

CARMELITA PROJECT

BIOLOGICAL RESOURCES

ENVIRONMENTAL ASSESSMENT



JULY | 2010

Lead Agency

Fresno County, Public Works and Planning

Operator

Carmelita Resources, LLC

Applicant

Colony Land Company, L.P.

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BIOLOGICAL RESOURCES ENVIRONMENTAL ASSESSMENT

The purpose of this Biological Resources Environmental Assessment is to provide a discussion of the biological resources present at the Project site and recognizes the special-status plant, wildlife, and invertebrate species that might inhabit or use the Project site. This report also identifies any impacts to the biological resources and provides proposed mitigation measures that would lessen these impacts, when possible, to a less than significant level.

1.0 METHODOLOGY AND TERMINOLOGY

The environmental setting and the impact assessment of the Carmelita Project (Project) impacts to biological resources are based on literature searches as well as field investigations. Prior to performing biological field surveys within the Project site boundaries, literature reviews, state records searches and map overlay analyses were conducted for the following purposes:

- Search for, and obtain, previously compiled inventories of plant and wildlife species and natural plant communities of properties in the vicinity;
- Identify biologically sensitive species and habitat types known or expected to occur and compare their habitat requirements to those of the Project site; and
- Determine if there is any need to conduct focused biological surveys to determine the presence of biologically sensitive species.

1.1 Literature Review

A review of agency data bases including the California Department of Fish and Game's (DFG) Natural Diversity Data Base (CNDDDB), the U.S. Fish and Wildlife Service (FWS) listing of Threatened and Endangered Species and the California Native Plant Societies (CNPS) Inventory of Rare and Endangered Plant Species.

Specifically, a database and literature review was conducted to include some, or all, of the following: USFWS Federal Endangered and Threatened Species list (2009), CNDDDB (CDFG 2009), California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2009), other technical studies recently completed for other projects in the area, current listings for special status species (CDFG 2009), USGS topographic maps, Natural Resource Conservation Service (NRCS) soil maps, National Wetland Inventory Maps, etc.

1.2 Field Surveys

Information on the biological resources was based on several specialized biological surveys conducted between November 2008 and June 2009 including protocol level surveys for the Initial Site Assessment for California Tiger Salamander habitat, with focused surveys for Burrowing Owls (*Athene cunicularia*), Valley Elderberry Longhorn Beetles (*Desmocerus californicus dimorphus*), and nesting raptors.

Site surveys were conducted during the appropriate time of the year as specified in the guidelines and protocols for the species to evaluate the likelihood of the species of concern occupying or being impacted by the proposed Project. In addition, no jurisdictional wetlands occur on the Project site or within 100 feet of the site. The Fink Ditch is a man-made irrigation ditch constructed through upland habitat and as such does not meet U.S. Army Corps of Engineers definition of a jurisdiction wetland. The Project design is currently maintaining a 100-foot buffer from the ditch.

Although detailed surveys were conducted, none of the species were observed on the Project site nor is there a high probability of occurrence on the Project site due to the Project site's current extensive land use (disturbance). In addition, proposed mitigation measures, when implemented, will reduce the potential impacts to these species to a less than significant level. Impact BIO-1 through BIO-5, provided below in Section 5.0; provide the results of the detailed surveys. These surveys are also provided in Appendices to this Assessment. These Appendices are Appendix A, Biological Assessment Report, Appendix A-1, Official Agency Species List, Appendix A-2, Supplemental Survey Data, and Appendix A-3, NatureServe Ranking Definitions.

- **Floristic Survey:** ESR, Inc. conducted driving and walking surveys of the Project area, during which the biotic habitats were noted, and vascular plants recorded. Particular attention was given to habitats of the Project site, which would be suitable, or potentially suitable, for special status plant species (state or federally listed species, candidate species, and species with CNPS listing status).
- **Wildlife Survey:** ESR, Inc. conducted driving and walking surveys of the Project area, during which terrestrial vertebrates and their sign were recorded. Particular attention was given to the habitats of the Project site, which would be suitable, or potentially suitable, for special status animal species (state and federally listed species, species proposed for such listing, or candidate species).

Biological reconnaissance surveys were conducted on November 12, 2008, December 15, and 16, 2008, January 6 and 7, February 17, March 13, April 2 and April 17, 2009 to assess sensitive species, sensitive habitats, and other biological resource issues which might occur on or adjacent to the Project site. The visits conducted by ESR Senior Biologists William Stolp and Scott Larson and Staff biologist Andy Glass were specifically designed to follow the general guidelines and protocols for the species that may potentially inhabit the site or within close proximity of the Project.

2.0 EXISTING CONDITIONS

The Carmelita Project site is located in the vicinity of Reedley, 15 miles east of Fresno, California. Several potential water features in the general vicinity were identified including the Kings River, Byrd Slough, Cameron Slough, Centerville Kingsburg Canal, Friant-Kern Canal, and Alta Main Canal. Associated with the Kings River, Cameron Slough, and Byrd Slough are areas of fairly contiguous riparian habitat along their fringe including designations of Great Valley Riparian Habitat. The natural areas associated with these water features offer important habitat from a large number of native flora and fauna. The presence of these natural lands in the immediate site vicinity increases the study areas accessibility for many species of native wildlife. The habitats between the riparian areas; however, have been extensively developed for agricultural uses.

Additionally, there are several other man-made water features located in the general vicinity. These features consisted primarily of ponds associated with agricultural or recreational use that retain water on a year-round basis. Each potential water feature location within the 3.1-mile (5 km) buffer was visited or evaluated to assess the likelihood of use by sensitive species. Limited, patchy, scattered and fragmented areas were identified that exhibited use by fossorial (burrowing, i.e. ground squirrels,

gophers, etc.) mammals to the west of the property. The north, south, and eastern areas in the general vicinity are also in agricultural production with associated amenities to conduct the farming operations.

State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Avenue were all identified as within the general vicinity.

The Property is under intensive agricultural cultivation for production of tree fruits (peaches, plums and nectarines). Soils over the property, which lies within the alluvial fan of the Kings River, are very cobbly and rapidly drained. The conceptual project could impact approximately 898 acres of the site from which sand and gravel would be extraction by practices common to the industry and would remove aggregates up to a depth of up to approximately 50 feet below ground surface.

2.1 Geographical Setting and Project Summary

Colony Land Company, L.P.'s (Colony Land Company) Project property is located in the vicinity of Sanger, 15 miles east of Fresno, California (see Figure 1, Regional Location and Figure 2, Site Location). The operator for the Project will be Carmelita Resources, LLC (Carmelita Resources). The Property is under agricultural cultivation for production of tree fruits (peaches, plums and nectarines). Soils over the property, which lies within the alluvial fan of the Kings River, are very cobbly and rapidly drained. These soil conditions have been a challenge for farming practices in terms of disease, mechanical equipment, and inefficient water use. Cobble removal and soils replacement have shown improvement to these conditions.

The Property lies within a Mineral Resource Zone (MRZ-2) designated by the California Department of Conservation due to the presence of significant mineral deposits. Site-specific borings and materials testing have determined that the East Side Property contains construction aggregate materials of the quantity and quality that mineral extraction is a feasible use for portions of the lands.

An approximate 1,500-acre site west of Reed Avenue has been identified as a site for development of the Carmelita Project. Plans are being developed for long-term production of construction aggregates. The conceptual project may involve about 898 acres of the site from which aggregates would be removed up to a depth of approximately 50 feet below ground surface.

Operations would be typical of sand and gravel extraction, with conventional mining practices common to the industry. Overburden soils would be removed and stockpiled,

and sands and gravels excavated and transported to a rock processing plant site for washing and sizing. Accumulated unmarketable silts and clays (wash fines) would be used as backfill in completed excavation areas. Materials would be sold as washed aggregates, or used to make products, including asphaltic concrete and concrete at on-site plants. These plants would be located within a 40-acre site with access to Reed Avenue. Materials stockpiles, conveyors, silos, and plant equipment may be up to 60 feet in height. At a planned average production rate of 1.25 million tons per year, mining could continue for up to 100 years.

Mined land conditions will be influenced by actual extraction depths, overburden and waste quantities, groundwater depths (which vary significantly over time), and economic factors. Reclamation plans include surfaces with soils returned to agricultural uses, and water basins available for irrigation on the property. Final project plans will be a result of engineering and economic studies, land use decisions by the owners, environmental considerations, and input from the public review and approval process to be completed by Fresno County.

The Project site lies within Fresno County, specifically in the Wahtoke U.S. Geological Survey 7 ½ minute quadrangle, Section 5, Township 11 South, and Range 10 East of the Mt. Diablo Base and Meridian (MDBM). The County has a total area of 6,017 square miles (15,585 km²), of which, 5,963 square miles (15,443 km²) of it is land and 55 square miles (142 km²) of it (0.91 percent) is water. Major watercourses are the San Joaquin, Kings River, Delta-Mendota Canal, Big Creek, Friant Kern Canal, Helm Canal and Madera Canal. It is bordered on the west by the Coast Range and on the east by the Sierra Nevada. It is the center of a large agricultural area, known as the most agriculturally rich county in the United States. Figure 3, Carmelita Project Location Aerial Map, provides a depiction of the area surrounding the Project location.

Fresno County encompasses portions of the following three Regions within the California Floristic Province, as identified in the widely used Jepson Manual classification system: Central Western California (CW), Great Central Valley (GV), and the Sierra Nevada (SN). The Project site is located within the Great Central Valley region which is comprised of two sub regions – the Sacramento Valley (ScV) and the San Joaquin Valley (SnJV). The Project is located within the San Joaquin Valley Sub-region which is characterized predominantly as grassland that has undergone extensive agricultural conversion with islands of valley oak savanna. The San Joaquin Valley is generally hotter and drier than the Sacramento Valley to the north and therefore supports some desert elements to the south.

2.2 Site Setting

Colony Land Company owns, or has a purchase option on, the parcels constituting the Project site, which consists of approximately 1,500 acres in the vicinity of Minkler. The Project site is located in an agricultural setting within the floodplain of the Kings River. Agricultural areas consist of orchards, fields, pasture and rural residential uses. Figure 4, Carmelita Project Site Map, gives a depiction of the Project site and its current land uses while Figure 5, Site and Surrounding Land Use, identifies the different land uses on and near (1.2 miles [2 km]) the Project site. It is located in an unincorporated area of south-central Fresno County approximately 5.7 miles east of Sanger and 4.5 miles north of Reedley. More specifically, the Kings River and associated Byrd Slough lie immediately to the west; Reed Avenue is the eastern property boundary with the intersection of State Highway 180; and Reed Avenue to its northeast.

The site has been significantly altered for decades from its native state by the farming, commercial, and residential activities. This was verified by site surveys and it was further concluded that no native habitats exist within the study area. The study area consists of several land uses categorized as follows:

- Orchard;
- Ruderal, active, and inactive field;
- Active and inactive pasture;
- Commercial;
- Residential; and
- A man-made irrigation ditch excavated on previously dry land.

The primary land use consists of orchard activities dominated by peaches, plums and nectarines with a smaller percentage of pomegranates. The orchard understory was well managed by the use of tilling and plowing of ruderal weed species. Some areas appeared to be in line for future disking. These areas were intermittently vegetated primarily with non-native grasses and forbs such as crabgrass (*Digitaria sanguinalis*), prostrate spurge (*Chamaesyce maculate*), horseweed (*Conyza Canadensis*), and nutgrass (*Cyperus rotundus*).

The commercial areas consisted chiefly of parking areas, and a soil screening and separation facility with associated aggregate and soils stockpiles. The commercial areas exhibited evidence of ongoing disturbances with little vegetative cover except in the marginal fringe areas. Those sparse areas exhibited horseweed, Johnson grass (*Sorghum*

halepense), prostrate pigweed (*Amaranthus blitoides*), and puncture vine (*Tribulus terrestris*).

The inactive field is located behind the residential home. It appears to have been used as an irrigated pasture with some evidence of a residual row crop that has now gone to seed. In addition to the other vegetative species found on the site, this area also contained prickly lettuce (*Lactuca serriola*).

The residential area originally consisted of three single-family units with associated farm outbuildings. Two unoccupied residences were removed in December 2009 and January 2010. The remaining residential structure is under purchase option by Colony Land Company and will not be inhabited if a permit is granted. Vegetation in this area consists primarily of landscaped ornamental arrangements with some non-native plants such as hemlock (*Tsuga sp.*) eucalyptus (*Eucalyptus sp.*), olive (*Olea europaea*) and other ornamental trees and shrubs.

The Fink irrigation ditch is managed by the Kings River Water District. In some of the limited, fragmented areas there are remnant growths of herbaceous vegetation such as seep monkey-flower (*Mimulus guttatus*), curly dock (*Rumex crispus*), broadleaf arrowhead (*Sagittaria latifolia*), and curlytop knotweed (*Polygonum lapathifolium*). No riparian vegetation was located in or along the Fink irrigation ditch. By definition, the Finks Ditch does not meet criteria as an ACOE jurisdictional wetland and no other water features exist on the Project site or within 100 feet of it.

