APPENDIX C

BIOLOGICAL RESOURCES ASSESSMENT

MOORE BIOLOGICAL CONSULTANTS

December 1, 2008

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Subject: BASELINE BIOLOGICAL RESOURCES ASSESSMENT AT THE WEST CERES SPECIFIC PLAN AREA, STANISLAUS COUNTY, CALIFORNIA

Dear Rebecca:

Thank you for asking Moore Biological Consultants to conduct a baseline biological resources assessment of the West Ceres Specific Plan area (Figures 1 and 2). The focus of our work was to document existing biological resources in the site, conduct a survey to determine presence or absence of waters of the U.S. and wetlands, and search for suitable habitat for or presence of sensitive species in the site. This letter report details the methodology and results of our investigation.

Methods

Prior to the field surveys, we conducted a search of California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB, 2008). This information was used to identify species that have been previously documented in the greater project vicinity or have the potential to occur based on presence of suitable habitat and geographical distribution. Since the site is located near the

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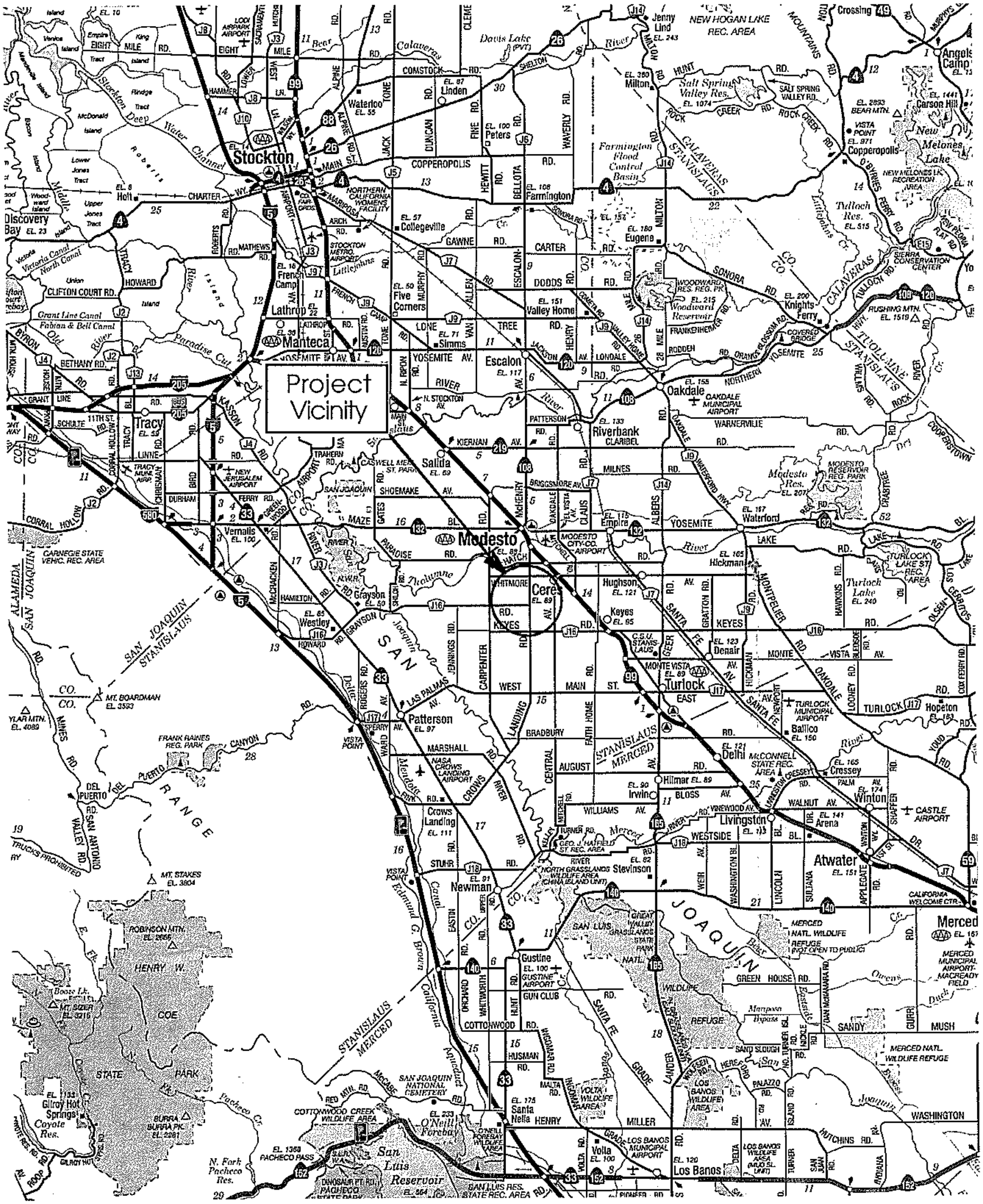

