing owl. As described above, no burrowing owls were observed in or near the Specific Plan area during the 2008 surveys and none of the ground squirrel burrows had any evidence of burrowing owl occupancy. Although intensive agriculture and development in the area substantially reduce the likelihood of occurrence of burrowing owl foraging and nesting within the Specific Plan area, this species could move into the site in the future.

CDFG's Staff Report on Burrowing Owl Mitigation (1995) identifies an areas of recommends a minimum of 6.5 acres of nesting and foraging habitat per pair or unpaired resident bird be acquired and permanently protected to offset the loss of burrowing owl habitat around an active burrow lost to development. This acreage is based on the birds foraging around the burrow in a circle with a radius of approximately 100 feet.

Mitigation Measure

Bio-4: Burrowing Owl Easement. To offset the loss of burrowing owl habitat around an active burrow lost to development, 6.5 acres of nesting and foraging habitat per pair or unpaired resident bird be acquired and permanently protected. A permanent conservation easement prohibiting any activities inconsistent with burrowing owl management would be required, as would an endowment to fund management and monitoring in perpetuity. Approval of the location, size, and management of the burrowing owl habitat area by CDFG would be required.

The mitigation will be accomplished either by developing a project-specific mitigation agreement that would be submitted to CDFG for approval or by purchasing burrowing owl mitigation credits at a CDFG-approved mitigation, if available.

Implementation of Mitigation Measure Bio-4 will reduce the impact related to potential loss of burrowing owl habitat to a level of *less than significant*.

Valley Elderberry Longhorn Beetle

The Valley elderberry longhorn beetle (VELB) is listed as a federally threatened species and its host plant is the blue elderberry shrub. The United States Fish and Wildlife Service (USFWS, 1999) Conservation Guidelines for the Valley Elderberry Longhorn Beetle identifies stems in excess of 1 inch diameter at ground level as potential habitat for the beetle. These guidelines direct that, if possible, elderberry shrubs should be avoided by a ground disturbance set back of at least twenty feet from the drip line of each shrub. The guidelines further directs that buffer areas between 20 and 100 feet from the driplines of the shrubs that are subject to temporary ground disturbance should be restored or re-vegetated. Although USFWS announced in early-October 2006 that science supports de-listing of the species, VELB remains protected until the formal de-listing process is completed.

Only one blue elderberry shrub was located in the site. No other blue elderberry shrubs were observed within or adjacent to the Specific Plan area. The blue elderberry shrub is about 15 feet tall, with several stems over 1 inch in diameter at ground level. A few stems had old and weathered bore holes that were somewhat suggestive of past occupancy by VELB, but no freshly cut definitive holes were observed. Despite lack of definitive evidence of species' occupancy, valley elderberry longhorn beetle could conceivably inhabit the shrub.

Between the field survey and completion of this report, the property owners consulted with USFWS. A survey by a USFWS biologist resulted in a conclusion that the elderberry shrub was unlikely to harbor or provide habitat for VELB, pursuant to the Endangered Species Act of 1973, and could be removed without it being considered a “take” (see message from USFWS, included in Appendix C). The elderberry shrub was promptly removed and is no longer on the site.

The owners have already taken the appropriate action and removed the elderberry bush following consultation with USFWS and a conclusion that the bush did not harbor the protected VELB and therefore, that removal of the bush would not affect VELB. There would be *no impact* with respect to VELB.

Other Nesting Birds

Impact Bio-5: Disturbance of Nesting Birds. Construction activities associated with buildout of the Plan area could adversely affect nesting birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California.

On-site trees could be used by birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California. If tree removal or any type of site disturbance or construction occurs during the avian nesting season (February 1 to August 31), the developer(s) should retain a qualified wildlife biologist to conduct a nesting bird surveys survey to determine if nests are active or occupied onsite or within 100 feet of the project site.

Mitigation Measure

Bio-5: Pre-Construction Nesting Bird Survey. Pre-construction surveys for nesting birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California within 100 feet of a development site in the Plan area shall be conducted if construction commences during the avian nesting season, between February 1 and August 31. The survey should be undertaken no more than 15 days prior to any site-disturbing activities, including vegetation removal or grading. If active nests are found, a qualified biologist shall determine an appropriate buffer in consideration of species, stage of nesting, location of the nest, and type of construction activity. The buffers should be maintained until after the nestlings have fledged and left the nest.

Implementation of Mitigation Measure Bio-4 will reduce the impact related to potential disturbance of nesting birds to a level of *less than significant*.

SENSITIVE NATURAL COMMUNITY

No riparian habitats or other sensitive natural communities were observed in the Specific Plan area. Therefore, development of the Plan area will not have a substantial adverse effect on any riparian habitats or other sensitive natural communities (*no impact*).

WETLANDS

No potential jurisdictional Waters of the U.S. or wetlands were observed in the Specific Plan area. Therefore, development of the Plan will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (*no impact*).

WILDLIFE MOVEMENT AND NURSERY SITES

There are no creeks, valleys, or other wildlife movement corridors in the site. The developed lands and intensively cultivated orchards and grain fields are not suitable nursery sites. Development of the Plan will not interfere substantially with wildlife movement or impede the use of wildlife nursery sites (*no impact*).

CONFLICT WITH POLICIES OR ORDINANCES

There are no known local policies or ordinances protecting biological resources. Future development in the Specific Plan area is not expected to conflict with any local policies or ordinances protecting biological resources (*no impact*).

CONFLICT WITH A CONSERVATION PLAN

The Specific Plan area is not located within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (*no impact*).

CUMULATIVE BIOLOGICAL RESOURCES IMPACTS

Development of the Plan would contribute to cumulative loss of foraging habitat for Swainson's hawk, as specified in Impact Bio-1. However, implementation of mitigation measure Bio-1 would reduce this cumulative impact to a less than significant level. Disturbance of burrowing owls and nesting Swainson's hawks and other nesting birds during construction phases would be mitigated on a project level through implementation of mitigation measures Bio-2, Bio-3 and Bio-4 and the cumulative impact would be *less than significant*.

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