2.3 Biological Communities

A community is an assemblage of populations of plants, animals, bacteria, and fungi that live in an environment and interact with one another, forming a distinctive living system with its own composition, structure, environmental relationships, development, and functions (Whittaker 1975). ESR uses both the Wildlife Habitat Relationship System (WHRS) and Holland Type to classify communities. These widely utilized methodologies subject classification to the dominant vegetation present. Dominance is contingent upon 1) amount or 2) an indicator unique to specific environmental conditions (Mayer and Laudenslayer 1988). As earlier indicated, the communities identified on the Project site and within 1.2 miles (2 km) of its perimeter include Cropland, Annual Grassland, Pasture, Fresh Emergent Wetland, and Riverine. For presentation purposes, we also classify much of the area on the Project site as Disturbed. Common characteristics of these communities are discussed in general terms and potential habitat suitability for wildlife usage below.

2.3.1 Cropland

General Description

Cropland habitat characterizes all of the areas associated with active agricultural land uses (irrigated and non-irrigated) on the Project site and in its vicinity. The primary use of the Project property is peach, plum and nectarine orchards with some pomegranates also being grown. The surrounding areas are also in agricultural production with a variety of products. Although most crops are planted in rows similar to the Project property there is other non-orchard or row crop such as alfalfa hay and small grains (barley and wheat) in the area that can form dense stands with up to 100 percent canopy closure.

Cropland habitats do not conform to normal habitat stages. Instead, cropland is regulated by the crop cycle in California. These habitats can be annual or perennial and vary according to location in the state, and germinate at various times of the year. Crops such as milo, wheat, cotton, rice and lettuce are common annual plants, whereas stone fruit, nuts, alfalfa, and strawberries are perennials. In addition, the crop rotation system can be used extensively in some areas. This type of planting system rotates crop types (usually between annual and perennials) to conserve soil nutrients, thus maintaining soil productivity (Mayer and Laudenslayer 1988).

Habitat Suitability

Croplands are established on the State's most fertile soils, which, prior to establishment of croplands, historically supported an abundance of wildlife unequalled in other sites. Croplands have greatly reduced the wildlife richness and diversity of California. Many species of rodents and birds have adapted to croplands and are controlled by fencing, trapping, and poisoning to prevent excessive crop losses. Prior to establishing State and Federal wildlife refuges, waterfowl depredation of crops was extensive. That problem has been essentially eliminated; however, some species of waterfowl depend on crop residuals that remain in the fields after harvesting. Deer and wild pigs forage in alfalfa and grain fields and can cause depredation problems (Mayer and Laudenslayer 1988).

Croplands can serve as habitat for wildlife species that are considered integral components of California tiger salamander (*Ambystoma californiense*; CTS) upland habitat. For example, the fossorial wildlife species often associated with croplands create the refugia necessary for salamander aestivation (a state of dormancy during dry periods). Some burrows were documented on the Project site and in its vicinity during the survey. The Project site therefore provides some of the requisite upland habitat

features needed by CTS. However, the routine disturbances associated with cropland habitat, such as disking and tilling, and the lack of potential viable breeding ponds in the vicinity, likely preclude the utilization of these burrows by aestivating CTS.

2.3.2 Pasture

General Description

Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy closure. Height of vegetation varies, according to season and grazing levels, from a few inches to two or more feet on fertile soils before grazing. Old or poorly drained pastures could have patches of weeds in excess of two feet in height (Mayer and Laudenslayer 1988).

Pastures often occur in association with agricultural habitats. Moreover, irrigated pastures can be found adjacent to habitats such as Great Valley Mixed Riparian, Mixed Chaparral, Coastal Scrub, Fresh Emergent Wetland, Annual and Perennial Grassland eastside habitats such as Sagebrush and Bitterbrush as well as various desert habitats (Mayer and Laudenslayer 1988).

Habitat Suitability

Wildlife use pastures in a variety of ways depending upon geographic area and types of adjacent habitats. Ground-nesting birds, including waterfowl, nest in pastures if adequate residual vegetation is present at the onset of the nesting season. Flood irrigation of pastures provides feeding and roosting sites for many wetland-associated birds, including shorebirds, wading birds, gulls, waterfowl, and raptors. As with Croplands, Pastures can serve as habitat for wildlife species that are considered integral components of California tiger salamander upland habitat. The fossorial wildlife species typically associated with Pastures can create the refugia necessary for salamander aestivation. Some burrows were documented within the Pasture habitat near the Project site during the survey. The Project site area provides some isolated and fragmented patches of the requisite upland habitat features needed by CTS. However, because of its isolated and fragmented nature and because of the reasons that are discussed in the Initial Site Assessment for California tiger salamander (see Appendix A-2 of the Biological Assessment Report), it is unlikely that CTS utilize the site.

2.3.3 Annual Grassland

General Description

This habitat is open grassland composed primarily of annual plant species located to the northeast of the site near Jesse Morrow and Campbell Mountains. Many of these species also occur as understory plants in Great Valley Mixed Riparian Woodland and other habitats. Structure in Annual Grassland depends largely on weather patterns and livestock grazing. Dramatic differences in physiognomy, both between seasons and between years, are characteristic of this habitat. Fall rains cause germination of annual plant seeds. Plants grow slowly during the cool winter months, remaining low in stature until spring, when temperatures increase and stimulate more rapid growth. Large amounts of standing dead plant material can be found during summer in years of abundant rainfall and light to moderate grazing pressure. Heavy spring grazing favors the growth of summer-annual forbs, such as tarweed (*Hemizonia* spp) and turkey mullein (*Eremocarpus setigerus*), and reduces the amount of standing dead material. On good sites, herbage yield may be as high as 4,900 kg/ha (4,400 lb/ac) (Garrison *et al.* 1977).

Introduced annual grasses are the dominant plant species in this habitat. These include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* L. ssp. *rubens*), wild barley (*Hordeum leporinum*), and foxtail fescue (*Vulpia myuros*). Common forbs include broadleaf filaree (*Erodium moschatum*), redstem filaree (*E. cicutarium*), turkey mullein (*Eremocarpus setigerus*), true clovers (*Trifolium* L.), bur clover (*Medicago hispida*), popcorn flower (*Plagiobothrys canescens*), and many others. California poppy (*Eschscholzia californica*), the State flower, could be found in this habitat. Perennial grasses, found in moist, lightly grazed, or relic prairie areas include purple needlegrass (*Nassella pulchra*) and Idaho fescue (*Festuca idahoensis*). Species composition is also related to precipitation (Bartolome *et al.* 1980). Perennial grasses are more common on northern sites with mean annual rainfall greater than 150 cm (60 in). Soft chess and broadleaf filaree are common in areas with 65-100 cm (25-40 in) of rainfall, and red brome and red stem filaree are common on southern sites with less than 25 cm (10 in) of precipitation (Bartolome *et al.* 1980).

Habitat Suitability

Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. Characteristic reptiles that breed in Annual Grassland habitats include the western fence lizard, common garter snake, and western

rattlesnake (Basey and Sinclear 1980). Mammals typically found in this habitat include the black-tailed jackrabbit, California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher, western harvest mouse, California vole, badger, and coyote (White *et al.* 1980). The endangered San Joaquin kit fox is also found in and adjacent to this habitat (U.S. Fish and Wildlife Service 1983). Common birds known to breed in Annual Grasslands include the burrowing owl, short-eared owl, horned lark, and western meadowlark (Verner *et al.* 1980). This habitat also provides important foraging habitat for the turkey vulture, northern harrier, American kestrel, black-shouldered kite, and prairie falcon.

Like Croplands and Pastures, Annual Grasslands can serve as habitat for wildlife species that are considered integral components of CTS upland habitat. Fossorial wildlife species typically associated with Annual Grasslands, such as California ground squirrels (*Spermophilus beecheyi*), create the refugia necessary for salamander aestivation. California ground squirrel colonies were documented within this habitat during the survey primarily near Jesse Morrow Mountain and Campbell Mountain. Thus, those distant areas (> 5 miles to the northeast) provide some of the requisite upland habitat features needed by CTS.

2.3.4 Fresh Emergent Wetland

Fresh Emergent Wetlands were identified within 1.2 miles (2 km) of the Project site, primarily associated with the Cameron and Byrd Sloughs and the Kings River systems. These wetlands included some highly managed man-made ornamental, recreational and sediment ponds that are not in a natural state. During the field portion of the survey all of the accessed ponds were observed to be occupied by large numbers of non-native predatory species including, but not limited to, largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis ssp.*), blue gill (*Lepomis macrochirus*), and/or bullfrog (*Rana catesbeiana*).

General Description

Emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots to 2 m (6.6 ft) tall (Cheatham and Haller 1975; Cowardin *et al.* 1979). Typically, emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment (Gosselink and Turner 1978). The vegetation may vary in size from small clumps to vast areas covering several kilometers.

On the upper margins of Fresh Emergent Wetlands, saturated or periodically flooded, soils support several moist soil plant species including big leaf sedge, baltic rush, redroot nutgrass and on more alkali sites, saltgrass. On wetter sites, common cattail, tule bulrush, river bulrush, and arrowhead are potential dominant species (Cheatham and Haller 1975; U.S. Army Corps of Engineers 1978; Wentz 1981).

Fresh emergent wetland habitats may occur in association with terrestrial habitats or aquatic habitats including Riverine (RIV), Lacustrine (LAC) and Wet Meadows (WTM). The upland limit of Fresh Emergent Wetlands is the boundary between land with predominantly hydrophytic cover and land with primarily mesophytic or xerophytic cover or the boundary between hydric and non-hydric soils (Cowardin *et al.* 1979). The boundary between fresh emergent wetlands and deep water habitats (e.g., Lacustrine or Riverine) is the deep water edge of the emergent vegetation. It is generally accepted that this demarcation is at or above the 2m (6.6 ft) depth (Cowardin *et al.* 1979, Zoltai *et al.* 1975). The 2m (6.6 ft) lower limit for emergent wetlands was selected because it represents the maximum depth to which emergent plants normally grow (Welch 1952; Sculthorpe 1967).

Habitat Suitability

Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds (U.S. Comptroller General 1979), and numerous mammals, reptiles, and amphibians. Many species rely on Fresh Emergent Wetlands for their entire life cycle.

Fresh emergent wetland habitats occur on virtually all exposures and slopes provided a basin or depression is saturated or at least periodically flooded. However, they are most common on level to gently rolling topography. They are found in various landscape depressions or at the edge of rivers or lakes (Wentz 1981). Fresh emergent wetland vegetation zones characteristically occur as a series of concentric rings which follow basin contours and reflect the relative depth and duration of flooding. If the bottom of the wetland is very uneven, vegetation zones may be present in a patchy configuration rather than the classic concentric ring pattern (Millar 1976). Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed (Cowardin *et al.* 1979). In some areas organic soils (peat) may constitute the primary growth medium (U.S. Army Corps of Engineers 1978).

2.3.5 Riverine

General Description: Riverine habitat occurs within 1.2 miles (2 km) of the Project site associated with the Kings River and the areas surrounding the Byrd and Cameron Sloughs, which lie south, west northwest of the Project site and trends along a northwest-southeast axis. Intermittent or continually running water distinguishes Riverine habitat. A stream originates at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease and the bottom will change from rocky to muddy (Mayer and Laudenslayer 1988).

Habitat Suitability

The majority of fast stream inhabitants live in riffles, on the underside of rubble and gravel, sheltered from the current. Characteristic of the riffle insects are the nymphs of mayflies, caddisflies, alderflies, stoneflies; and the larva and pupae of true flies. In pools, the dominant insects are burrowing mayfly nymphs, dragonflies, damselflies and water striders. Water moss and heavily branched filamentous algae are held to rocks by strong holdfasts and align with the current. Other algae grow in spheric, or cushionlike colonies with smooth, gelatinous surfaces. Algae growth in streams often exhibits zonation on rocks, which is influenced by depth and current. With increasing temperatures, decreasing velocities and accumulating bottom sediment, organisms of the fast water are replaced by organisms adapted to slower moving water. Mollusks and crustaceans replace the rubble-dwelling insect larvae. Backswimmers, water boatmen and diving beetles inhabit sluggish stretches and backwaters. Emergent vegetation grows along river banks, and duckweed floats on the surface. Abundant decaying matter on the river bottom promotes the growth of plankton populations that are not usually found in fast water (Mayer and Laudenslayer 1988).

Riverine habitats can occur in association with many terrestrial habitats. Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats (Mayer and Laudenslayer 1988).