Scale: 1 inch = 9 miles

Source: Calif. State Automobile Association

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FIGURE 1

PROJECT VICINITY

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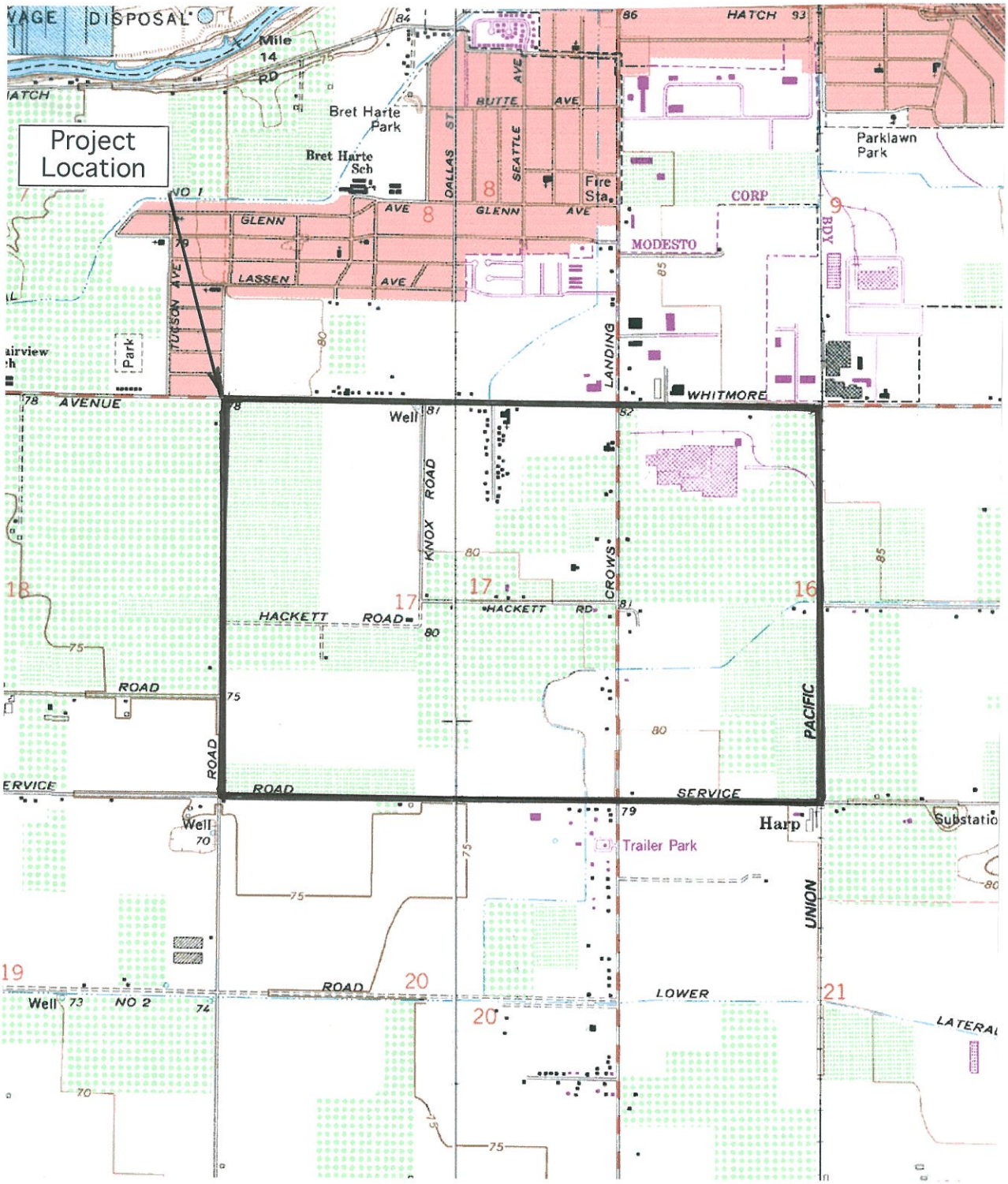