2.3.6 Disturbed

No semblance of a natural biological community exists within these types of areas. The 1,500-acre Colony Land Company property and in particular the 898 acres proposed for disturbance by the Carmelita Project have been significantly altered through the historic and continued use by the agricultural operations. The disturbed areas at the Project site and the surrounding areas consist of a small scale mining operation on-site, equipment storage buildings and prepared areas, paved farm roads, concrete and other impervious surface pads constructed for other numerous storage structures, residential or office complexes, stock piles of landscaping materials, and storage areas for agricultural amendments. The fringe areas near the boundaries of the property exhibit some semblance of native species but even those areas are not in a natural state with the species having become marginally established.

2.4 Special Status Species

“Special Status Species” is a general term that refers to all taxa tracked by the DFG’s CNDDDB, regardless of their legal or protection status. These taxa generally fall into one or more of the following categories:

- Officially listed or proposed for listing under the State and/or Federal Endangered Species Acts.
- State or Federal candidate for possible listing.
- Taxa that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines.
- Taxa considered by the Department to be a “Species of Special Concern”.
- Taxa that are biologically rare; very restricted in distribution; declining throughout their range; or have a critical, vulnerable stage in their life cycle that warrants monitoring.
- Populations in California that may be on the periphery of a taxon range but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at an alarming rate e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.).
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization.

For most animal taxa, the CNDDDB is interested in sightings that indicate the presence of a resident population; for many birds, however, the CNDDDB tracks only nesting locations. It is not necessary to actually locate a nest to confirm breeding status. Any indication of breeding (territorial males, adults carrying nest material or food, the presence of newly fledged young, etc.) is acceptable evidence of nesting. For other taxa where only a certain part of a distribution range or life history is tracked, the area or life stage is indicated.

2.5 Sensitive Habitat

“Special or Sensitive Habitat” is a general term that refers to special areas generally tracked by the DFG’s CNDDDB. Sensitive habitats may include the following:

- Native habitats of limited distribution (i.e. wetlands of various types, riparian habitat, native grasslands, etc.); or,
- Native habitats used by state or federally listed threatened or endangered species; or,
- Habitats supporting particularly high concentrations of native plants and animals; or,
- Habitat that is within the jurisdiction of one or more state and federal resource agencies (i.e. wetland, endangered species habitat, etc.).

2.6 Records Search and Results

The records search conducted included the DFG’s CNDDDB, the FWS’s Threatened and Endangered Species List, and the CNPS’s List of Rare and Endangered Plants. The search was conducted for the nine quadrangles (Wahtoke, Reedley, Sanger, Selma, Round Mountain, Piedra, Pine Flat Dam, Orange Cove North and Orange Cove South) surrounding the Project location and have been summarized in the Table 1, Record Search Results (Table 1), with the official lists included in Appendix A-1. Table 1 provides information that includes Scientific Nomenclature, Common Name, Status (federal, State, CNPS rankings), Habitat Requirements, Occurrence Potential (potential to occur on the Project site), and Comments for each species listed in the various database searches.

The records search indicated that several federally listed species have the potential to occur in the study area. California Tiger Salamander (*Ambystoma californiense*), Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardi*), and the San Joaquin kit fox (*Vulpes macrotis mutica*) have been found in the general vicinity.

In addition, the California species of special concern such as Burrowing owl (*Athene cunicularia*), spotted bat (*Euderma maculatum*), Western Spadefoot Toad (*Spea hammondi*), western pond turtle (*Spea hammondi*) and potentially the Swainson's hawk (*Buteo swainsoni*) occur in the general vicinity. Limited vernal pools and more extensive waters of the US and wetlands have been recorded in the general vicinity of the Project but none of these types of habitat exists on the Project site.

The records search of the databases indicated that none of the federally listed species were found previously on the property and that none occurred in the Project area. It should be noted that this does not infer that the species doesn't exist there, but only that it has not been previously recorded.

As noted in Section 2.4, special status plants and wildlife are those species that are listed or proposed for listing as rare, threatened, or endangered by CDFG or USFWS, on formal lists as candidates for listing as threatened or endangered, on formal lists as species of concern, or otherwise recognized at the federal, State, or local level as sensitive. Sensitive habitats are those that are of limited extent and have experienced extensive loss or degradation resulting from development and/or agricultural practices in recent years.

Species that have not been recorded in the area but could potentially occur based on habitat suitability are also included in the table. ESR reviewed the specific habitats required by each species listed in Table 1 and the specific habitats and habitat conditions present on the Project site as well as our previous experience with these species were taken into consideration. Each of these factors was considered in our evaluation of the likelihood of each species listed in Table 1 as potentially occurring on the Project site. Species that were determined to potentially occur on the site based on availability of suitable habitat or other factors (i.e., at least a "Low" potential for occurrence in Table 1 are discussed more fully in Section 5.0. Species determined unlikely to occur on the Project site based on these same factors are documented accordingly in Table 1 and are not discussed further in this report.

Figure 6, Carmelita Project CNDDDB Species Map, provides a map depicting the location and type of sensitive species found on the CNDDDB for the general area.

TABLE 1
RECORDS SEARCH RESULTS

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
MAMMALS					
<i>Antrozous pallidus</i>	Pallid bat	CA SC	Occurs in variety of habitat types; most common in xeric ecosystems. Roosts in rocky outcrops, cliffs, and crevices, trees, buildings, and in rocks near the ground.	Low (foraging)	No suitable habitat. Two CNDDDB occurrences are distant to the Project vicinity; opportunistic feeder in a variety of settings; may forage over grassland and seasonal wetland habitats.
<i>Euderma maculatum</i>	Spotted Bat	CA SC	Found in a variety of habitat types from sea level to 9,000 feet. Prominent rock features appear necessary for roosting.	Absent	No suitable habitat on Project property. One CNDDDB record distant to the Project vicinity; may forage over grasslands near Project property.
<i>Lasiurus cinereus</i>	Hoary bat	CA SC	Habitats utilized by this species for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Sites that are preferred are hidden from above, have few branches below, and have ground cover of low reflectivity.	Low (foraging)	No suitable roosting habitat on Project property. No CNDDDB records near project vicinity; may forage over grasslands near Project property.
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, ST	Inhabits annual grasslands or grassy open stages with scattered shrubby vegetation. Requires loose-textured sandy soils for burrowing	Absent	No suitable habitat exists on the Project site, no dens or signs of presence have been observed. The Project property is east of the current range of this species. The closest CNDDDB occurrence is about 8.5 km to the west of the Project property

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
BIRDS					
<i>Agelaius tricolor</i>	Tricolored blackbird	CA SC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.	Absent	No suitable nesting or foraging habitat present on the Project property.
<i>Athene cunicularias</i>	Burrowing owl	CA SC	Occurs in open, valley grassland habitat, with short to moderate vegetation height, areas of bare ground and populations of burrowing mammals. Species depends on burrows dug by small mammals, most notably ground squirrels, for nest and roosting sites.	Low	No suitable habitat exists on the Project property. All off-site burrows examined exhibited no evidence of use by the species. "Low" evaluation given due to its migratory nature.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC, SE, G5T3Q, S1	Historically, the Yellow-billed Cuckoo was a common breeding species in riparian habitat throughout much of lowland California. Debate continues as to whether eastern and western are separate species.	Absent	Site not near breeding populations currently limited to the Sacramento River from Red Bluff to Colusa and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. CNDDDB occurrence was from a 1902 sighting 6 miles northeast of Fresno on Francher Creek.

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
REPTILES					
<i>Actinemys marmorata</i>	Pacific pond turtle	CA SC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. Lays eggs in upland habitat consisting of sandy banks or grassy, open fields.	Low	No suitable habitat for this species on the Project site. River and deeper ponds near site could support turtles. "Low" ranking due to its migratory range for nesting purposes.
AMPHIBIANS					
<i>Ambystoma californiense</i>	California tiger salamander	FT; CA SC	Most commonly found in grasslands or open woodland habitats. Lives in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocket gopher), and occasionally other underground retreats, throughout most of the year. Lays eggs on submerged stems and leaves, usually in shallow ephemeral or semi-permanent pools and ponds that fill during heavy winter rains, sometimes in permanent ponds.	Low to Absent (unlikely aestivation)	No CTS identified within 5 km of Project property as per USFWS protocol. No breeding or aestivation habitat on site. Adjacent cultivated grassland to the west of Project property is low probability aestivation habitat due to lack of suitable refugia.
<i>Spea hammondi</i>	Western spadefoot toad	CA SC	Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Absent	Several CNDDDB records from project vicinity; man-made ponds and seasonal wetlands may provide suitable habitat for breeding. No suitable habitat on Project property.

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
INVERTEBRATES					
<i>Calicina mesaensis</i>	Table Mountain harvestman	CA SA	Prefer mesic habitats but absent from saturated or periodically inundated areas; occur under medium to large rocks in contact with soil	Absent	Only known location is from under basalt rocks at Table Mountain about 8 miles north of the Project. No suitable habit on Project site.
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swales, earthen slumps, or basalt-flow depression pools.	Absent	Seven records from project vicinity (10 mile search), nearest is over 3.5 miles; no suitable habitat is present on Project property.
<i>Linderiella occidentalis</i>	California linderiella	CA SA	Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions	Absent	One record from project vicinity (10 mile search);, no suitable habitat is present on Project property.
<i>Ledidurus packard</i>	Vernal pool tadpole shrimp	FE	Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions	Absent	No records from project vicinity (10 mile search); no suitable habitat is present on Project property.
<i>Chrysis tularensis</i>	Tulare cuckoo wasp	G1G2	Occur in open, sunny habitats with abundant flowers and small shrubs, where they feed on nectar. Cuckoo wasps often lurk near the nests of their hosts (wild bees), waiting for an opportunity to sneak in and lay an egg.	Absent	No suitable habitat on Project site.

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
<i>Calicina piedra</i>	Piedra harvestman	G1 S1	Occur in mesic habitats, but are absent from situations where soils are saturated or periodically inundated. Most species occur under medium to large undisturbed rocks that are in contact with the soil.	Absent	No suitable habitat on Project site.
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers branches greater than 1 in (2.5 cm) in diameter.	Low	Elderberry plants occur along western fence line boundary of the Carmelita site property; however, the Carmelita Project will be beyond the 100' setback and no significant impact is anticipated as per USFWS protocol.
<i>Lyta moesta</i>	Moestan blister beetle	CA SA	Occurs in central California; associated with grassland habitats and vernal pools; larvae parasitic on solitary bees.	Absent	Only CNDDDB record is historical and undated; Project property within historic range of species but suitable habitat does not occur on site.
<i>Talanites moodyae</i>	Moody's gnaphosid spider	G1G2, S1S2	Occurs in two locations primarily in grassland under granite rocks and serpentine rocks on Smith Mountain and Granite Hill.	Absent	No suitable habitat on Project site.
PLANTS					
<i>Castilleja campestris</i> ssp. <i>succulenta</i>	Succulent owl's clover	FT, SE, CNPS 1B	Occurs in vernal pools in valley and foothill grasslands 25 – 750 m.	Absent	No suitable habitat located on Project property. May be located near vernal pools in distant vicinity.

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
<i>Erigonum nudum</i> <i>var. dimorphus</i>	Kings River buckwheat	G5T3Q, S2.2, CNPS 1B.2	Occurs in foothill woodlands and wetlands in another region, but occurs almost always under natural conditions in non wetlands in California between 492 and 984 feet. Blooms August-November.	Absent	No suitable habitat on Project site.
<i>Eryngium spinosepalum</i>	Spiny-sepaled button-celery	CNPS 1B	Occurs on vernal pools in valley and foothill grassland	Absent	Several distant CNDDDB records, especially north east of Project property; no suitable habitat present on Project property; species not observed during surveys
<i>Imperata brevifolia</i>	California satintail	CNPS 2	Perennial rhizomatous grass; occurs in mesic areas (meadows, stream sides, alkali seeps) in coastal scrub, chaparral, and riparian scrub.	Absent	CNDDDB listing within 5 km of site to the north. No suitable habitat on Project site.
<i>Leptosiphon serrulatus</i>	Madera leptosiphon	CNPS 1B	Cismontane woodland, lower coniferous forest. Meadows and decomposed granite. 300-1300 m. Blooms April-May.	Absent	No suitable habitat on Project property; this plant grows at higher elevations; species not observed during surveys.
<i>Orcuttia inaequalis</i>	San Joaquin Valley orcutt grass	FT, SE, CNPS 1B	Annual. Vernal pools. 10-755 m. Blooms April to September	Absent	One CNDDDB record over 6 miles from Project vicinity (10 mile search); species or habitat not observed during focused surveys.
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	FT, SE, CNPS 1B	Occurs in cismontane woodland, valley and foothill grassland; grows on grassy valley floors and rolling foothills; restricted to adobe clay soils.	Absent	Species known historically only from Fresno, Tulare and Kern Counties; closest records are from Round Mountain area, several miles northeast of site; Project property does not include adobe clay soils; no suitable habitat on Project site.

Scientific Name	Common Name	Status ¹	Habitat Requirements	Occurrence Potential	Comments
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE, G1 S1.1 CNPS 1B.1	Inhabits cismontane woodlands or valley and foothill grasslands with serpentine/clay soils, approximately 120-425 meters in elevation above sea level. Blooms between April and May.	Absent	No suitable habitat on site. Species not observed during surveys.
<i>Tuctoria greenei</i>	Greene's tuctoria	FE, SR, CNPS 1B	Dry bottoms of vernal pools in open grasslands. 30 – 70 m. Blooms May to September.	Absent	No CNDDDB records from within a mile of Project site; species not observed during surveys; USFWS considers species extirpated from Fresno and Madera Counties.

CNPS Code Designations:

List 1B: Rare, threatened, or endangered in California OR elsewhere. 1. Seriously endangered in California 2. Fairly endangered in California, 3. Not very endangered in California. **List 2:** Rare, threatened, or endangered in California, but more common elsewhere. **List 3:** We need more information about this plant (review list). **State rank:** **S1:** Less than 6 occurrences or less than 1,000 individuals or less than 2,000 acres, **S2:** 6-20 occurrences or 1,000 - 3,000 individuals or 2,000 - 10,000 acres, **S3:** 21-80 occurrences or 3,000 - 10,000 individuals or 10,000 - 50,000 acres. **Global Rank:** **G1:** Less than 6 occurrences or less than 1,000 individuals or less than 2,000 acres, **G2:** 6-20 occurrences or 1,000 - 3,000 individuals or 2,000 - 10,000 acres, **G3:** 21-80 occurrences or 3,000 - 10,000 individuals or 10,000 - 50,000 acres

FWS/CDFG Code Designation:

SE = State-listed as Endangered, **ST** = State listed as Threatened, **FE** = Federally listed as Endangered, **FT** = Federally listed as Threatened, **SCE** = State candidate (Endangered), **SCT** = State Candidate (Threatened), **SCD** = State Candidate (Delisting), **FPE** = Federally proposed (Endangered), **FPT** = Federally proposed (Threatened), **FPD** = Federally proposed (Delisting)

2.7 Special Status Species Account

As indicated in Table 1, six special status animal species (Pallid bat, Hoary bat, Western burrowing owl, Pacific pond turtle, CTS, and VELB) were identified as potentially occurring on the Project site, based on at least a low probability of occurrence. In addition, due to the trees and riparian areas near the Project, nesting raptors must also be considered. Following are additional details, descriptions, and habitat requirements for each of the potential species identified in Table 1.

2.7.1 *Pallid Bat*

The Pallid bat, a State Species of Special Concern occurs throughout California, except in the high Sierra Nevada, from Shasta to Kern counties and the northwestern corner of the state from Del Norte and western Siskiyou counties. It inhabits a variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up to 8,000 feet in mixed coniferous forests. They are common in grasslands and desert regions in the southwestern United States and most abundant in the Sonoran life zones. They are less abundant in evergreen and mixed forests than in vegetation assemblage's characteristic of lower elevations. In California, pallid bats are associated with oak woodlands at lower elevations and may roost in a variety of places including tree cavities, rock crevices and man-made structures. Pallid bats travel 0.3 to 1.6 miles from the day roost for foraging. They are intolerant of disturbance and may abandon a roost when disturbed, not to return for years. Pallid bats have one of the most unique feeding habits of any North American bat. Little, if any, of their food is captured in the air. Some of their favorite food includes scorpions, crickets, grasshoppers, and spiders.

The Pallid bat was not observed on the Project site, but the trees in the Valley Oak Woodland and Sycamore Woodland along the Kings River provide potential roosting habitat for this species. However, suitably sized tree cavities were not readily observed in the woodlands. Therefore, potential impact to this species is considered low and less than significant.

2.7.2 *Hoary Bat*

The Hoary bat is the most widespread North American bat. Habitats utilized by this species for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Sites that are preferred are hidden from above, have few branches below, and have ground cover of low reflectivity. Numerous studies have shown that the hoary bat feeds primarily on moths, although it also feeds on various flying insects.

Site surveys did not observe any roosting bats nor observe any potential winter hibernating habitat, although specific surveys for bats were not completed. Potential impacts to this species are considered to be low and less than significant.

2.7.3 Western Burrowing Owl

The Western burrowing owl, a State Species of Special Concern is a migratory resident of open, dry grassland and desert habitats, as well as of grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. It occurs up to 1,600 meters in elevation above sea level. It primarily consumes insects, but it also preys upon small mammals, reptiles, birds, and carrion. Western burrowing owls usually nest in abandoned burrows of fossorial mammals, but they may also dig their own burrows in soft soil. Their nest chambers are often lined with excrement, pellets, debris, vegetation, or feathers. Western burrowing owls exhibit high site fidelity, reusing burrows year after year. A site should generally be assumed occupied if at least one Western burrowing owl has been observed occupying a burrow there within the previous three years. This species was historically common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains, but its numbers have been markedly reduced in recent decades. Habitat loss and ground squirrel poisoning have been the primary factors contributing to its decline.

Due to the highly disturbed habitat that characterizes the Project site, it is unlikely that burrowing owls will utilize the site for nesting purposes, although potential burrow sites were observed. Therefore a more focused, protocol level survey was conducted. The full survey report included in Appendix A-2 of the Biological Assessment Report. The conclusions of this survey are summarized in Impact BIO-5 provided in Section 5.0, below.

2.7.4 Pacific Pond Turtle

The Pacific pond turtle (PPT) is a State Species of Special Concern. Overall, PPT's have been described as habitat generalists. PPT's have been observed in slow-moving rivers and streams (e.g. in oxbows), lakes, reservoirs, permanent and ephemeral wetlands, stock ponds, and sewage treatment plants. PPT's prefer aquatic habitat with refugia such as undercut banks, submerged vegetation, rocks, logs and mud banks, and have been known to avoid areas with open water that lack refugia. Being ectotherms, pond turtles require emergent basking sites to thermoregulate their body temperature, taking advantage of mud banks, rocks, logs, root wads, and other opportunistic sites.

Despite their name, pond turtles regularly utilize upland terrestrial habitat, most often during the summer and winter, especially for oviposition (females), mate seeking (males), overwintering, and overland dispersal. Most often overland movement events are part of normal turtle movements within a terrestrial home range, but pond turtles regularly overwinter in uplands, burying themselves beneath the leaf litter. Common predators of nests, nested hatchlings, and adult turtles in the wild include raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), and coyotes (*Canis latrans*), although the largest threats pond turtles face presently are the predation of hatchlings by introduced, non-native bullfrogs (*Rana catesbeiana*), and the loss of habitat due to urbanization.

Given that the PPT's are opportunistic and can inhabit a suite of aquatic and upland systems, the riparian habitat near the potential wetland areas and ponds provide more optimum upland refugia than the highly disturbed habitat that characterizes the Project site, therefore the potential for PPT to be impacted by the Project is considered to be low and less than significant.

2.7.5 California Tiger Salamander

The California tiger salamander (*Ambystoma californiense*; CTS) is a Federally Threatened Species and proposed for State listing by the DFG. This species is restricted to grasslands and foothill regions below 2,000 ft where lowland aquatic sites are available for breeding. It prefers natural ephemeral (vernal) pools or ponds that mimic them (stock ponds that are allowed to go dry). Larvae require significantly more time to transform into juvenile adults than other amphibians such as the western spadefoot toad (*Scaphiopus hammondi*) and Pacific tree frog (*Pseudacris regilla*). Also, compared to the western toad or western spadefoot toad, CTS are poor burrowers. They require refuges provided by ground squirrels and other burrowing mammals in which to enter estivation during the dry months. The primary cause of the decline of CTS populations is the loss and fragmentation of habitat from human activities and the encroachment of nonnative predators. A typical salamander breeding population in a pond can drop to less than 20 breeding adults and/or recruiting juveniles in some years, making these local populations prone to extinction. CTS therefore require large contiguous areas of vernal pools containing multiple breeding ponds to ensure recolonization of individual ponds. A strong negative association between bullfrogs and CTS has been documented. Although bullfrogs are unable to establish permanent breeding populations in vernal pools, dispersing immature frogs from permanent water bodies within 2 miles take up residence and prey on adult or larval salamanders in these areas during the rainy season. Louisiana swamp crayfish, mosquito fish, green sunfish and other introduced fishes also prey on adult or larval salamanders (USFWS 2004).

No CTS potential breeding pools occur on the Project site or within 1.2 miles (2 km) of the site and only marginal, isolated and fragmented areas that could potentially provide aestivation burrows occur on the Project site or within the 1.2-mile (2 km) requisite search area. Given that such requisite habitat features, however marginal were observed, a USFWS protocol Initial Site Assessment Report was completed. This Report is provided in Appendix A. The results of the report are summarized in Impact BIO-3, provided in Section 5.0, below.

2.7.6 Valley Elderberry Longhorn Beetle

The Federally Threatened Valley Elderberry Longhorn Beetle (VELB) has been listed since August 8, 1980 (45 FR 52803) and was proposed for delisting by the USFWS after a 5 year review completed in February 2007. Critical beetle habitat has been designated in two areas along the American River in metropolitan Sacramento. Areas along Putah Creek, Solano County, and areas east of Nimbus Dam along the American River Parkway, Sacramento County, are considered critical habitat for VELB. Beetles have been found to extensively utilize these areas that currently support large numbers of mature elderberry plants (*Sambucus* species).

The VELB are dependent on elderberry plants as habitat for their larvae, although use of the plants by VELB is often not readily apparent. Evidence of an exterior exit hole prior to pupae development is often the only sign of VELB presence on a particular host plant. Larvae are found in elderberry stems with a basal diameter greater than one inch.

Elderberry plants that are utilized generally occur in wet riparian forests that consist of several upper and intermediate canopy layers with a dense understory. The overstory typically includes numerous overlapping crowns of cottonwoods (*Populus fremontii*), sycamores (*Platanus racemosa*), willows (*Salix sp.*), and valley oaks (*Quercus lobata*) while the subcanopy consists of maple (*Acer negundo var. californicum*), ash (*Fraxinus latifolia*), and elderberry (*Sambucus spp.*). Vines are also usually abundant in all canopy layers of riparian forests where VELB are found.

Research indicates that VELB dispersal patterns are restricted to riparian corridors, but Collinge *et al.* (2001) found that colonization of new elderberry sites within occupied drainages is rare and that dispersal between drainages probably does not occur at all. This pattern implies that even when an individual VELB disperses from its host plant to colonize new habitat, it will only travel along the riparian corridor within its natal drainage.

VELB was not identified on the Project site during surveys, however several blue elderberry plants were observed and mapped on the fringe of the property. Survey results are discussed in the full report located in Appendix A-2 of the Biological Assessment Report. Impact BIO-2 summarizes the conclusions and recommendations of this report.

2.7.7 Nesting Raptors

The Great Valley Riparian communities located west of the Project site along the Kings River provide potential nesting habitat for birds of prey, with one nest being utilized by red-tailed hawks observed during the surveys. Although the timing of the survey overlapped nesting seasons, no occupied nests were observed and no evidence of past breeding attempts was noted within the Project site, although foraging red-tail and red-shoulder hawks were observed. However, given that raptors utilize the Project site for foraging, future nesting attempts by raptors are plausible. If the Project site becomes occupied by breeding birds of prey in the period immediately prior to project implementation, construction activities or removal of trees containing nests during the nesting period may destroy fertile eggs or nestlings or lead to nest abandonment.

Due the initial sighting of the hawks, a more detailed survey was conducted with the summary results presented in impact analysis with the complete survey report found in Appendix A-2 to the Biological Assessment Report. The conclusion and recommendations of the Report are summarized in Impact BIO-4; which is provided in Section 5.0, below.

3.0 REGULATORY SETTING

The following sections provide an overview of the federal, state, and local regulations that have been promulgated to address sensitive species and habitats.

3.1 Federal

3.1.1 Federal Endangered Species Act (16 USC 1531-1544)

The federal Endangered Species Act (ESA) provides protection for federally listed endangered and threatened species and their habitats. An “endangered” species is a species in danger of extinction throughout all or a significant portion of its range. A “threatened” species is one that is likely to become endangered in the foreseeable future without further protection. Other special status species include “proposed” species, and “species of concern.” Proposed species are those that have been officially

proposed (in the Federal Register) for listing as threatened or endangered. “Species of concern” are species for which not enough scientific information has been gathered to support a listing proposal, but still may be appropriate for listing in the future, after further study. A “de-listed” species is one whose population has reached its recovery goal and is no longer in jeopardy. The USFWS administers the federal ESA. A project may obtain permission to take federally-listed species in one of two ways: a Section 10 HCP to a private party, or Section 7 Biological Opinion from USFWS or NOAA issued to another federal agency that funds or permits an action (e.g., USACOE). Under either section of the ESA, adverse impacts to protected species are avoided, minimized or mitigated for impacts to federally listed species. Both cases require consultation with the USFWS and/or National Marine Fisheries Service (NMFS), which ultimately issues a Biological Opinion determining whether the federally listed species will be adversely impacted by a project, or by the issuance of an incidental take permit.