Scale: 1 inch = 2,000 feet

Source: USGS 7.5-minute Brush Lake & Ceres topographic quadrangles

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FIGURE 2
PROJECT LOCATION

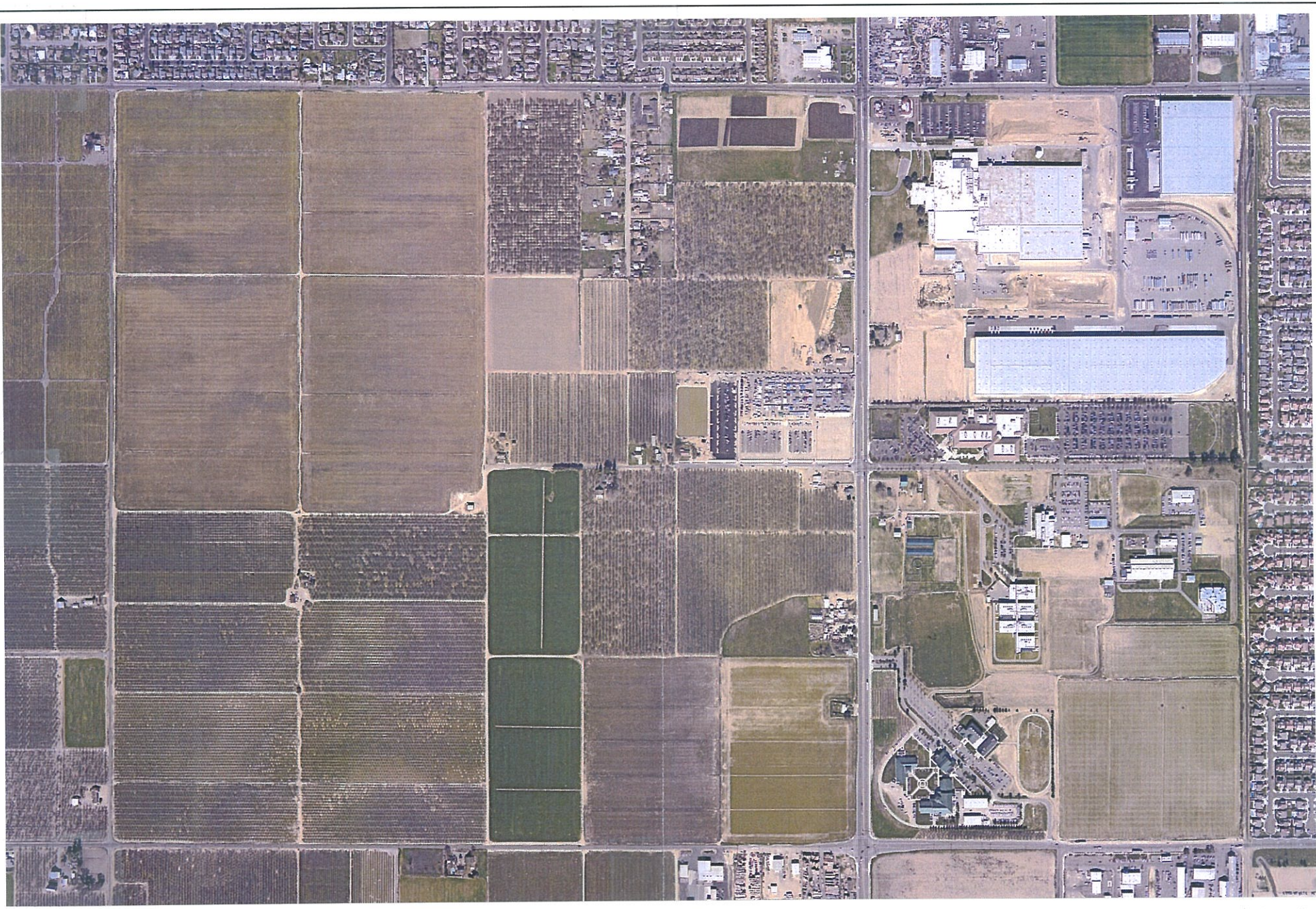
intersection of the USGS 7.5-minute Ceres, Brush Lake, Salida, and Riverbank topographic quadrangles, the CNDDB search encompassed all four quadrangles This CNDDB search area is approximately 240 square miles surrounding the Specific Plan area.