3.1.2 Bald Eagle Protection Act (16 U.S.C. 668-668D, 54 Stat. 250)

The Bald Eagle Protection Act prohibits the take, possession, sale, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS.

3.1.3 Migratory Bird Treaty Act (16 USC 703-712)

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, implements domestically a series of treaties (on behalf of Canada) between the United States and Great Britain, Mexico, Japan, and the former USSR. The MBTA provides for international migratory bird protection, and authorizes the Secretary of the Interior to regulate the “taking” of migratory birds. Specifically, the MBTA states that it shall be unlawful, except as permitted by regulations, to “at any time, by any means, or in any manner, to pursue, take, kill, possess, sale, purchase, ship, transport, carry, or export, at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird” (16 USC 703). The current list of species protected by the MBTA can be located in Title 50, CFR Section 10.13. The Wahtoke U.S.G.S. 7.5 minute quadrangle was used in the search for special status species potentially occurring within the project area or in the project area vicinity.

3.1.4 Clean Water Act – Section 404/10 Jurisdiction (33 USC 1251-1376)

The US Army Corps of Engineers (ACOE) and the Environmental Protection Agency (EPA) regulate the discharge of dredged and fill material into “Waters of the United States” under Section 404 of the Clean Water Act (CWA). ACOE jurisdiction over non-tidal “Waters of the United States” extends to the “ordinary high water mark,”

provided the jurisdiction is not extended by the presence of “wetlands” (33 CFR Part 328, Section 328.4). The discharge of dredged or fill material into Waters of the United States at a project site requires a Section 404 permit.

As discussed above, ACOE regulatory jurisdiction under Section 404 is founded on a connection between the water body in question and interstate commerce. This connection may be direct; through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. On January 9, 2001, the Supreme Court issued a decision in *Solid Waste Agency of Northern Cook County [SWANCC] v. U.S. Army Corps of Engineers* concerning Clean Water Act jurisdiction over isolated waters. This decision substantially affected the extent of Corps regulatory authority over “non-navigable, isolated, intrastate waters,” and particularly, the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. In addition, since *SWANCC*, the U.S. Supreme Court decision in *Rapanos v. United States* has also further restricted the application of the waters of the U.S. definition regarding ephemeral streams, ditches and other waters.

The preamble to Corps regulations in the Preamble Section 328.3 – Definitions, states that the Corps does not generally consider the following waters to be waters of the U.S. The Corps does, however, reserve the right to regulate the following waters on a case by case basis:

- Non-tidal drainage and irrigation ditches excavated on dry land,
- Artificially irrigated areas that would revert to upland if the irrigation ceased,
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing,
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons,
- Water filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the U.S.

In association with obtaining a Section 404 permit, a Water Quality Certification must be obtained from the Regional Water Quality Control Board. To obtain approval of the application for Water Quality Certification, projects must follow the Corps’ 404(b)(1)

Guidelines which specify avoidance of wetland impacts and minimization and mitigation of impacts to any affected wetlands. However since a 404 permit is not anticipated to be required for the Project the associated 401 certification will also not be required.

3.2 State

3.2.1 California Endangered Species Act (CESA) (California Fish and Game Code 2050-2116)

Similar to the federal ESA, the CESA, along with the Native Plant Protection Act, authorizes the California Fish and Game Commission to designate, protect, and regulate the taking of special status species in the State. However, unlike the federal ESA, CESA also prohibits take of species proposed for listing (called “candidate species” by the state). CESA defines “endangered” as those species whose continued existence in California is jeopardized. State-listed “threatened” species are those not presently threatened with extinction, but which may become endangered if their environments change or deteriorate. Section 2080 of the CDFG code prohibits the taking of state-listed plants and animals. Any Projects that may adversely impact state-listed threatened or endangered species must formally consult with CDFG. CDFG can issue incidental take permits under Section 2081 of CESA.

3.2.2 CDFG Species of Concern

In addition to species formally listed under the ESA and the CESA, “species of special concern” receive additional consideration by CDFG and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFG. It tracks species in California whose breeding populations in California may be decreasing or face local extirpation. To avoid the future need to list these species as endangered or threatened, the CDFG recommends consideration of these species, which do not as yet have any legal status, during analysis of the impacts of projects.

3.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, (Section 3503.5, 1992) which states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird in the order Falconiformes or Strigiformes (bird of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the DFG.

3.2.4 Stream Alteration

Under Section 1602 of the California Fish and Game Code, a private party must notify the CDFG if a Project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFG may propose reasonable measures to protect those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFG identifying the approved activities and associated mitigation measures.

3.2.5 CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes described above, the CEQA Guideline Section 15380(d) 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 specified criteria for the region or locality. These criteria have been modeled after the definition in the federal ESA and the section of the CDFG Code dealing with rare or endangered plants and animals. Section 15380(d) allows but does not compel a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by the USFWS, NMFS or CDFG (e.g., candidate species, species of concern) would occur.

3.3 Local

3.3.1 County of Fresno General Plan

Policy OS-E.1: The County shall support efforts to avoid the “net” loss of important wildlife habitat where practicable. In cases where habitat loss cannot be avoided, the County shall impose feasible mitigation for the loss of wildlife habitat that is critical to supporting special status species and/or other valuable or unique wildlife resources. Mitigation shall be at sufficient ratios to replace the function, and value of the habitat that was removed or degraded. Mitigation may be achieved through any combination of creation, restoration, conservation easements, and/or mitigation banking. Conservation easements should include provisions for maintenance and management in perpetuity. The County shall recommend coordination with the USFWS and the CDFG to

ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.

- Policy OS-E.2:** The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding.
- Policy OS-E.3:** The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where feasible, located so that the value of the habitat for wildlife is maintained.
- Policy OS-E.6:** The County shall ensure the conservation of large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife populations, as long as this preservation does not threaten the economic well-being of the county.
- Policy OS-E.9:** Prior to approval of discretionary development permits, the County shall require, as part of any required environmental review process, a biological resources evaluation of the project site by a qualified biologist..." The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant resources and/or special status plants or animals. Such evaluation will consider the potential for significant impact on these resources and will either identify feasible mitigation measures or indicate why mitigation is not feasible.
- Policy OS-E.11:** The County shall protect significant aquatic habitats against excessive water withdrawals that could endanger special status fish and wildlife or would interrupt normal migratory patterns.
- Policy OS-E.12:** The County shall ensure the protection of fish and wildlife habitats from environmentally-degrading effluents originating from mining and construction activities that are adjacent to aquatic habitats.
- Policy OS-E.13:** The County should protect to the maximum extent practicable wetlands, riparian habitat, and meadows since they are recognized as essential habitats for birds and wildlife.
- Policy OS-E.16:** Areas that have unusually high value for fish and wildlife propagation should be preserved in a natural state to the maximum possible extent.
- Policy OS-E.17:** The County should preserve, to the maximum possible extent, areas defined as habitats for rare or endangered animal and plant species in a natural state consistent with State and Federal endangered species laws.
- Policy OS-E.18:** The County should preserve areas identified as habitats for rare or endangered plant and animal species primarily through the use of open space easements and appropriate zoning that restrict development in these sensitive areas.

- Policy OS-F.1:** The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides and ridges, and along important transportation corridors, consistent with fire hazard and property line clearing requirements.
- Policy OS-F.2:** The County shall require developers to use native and compatible non-native plant species, especially drought-resistant species, to the extent possible, in fulfilling landscaping requirements imposed as conditions of discretionary permit approval or for project mitigation.
- Policy OS-F.3:** The County shall support the preservation of significant areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.
- Policy OS-F.4:** The County shall ensure that landmark trees are preserved and protected whenever possible.
- Policy OS-F.5:** The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects..."
- Policy OS-F.6:** The County shall require that development on hillsides be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion.
- Policy OS-F.7:** The County shall require developers to take into account a site's natural topography with respect to the design and siting of all physical improvements in order to minimize grading.
- Policy OS-F.8:** The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches and on unused or marginal land for the benefit of wildlife.
- Policy OS-F.9:** The County shall support the continued use of prescribed burning to mimic the effects of natural fires to reduce fuel volumes and associated fire hazards to human residents and to enhance the health of biotic communities.
- Policy OS-F.10:** The County shall require that new developments preserve natural woodlands to the maximum extent possible.
- Policy OS-F.11:** The County shall promote the preservation and management of oak woodlands by encouraging landowners to follow the Fresno County Oak Management Guidelines and to prepare an Oak Management Plan for their property.

4.0 THRESHOLDS OF SIGNIFICANCE

The following subsections describe the thresholds of significance used to assess potential environmental impacts and the impact assessment. Based on Appendix G of the CEQA Guidelines, a project is considered to result in significant impacts on biological resources if it would:

- 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 CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of any adopted habitat conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The first significance threshold (substantial adverse effect on species) is addressed by Impacts BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5. The second threshold (effect on riparian habitat or other sensitive natural community) is addressed by Impacts BIO-1, BIO-2, and BIO-3. The third threshold (interference with movement of species through migratory corridors) is addressed by Impacts BIO-6. The sixth threshold (impacts on any habitat conservation or natural community conservation plan) is addressed by Impact BIO-7.

5.0 ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND SIGNIFICANCE DETERMINATIONS

Impact BIO-1: Special Status Plants

The Project would not affect sensitive vegetation communities and special status species of plants or the habitat of plant species.

There are no anticipated significant impacts to special status plant species potentially occurring within the bounds of the Project site given the longtime heavy agricultural use and no existing on-site populations.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measure: None Required

Impact BIO-2: Valley Elderberry Longhorn Beetle (VELB)

Project activities may result in disturbance or loss of habitat for the VELB.

During the site reconnaissance survey at the Project site, 56 isolated and grouped elderberry plants were located with stems greater than 1 inch measured at ground level according to the 1999 USFWS VELB protocol at a distance of greater than 100 feet from the project site. No VELB exit holes were observed on any of the stems, branches or trunk of the identified elderberry plants during the site reconnaissance. No Elderberry plants were found within a 100-foot radius of the Project site. No communities of Elderberry plants, including the requisite supporting habitat, were located at the Project site. Figure 7, Carmelita Project Elderberry Plant Locations, shows the location of elderberry plants found near the Project site.

According to the FWS VELB protocol, no impact to VELB will occur if Project disturbance is greater than 100 feet from the dripline of the elderberry plant. The Project design is beyond the 100-foot impact buffer and no impact is anticipated.

There will not be a significant impact if the following Project Commitment is incorporated into the Project:

- **VELB Avoidance:** The USFWS VELB protocol specifically states that no impact to the VELB will be encountered if a 100-foot buffer from the dripline of the elderberry plants is established. The current boundary of development for the Carmelita Project is beyond the requisite 100-foot buffer. Prior to initiating site development, the 100-foot buffer should be delineated by installation of a construction barrier fence.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measure: None Required

Impact BIO-3: California Tiger Salamander

The Project would not affect habitats occupied by the California tiger salamander (CTS).

Potential, but marginal, isolated, and fragmented, areas of upland aestivation habitat for CTS was identified both on the Project site and within 1.2 mile (2 km) of its perimeter. The Pasture, Cropland, and Annual Grassland habitats supported limited fossorial wildlife species that create the requisite aestivation burrows. However, no potential breeding habitat was identified on the Project site or contiguous to it. The man-made ponds (shown as “CTS search sites” on Figure 8, Carmelita Project CTS Map) to the south, west, northwest and north of the Project site do not allow for CTS breeding. Not only are the ponds managed far too intensively, but they are entirely isolated by high disturbance agricultural and mining activities. The wetlands west of the Project site, likewise, do not constitute breeding habitat for this sensitive species. They were each occupied by significant numbers of CTS predators including, but not limited to, largemouth bass, green sunfish, mosquito fish, blue gill, and bullfrogs. Such predators eliminate salamander populations within a short time span (Zeiner *et al.* 1990).

The Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Avenue were all identified as significant barriers that effectually isolate the Project site from potential CTS migration. The canal system is typically greater than 50 feet wide with sidewalls that are much too steep for CTS to traverse, intensively managed, fast flowing when utilized, and some are occupied by predatory fish as a consequence of carryover from where the water originates upstream.

Furthermore, the database search listed no historic occurrences of the CTS either on the project site, within 1.2 miles (2 km) of the perimeter or 5 km of the Project site. The closest occurrence documented by the CNDDDB is 5.13 miles (8.25 km) northeast of the Project site (shown as “CTS-CNDDDB” on Figure 8). Figure 8 shows a graphic depiction of the location that the CNDDDB lists for CTS. Not only does this distance exceed the known migration distance of CTS, but the occurrence location is beyond the Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Avenue which were all identified as significant barriers that effectually isolate the project site from potential CTS migration as previously mentioned.