Field surveys were conducted on March 7 and June 12, 2008. The surveys consisted of driving and walking throughout the Specific Plan area, making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. We conducted an assessment of potentially jurisdictional Waters of the U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008), and searched for sensitive species and suitable habitat for sensitive species (e.g., blue elderberry shrubs, vernal pools). Additionally, on-site trees were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*), and on-site burrows were inspected for evidence of burrowing owl (*Athene cunicularia*) occupancy.

Results

GENERAL SETTING: The Specific Plan area is located just west of Ceres, in Stanislaus County, California (Figure 1). The site is within Sections 16 and 17, Township 4 South, Range 9 East of the USGS 7.5-minute Ceres and Brush Lake topographic quadrangles (Figure 2). The site is essentially level and is at an elevation of approximately 80 feet above mean sea level.

West of Crows Landing Road, the site primarily consists of almond orchards, alfalfa fields, and grain fields (Figure 3 and attached photographs). 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.



Scale: 1inch = +/-900 feet
Source: Google Earth

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FIGURE 3
AERIAL PHOTOGRAPH

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 Specific 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*), millk 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. Table 1 is a list of plant species observed in the Specific Plan area.

There are a few coastal live oaks (*Quercus agrifolia*) in the landscaped entry to the G-3 Enterprises facility. No other notable oaks were observed in the Specific Plan area, although there may be a few more within landscaped areas around some of the County services buildings. 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.

Only one blue elderberry (*Sambucus* sp.) shrub was observed within the Specific Plan area. The shrub is adjacent to a metal shed, right along the west edge of Crows Landing Road (Figure 4 and attached photograph). No other blue elderberry shrubs were observed within or adjacent to the Specific Plan area.

TABLE 1

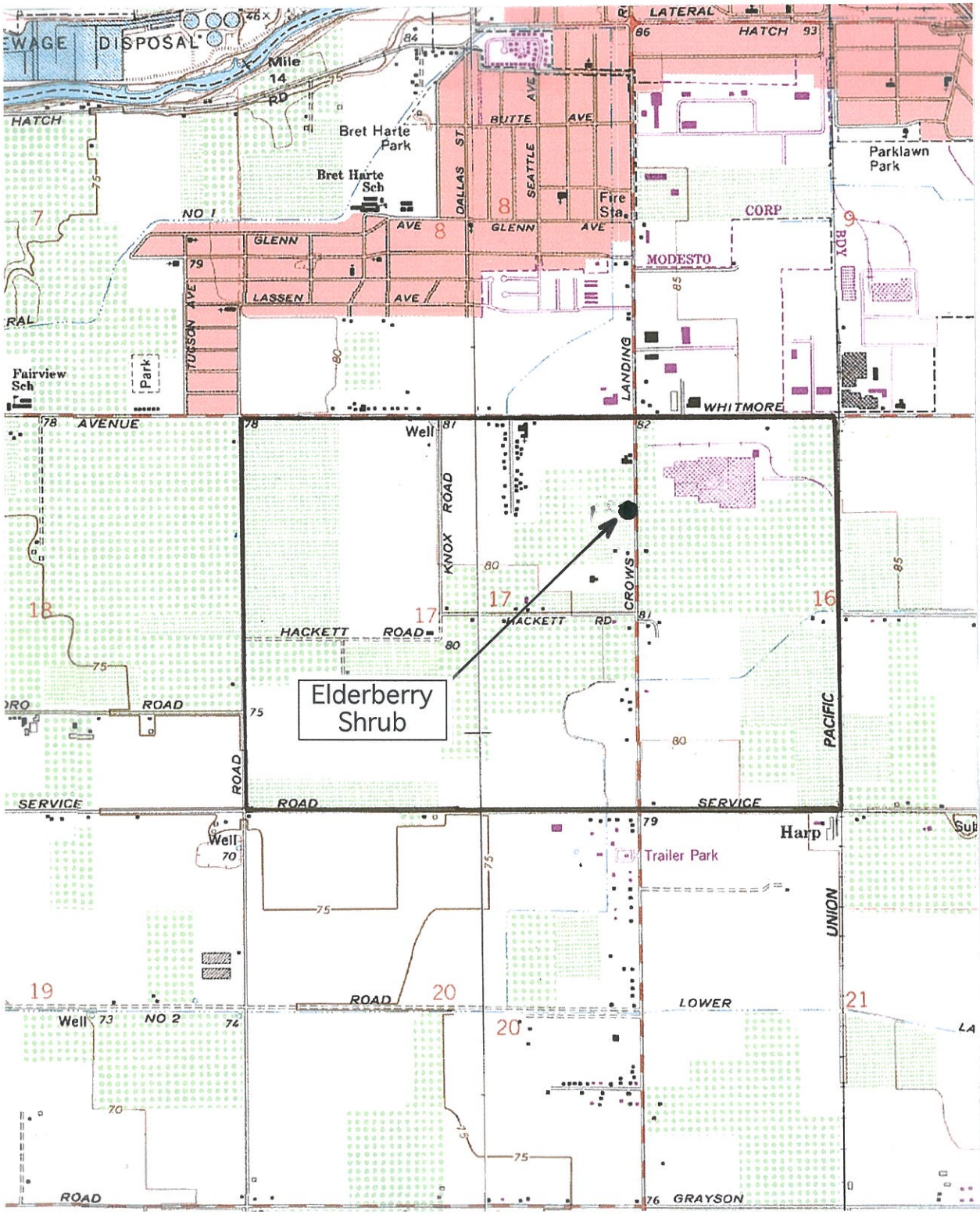
PLANT SPECIES OBSERVED IN THE SPECIFIC PLAN AREA