Given the results of the site assessment, the Project site does not support CTS, transient or otherwise. Redeveloping the location to include the Project is not expected to impact this sensitive species. Consequently, the submittal of this report should fulfill the requirements to satisfy the USFWS Initial Site Assessment protocol regarding CTS, as the findings contained within it preclude the need to conduct a full Presence/Negative Finding Survey.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measures: None Required

Impact BIO-4: Migratory Birds and Raptors

Project activities could result in impacts to nesting migratory birds and raptors.

One active raptor nest was identified within the survey perimeter. A female Red-tailed hawk (*Buteo jamaicensis*) was observed performing aerial displays and vocalizations to distract and deter the survey team from investigating a nest location approximately 1,125 feet northwest of the Project site. The adult male was observed throughout the survey foraging in the vicinity of the nest along the Kings River. The location of the nest is depicted in Figure 9, Carmelita Project Raptor Map. An additional pair of red-tailed hawks was observed engaging in aerial courtship displays north of the Project site, but no associated nest was documented. While two other raptors were observed south of the survey area along the riparian corridor of the Kings River, the survey revealed no additional active raptor nests within 0.5 miles of the Project site.

Although no active nests were observed during this survey, it is prudent that prior to construction, a pre-construction survey be completed to verify that nesting raptors have not become established on to the Project site or within 0.5 miles of it.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure BIO-1a: Nesting Raptor Preconstruction Surveys

If construction activities are initiated during the raptor nesting season, a qualified biologist will conduct a pre-construction survey of the construction areas and the

immediate vicinity (0.5 radius) for active raptor nests. The surveys should be conducted according to a protocol developed in consultation with the California Department of Fish and Game. The Protocol is provided in Appendix A-2 to the Biological Assessment Request.

Mitigation Measure BIO-1b: Avoidance

A pre-construction survey will be completed by the Operator for anticipated ground disturbance activities between July 30 through April 15. If active nests sites are observed, these nests will be monitored by a qualified biologist during the nesting season (April 1 through July 30). If ground disturbance are scheduled during that timeframe, the DFG will be consulted prior to commencing activities."

"Pre-Construction surveys for active raptor nests will be completed by the Operator between July 30 and April 1. If an active nest is observed within 500 feet of the project, the nest will be monitored by a qualified biologist during ground disturbance activities conducted between April 15 through July 30. If the hawks show signs of being disturbed, activities will stop and the DFG will be consulted."

"Prior to commencement of construction or quarrying activities within 500 feet of mapped oak or sycamore woodlands the Operator shall retain a qualified biologist to conduct a raptor survey of potential nesting sites. Surveys shall be conducted within the nesting season (April through July) and no more than twelve months prior to commencement of activities. If raptor nests are observed, the Operator shall not operate heavy equipment, or machinery within 500 feet of occupied nests. Survey results shall be submitted to the DFG prior to commencing operations within 500 feet of mapped woodlands."

Level of Significance After Mitigation: Less than Significant

Impact BIO-5: Burrowing Owls

Project activities could result in the loss of a burrowing owl or active burrow.

Biological reconnaissance surveys were conducted on November 12, 2008 to complete Phase I Habitat Assessment evaluations; December 15, and 16, 2008, January 6 and 7, February 17, March 13, April 2 and April 17, 2009 to complete Phase II Burrow Surveys requirements and assess sensitive species, sensitive

habitats, and other biological resource issues which might occur on or adjacent to the Project site.

The guidelines and protocols provided by the FWS, the CDFG, and the Burrowing Owl Consortium (BOC) for the species were cited, referenced, and used to evaluate the site for occupation and the potential for the Project to impact the specific species. The survey methodologies, assessments and results are provided in Appendix A-2 to the Biologic Assessment Report following the body of this report.

The focused surveys did not result in any of the sensitive species identified as potentially occurring on the Project being observed on the Project property or, in the professional opinion of ESR, have a high enough probability of occurrence that could be deemed significant.

Focused Burrowing Owl Survey Results

The Western burrowing owl survey and assessment consists of three Phases:

- Phase I: Habitat Assessment;
- Phase II: Burrow Survey; and
- Phase III: Census and Mapping, if owls were found.

It should be noted that the Phase III Census and Mapping effort would only be undertaken if evidence of use of the area by Western burrowing owls was observed during the surveys (Phase II).

In summary, during both the nesting season survey and the winter survey, no owl sightings were made and no occupied burrows or burrows with signs of owl presence (feathers, pellets, wash, prey remnants, etc.) were found. No census and mapping activities for occupied burrowing owl locations was necessary since none were found. Mitigation measures are not proposed at this time; however, prior to construction, a pre-construction survey would help reaffirm that the Project site is not being used by burrowing owls.

To ensure no adverse impact will occur to Western Burrowing Owl, the Applicant will incorporate the following Project commitments:

- **Western Burrowing Owl Preconstruction surveys:** Prior to commencing a new phase of the Project in an area potentially suitable for Western Burrowing Owl habitat, a qualified biologist should conduct a preconstruction survey for Western burrowing owl in areas slated for Project activities. Only if Western burrowing owls are identified during the preconstruction survey will an addendum to this report be prepared addressing the species.
- **Avoidance:** If Western Burrowing owls are found in areas slated for Project activities, construction should be delayed until further consultations with the appropriate agencies are completed.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measures: None Required

Impact BIO-6: Migratory Corridors and Wildlife Nursery Sites

The Project is not expected to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites.

Such corridors could include riparian habitats, ridge tops, spur ridges, etc. Some amphibians may make regular localized movements between breeding habitat and aestivation habitat through grasslands that are indistinguishable from adjacent grasslands that are not so used. Although this report focuses on the sensitive biotic resources of the Project site, the broader environmental setting has been described. Thus, the various biotic habitats observed in the Project area have been described and their component plants and animals discussions are herein.

The Project area could contain “movement corridors” for native wildlife; with species inhabiting vegetation associated with the adjoining riparian habitat west of the Project location. Few native wildlife species occurring on the site (with the possible exception of some avian species) are migratory. Impacts attributable to the development of site are less than significant to movement corridors for native wildlife because the Project site is currently an active agricultural site.

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None Required

Impact BIO-7: Conflict with Adopted Plans, Policies, or Habitat Conservation Plans

The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Level of Significance Before Mitigation: Less than Significant

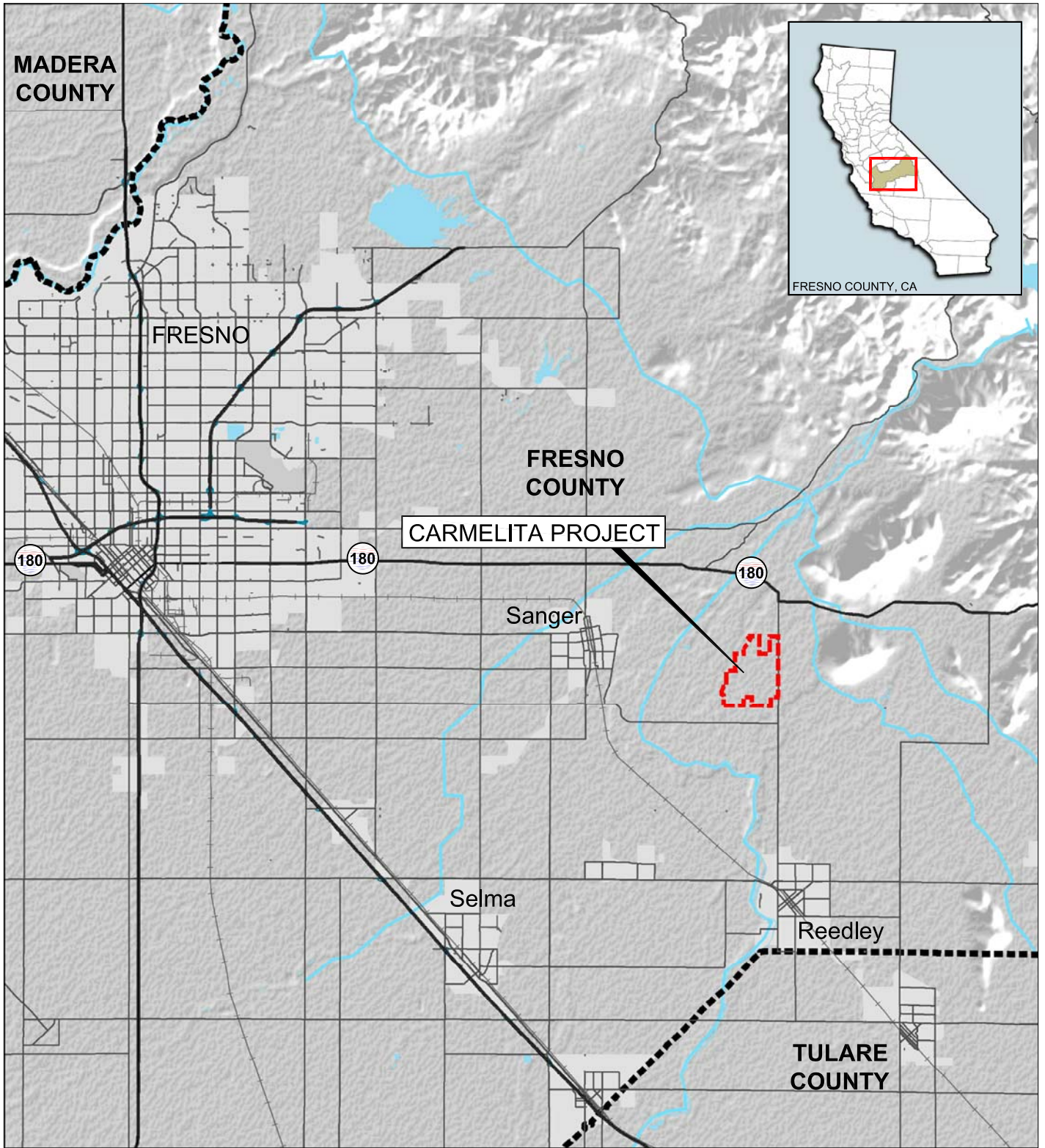
Mitigation Measures: None Required

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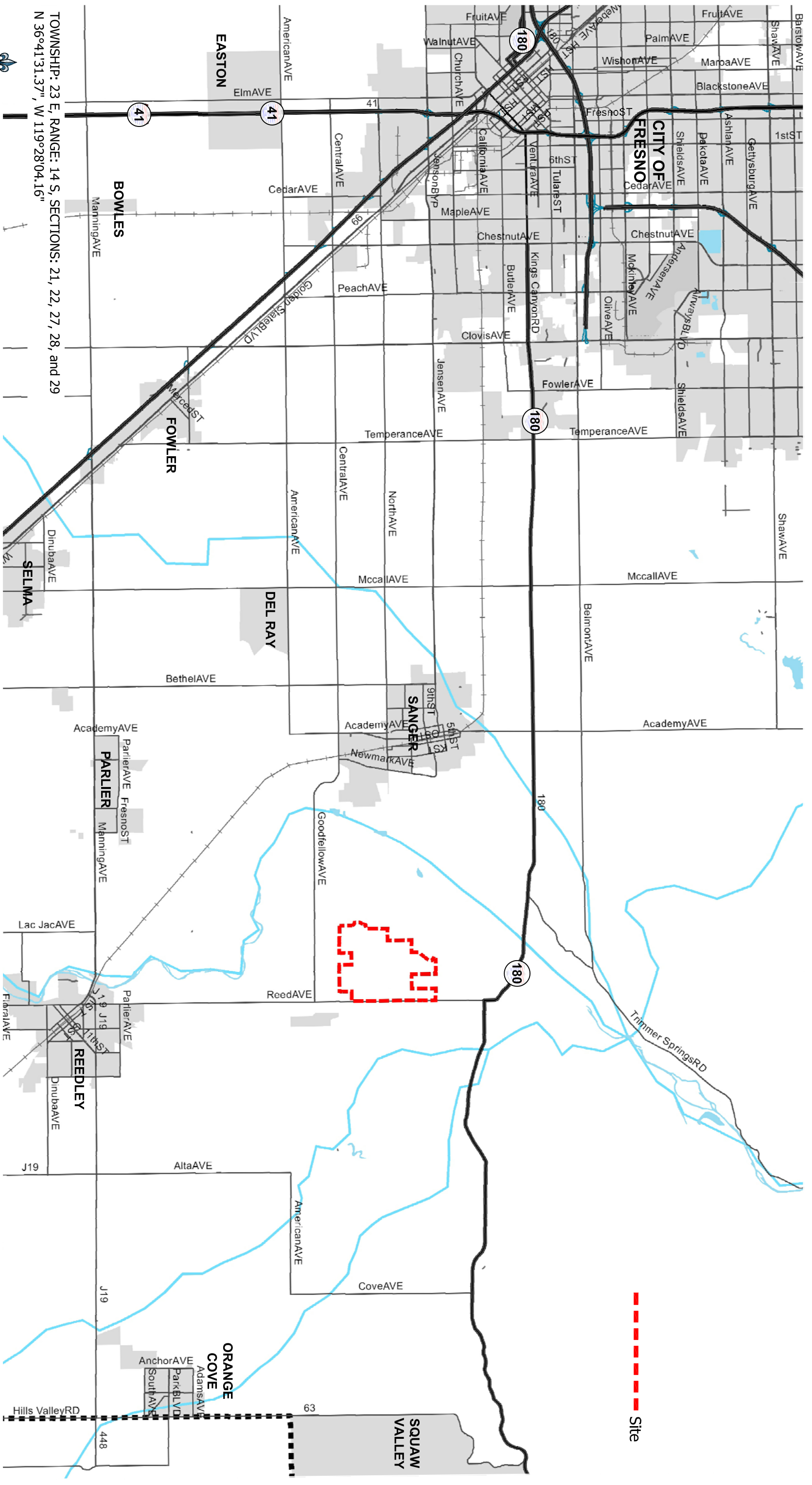


SCALE: 1" = 5 miles

BENCHMARK RESOURCES

Regional Location
BIOLOGICAL RESOURCES
CARMELITA PROJECT

Figure 1



0 10000'

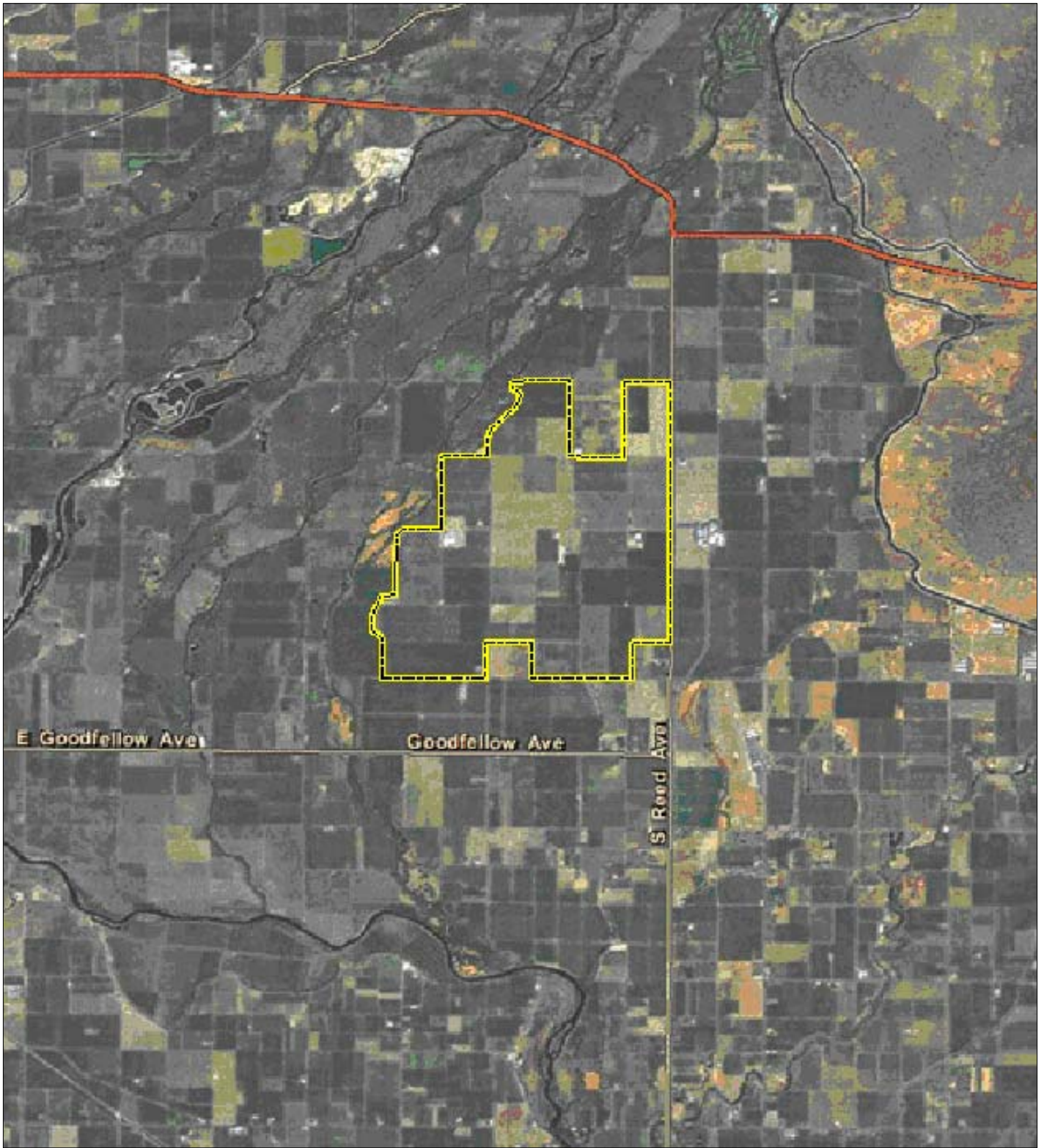
SCALE: 1" = 10000'-0"

BENCHMARK RESOURCES


Site Location
 BIOLOGICAL RESOURCES
 CARMELITA PROJECT

Figure 2

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



SCALE: 1" = 5000'-0"

 Property Boundary

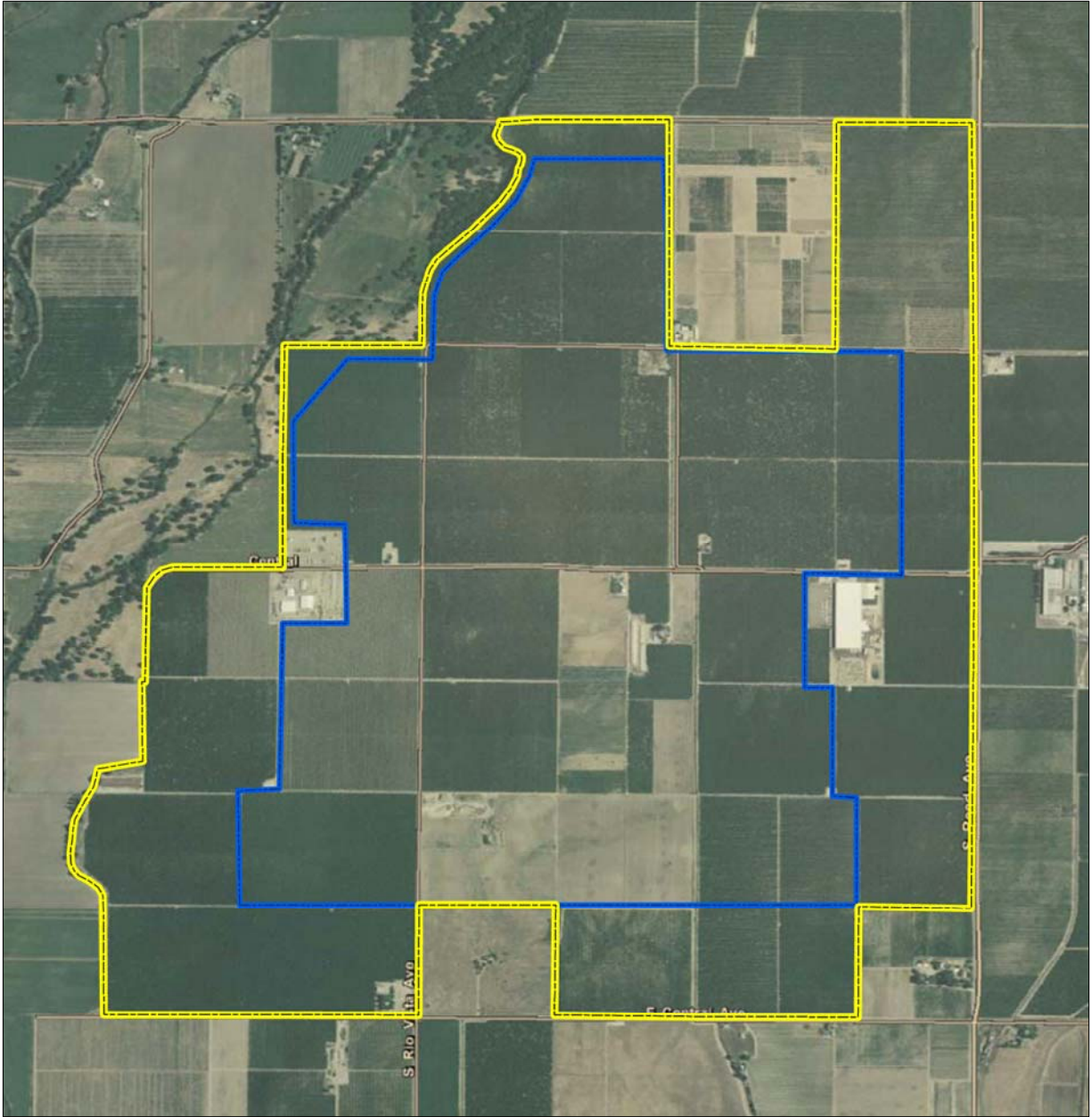
Carmelita Project Location Aerial Map



BIOLOGICAL RESOURCES
CARMELITA PROJECT

BENCHMARK RESOURCES

Figure 3

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



-  Property Boundary
-  Project Boundary



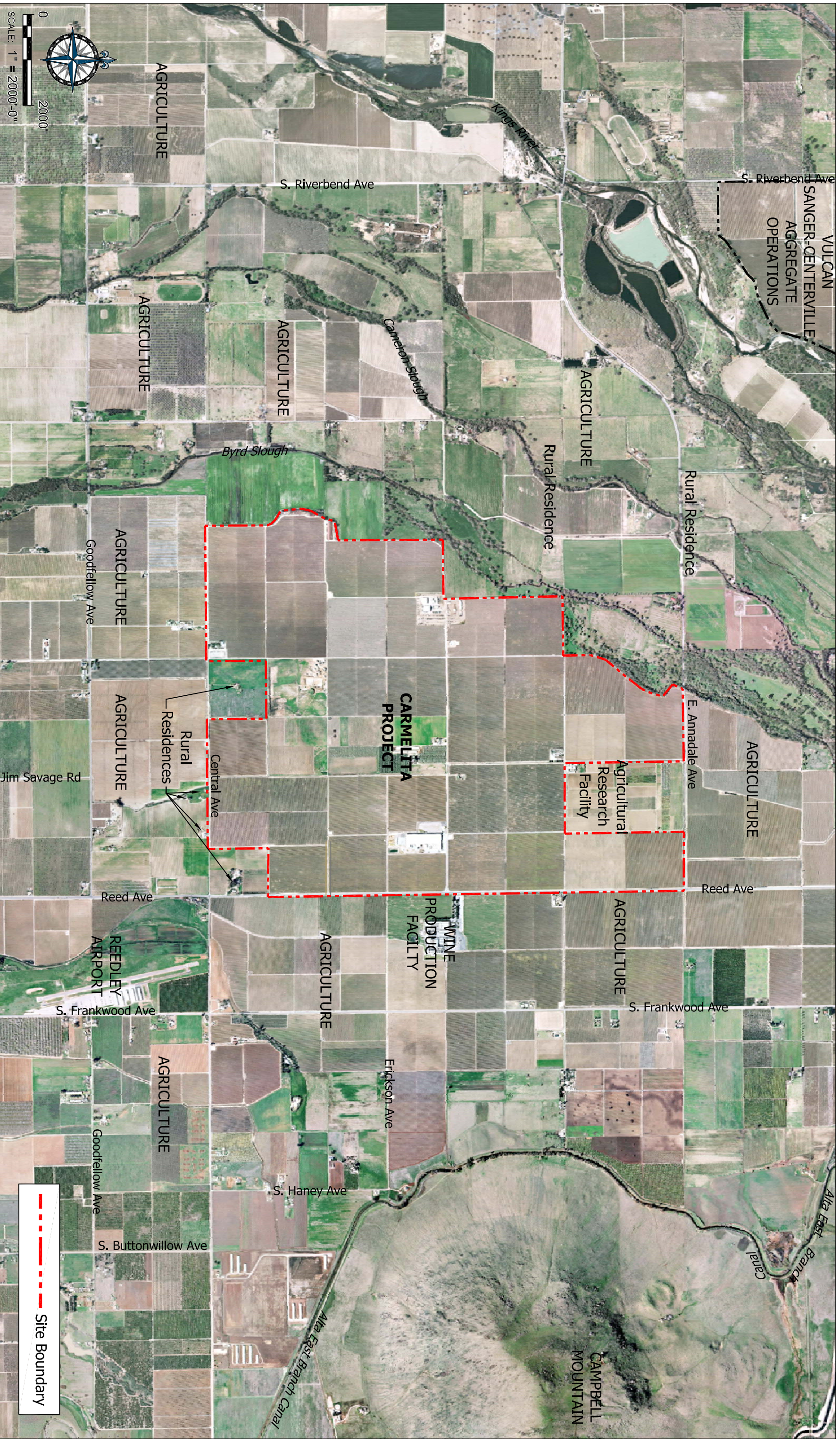
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Carmelita Project Site Map