Ailanthus altissima	tree of heaven
Amaranthus albus	pigweed
Amsinckia menziesii	fiddleneck
Avena sp.	oat
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft-chess brome
Calandrinia ciliata	red maids
Capsella bursa var. pastoris	shepherds purse
Centaurea solstitialis	yellow star-thistle
Chamomilla suaveolens	pineapple weed
Convolvulus arvensis	morning glory
Cucurbita foetidissima	calabazilla
Cynodon dactylon	Bermuda grass
Cyperus eragrostis	umbrella sedge
Dactylis glomerata	orchard grass
Datura innoxia	datura
Eremocarpus setigerus	dove weed
Erodium botrys	filaree
Erodium circutarium	red-stem filaree
Eschscholzia californica	California poppy
Helianthus annuus	common sunflower
Holocarpha virgata	tarweed
Hordeum murinum	foxtail barley
Hypochaeris glabra	smooth cat's ear
Lactuca serriola	prickly lettuce
Lamium amplexicaule	clasping henbit

TABLE 1 (continued)

PLANT SPECIES OBSERVED IN THE SPECIFIC PLAN AREA

Lolium perenne	perennial ryegrass
Malva neglecta	common mallow
Morus alba	mulberry
Olea europaea	olive
Paspalum dilatatum	Dallis grass
Pinus sp.	pine
Plantago sp.	plantain
Poa annua	annual bluegrass
Prunus dulcis	almond
Quercus agrifolia	coastal live oak
Raphanus sativus	wild radish
Robinia pseudoacacia	black locust
Rumex crispus	curly dock
Salsola tragus	tumbleweed
Sambucus mexicana	blue elderberry
Senecio vulgaris	common groundsel
Sequoia sempervirens	coastal redwood
Silybum marianum	milk thistle
Sonchus arvensis	sow-thistle
Sorghum halepense	Johnsongrass
Tribulus terrestris	puncture vine
Ulmus sp	elm
Vicia americana	vetch
Vicia sativa	winer vetch
Washingtonia filifera	California fan palm



Scale: 1 inch = 2,000 feet

Source: USGS 7.5-minute Brush Lake & Ceres topographic quadrangles

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FIGURE 4
ELDERBERRY SHRUB LOCATION

WILDLIFE: A limited number of wildlife species were observed in the Specific Plan area. 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 (*Zenaida macroura*), and house finch (*Carpodacus mexicanus*). All of these are species commonly found in rural areas of central Stanislaus County (Table 2).

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 Specific 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 Specific Plan area each year.

A limited variety of mammals common to agricultural and semi-rural areas occur in the Specific 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*) 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*),

TABLE 2

WILDLIFE SPECIES OBSERVED IN THE SPECIFIC PLAN AREA

Birds	
Turkey vulture	*Cathartes aura*
Red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
California gull	*Larus californicus*
Mourning dove	*Zenaida macroura*
Northern flicker	*Colaptes auratus*
Western kingbird	*Tyrannus verticalis*
Western scrub jay	*Aphelocoma coerulescens*
Yellow-billed magpie	*Pica nuttalli*
American crow	*Corvus brachyrhynchos*
Western bluebird	*Sialia mexicana*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
White-crowned sparrow	*Zonotrichia leucophrys*
Red-winged blackbird	*Agelaius phoeniceus*
Brewer's blackbird	*Euphagus cyanocephalus*
House finch	*Carpodacus mexicanus*
House sparrow	*Passer domesticus*
Mammals	
Raccoon	*Procyon lotor*
California ground squirrel	*Spermophilus beecheyi*
Amphibians	
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 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 he southeast part of the site. This lateral is mapped as "blue-line" drainage on the USGS topographic map (Figure 2). 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 3 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project site. 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 3

SPECIAL-STATUS PLANT AND WILDLIFE 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	*Blepharizonia plumosa ssp. plumosa*	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 CNDDB (2008) reports the closest occurrence of big tarplant approximately 8 miles northwest of the Specific Plan area.
WILDLIFE						
Birds						
Swainson's hawk	*Buteo swainsoni*	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 CNDDB (2008) is approximately 3 miles northeast of the Specific Plan area.
Burrowing owl	*Athene cunicularia*	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 CNDDB (2008) is approximately 10 miles northeast of the Specific Plan area.
Tricolored blackbird	*Agelaius tricolor*	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 CNDDB (2008) is approximately 4 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE 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
Suisun song sparrow	*Melospiza melodia maxillaris*	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 CNDDB (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	*Ambystoma californiense*	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 CNDDB (2008) within the 240-square mile search area is approximately 10 miles northwest of the site; this population is described in the CNDDB 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	*Branchinecta lynchi*	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 CNDDB (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).

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE 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
Vernal pool tadpole shrimp	*Lepidurus packardi*	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 CNDDB (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	*Desmocerus californicus dimorphus*	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 CNDDB (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 project 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 CNDDB (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 project site 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 project vicinity in the CNDDB (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 packardi*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

While the project site and surrounding areas may have provided habitat for the special-status wildlife species listed in Table 3 at some time in the past, farming and development in the site and surrounding parcels have substantially modified natural habitats within the greater project vicinity. Of the wildlife species identified in the CNDDB, Swainson's hawk, burrowing owl, and valley elderberry longhorn beetle 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 further below because they could be adversely affected by

conversion of habitat to development; the birds could also be disturbed by noise if they nested on or near the project site during construction.

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.

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 CNDDB (2008) contains several records of nesting Swainson's hawk in the greater project vicinity; the nearest occurrence of nesting Swainson's hawks in the CNDDB 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 project 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.

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.

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.

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. The shrub is adjacent to a metal shed, right along the west edge of Crows Landing Road (Figure 4). 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.

Discussion and Conclusions

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to biological resources are significant environmental effects, six resource issues are analyzed and evaluated. Each of the checklist items is addressed below.

1. *Will the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

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.

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

VELB, no sensitive wildlife species are expected to occur in the site on more than a very occasional or transitory basis.

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 project vicinity. 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.

CDFG's staff report also provides measures to minimize potential construction impacts to nesting hawks through setbacks from active nests. Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the project site are recommended if construction commences between March 1 and September 15. If active nests 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 (1994).

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. 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).

Disturbance to the on-site elderberry shrub should be avoided, if feasible, by restricting any type of ground disturbance activities within 20 feet of the drip line of the elderberry shrub. In the event that complete avoidance of the elderberry shrub is infeasible, consultation with USFWS is recommended to further assess the potential impacts to VELB and determine the need for any permits or mitigation.

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. The survey should be undertaken no more than 15 days prior to any site-disturbing activities, including vegetation removal or grading, Active nests should be protected with an appropriate buffer determined by the biologist 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.

2. *Will the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No riparian habitats or other sensitive natural communities were observed in the Specific Plan area. Therefore, the project will not have a substantial adverse effect on any riparian habitats or other sensitive natural communities.

3. *Will the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

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

4. *Will the project 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 wildlife 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. The project will not interfere substantially with wildlife movement or impede the use of wildlife nursery sites.

5. *Will the project have conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

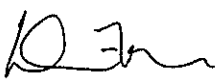
There are no known local policies or ordinances protecting biological resources. Future development in the Specific Plan area is not expected to conflict with any local policies or ordinances protecting biological resources.

6. *Will the project have conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat 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.

Thank you, again, for asking Moore Biological Consultants to conduct this work. Please feel free to call me at (209) 745-1159 with any questions.

Sincerely,



Diane S. Moore, M.S.
Principal Biologist

References and Literature Consulted

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USFWS. 2005b. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation and Economic Exclusions from August 2003 Final Designation, Final Rule. Federal Register Vol. 70, No. 154, August 11.

Almond orchard in the north-central part of the site, looking northeast; 3/07/08.

Pistachio orchard in the west part of the site, looking southeast; 3/07/08.

Newly planted orchard in the north-central part of the site, looking southeast; 3/07/08.

Alfalfa field in the northwest part of the site, looking northwest; 3/07/08.

Newly planted grain in the west-central part of the site, looking southeast; 3/07/08.

Blue elderberry shrub on the west side of Crows Landing Road; 3/07/08.