BIOLOGICAL RESOURCES
CARMELITA PROJECT

BENCHMARK RESOURCES

Figure 4



Site and Surrounding Land Use

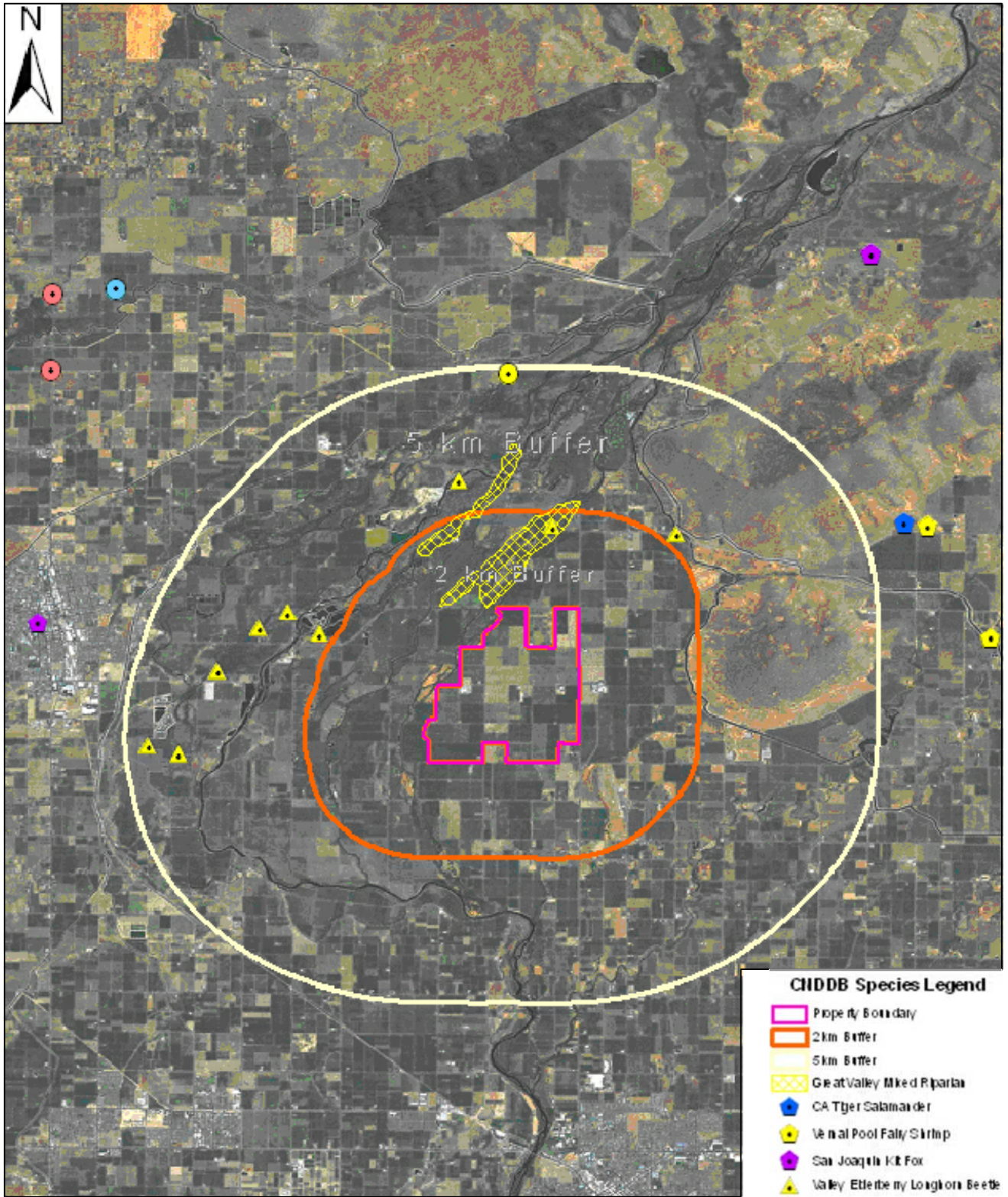
BIOLOGICAL RESOURCES
CARMELITTA PROJECT

Figure 5

BENCHMARK RESOURCES

AERIAL PHOTOGRAPH SOURCE AND DATE: GlobeExplorer ImagetAtlas (February, 2007)

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



0 10,000'

SCALE: 1" = 10,000'-0"

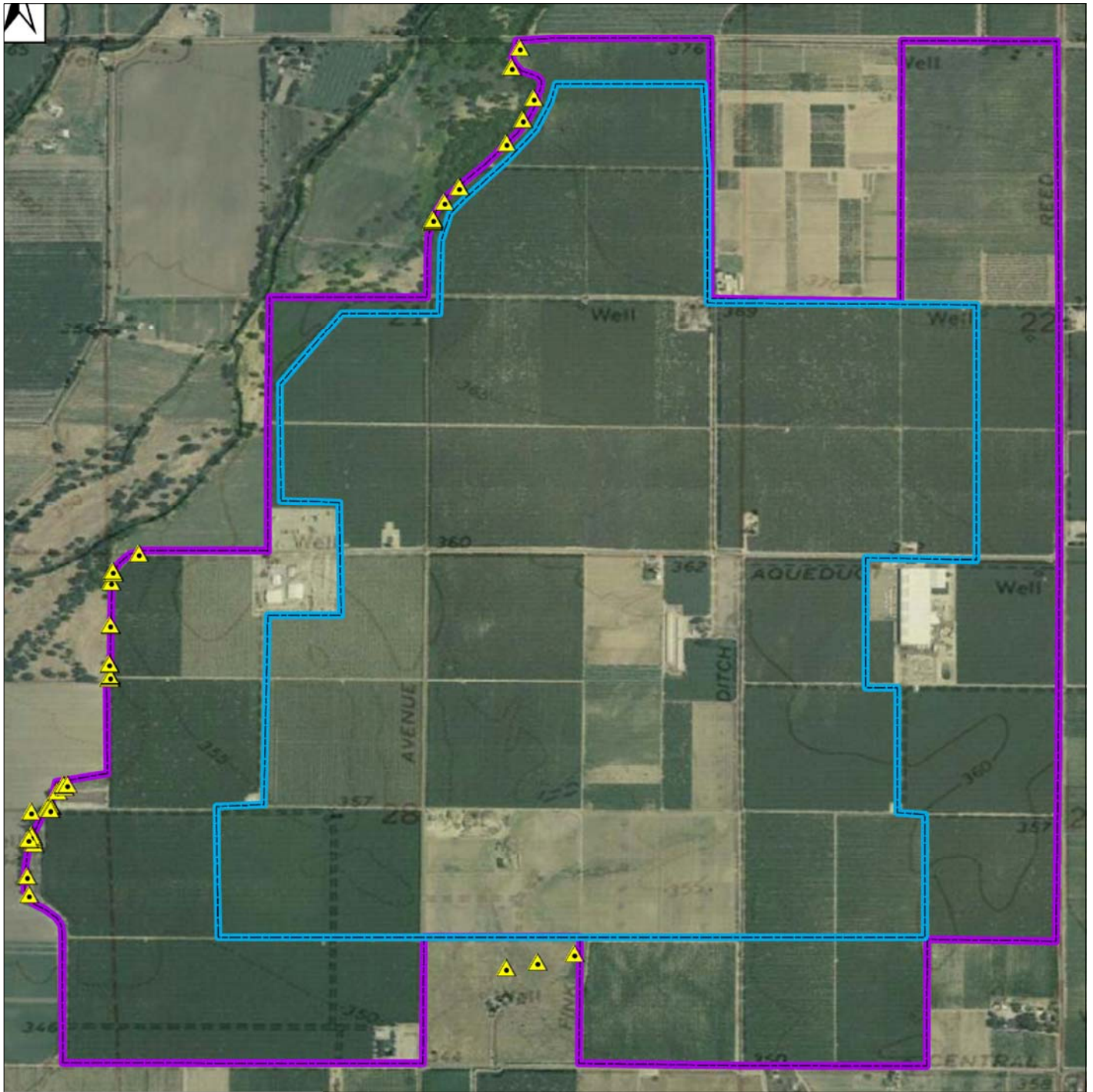
Carmelita Project CNDDDB Species Map

BIOLOGICAL RESOURCES
CARMELITA PROJECT

BENCHMARK RESOURCES

Figure 6

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



-  Property Boundary
-  Project Boundary
-  Elderberry Plants



0 2000'

SCALE: 1" = 2000'-0"

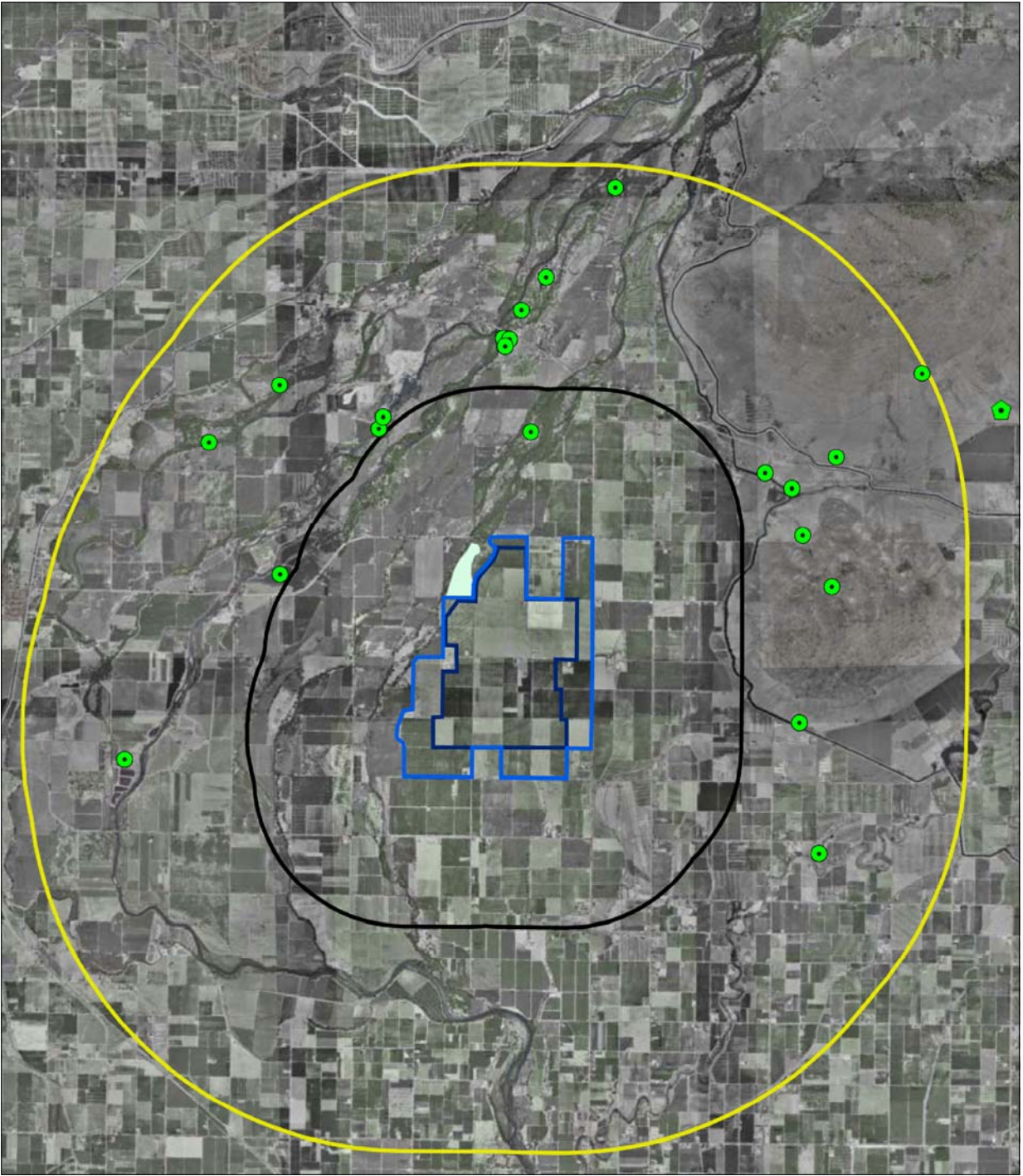
Carmelita Project Elderberry Plant Locations

BIOLOGICAL RESOURCES
CARMELITA PROJECT

BENCHMARK RESOURCES

Figure 7

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



- Property Boundary
- 2km CTS Search Radius
- CTS - CNDDB
- pasture
- Project Boundary
- 5km CTS Search Radius
- CTS search sites



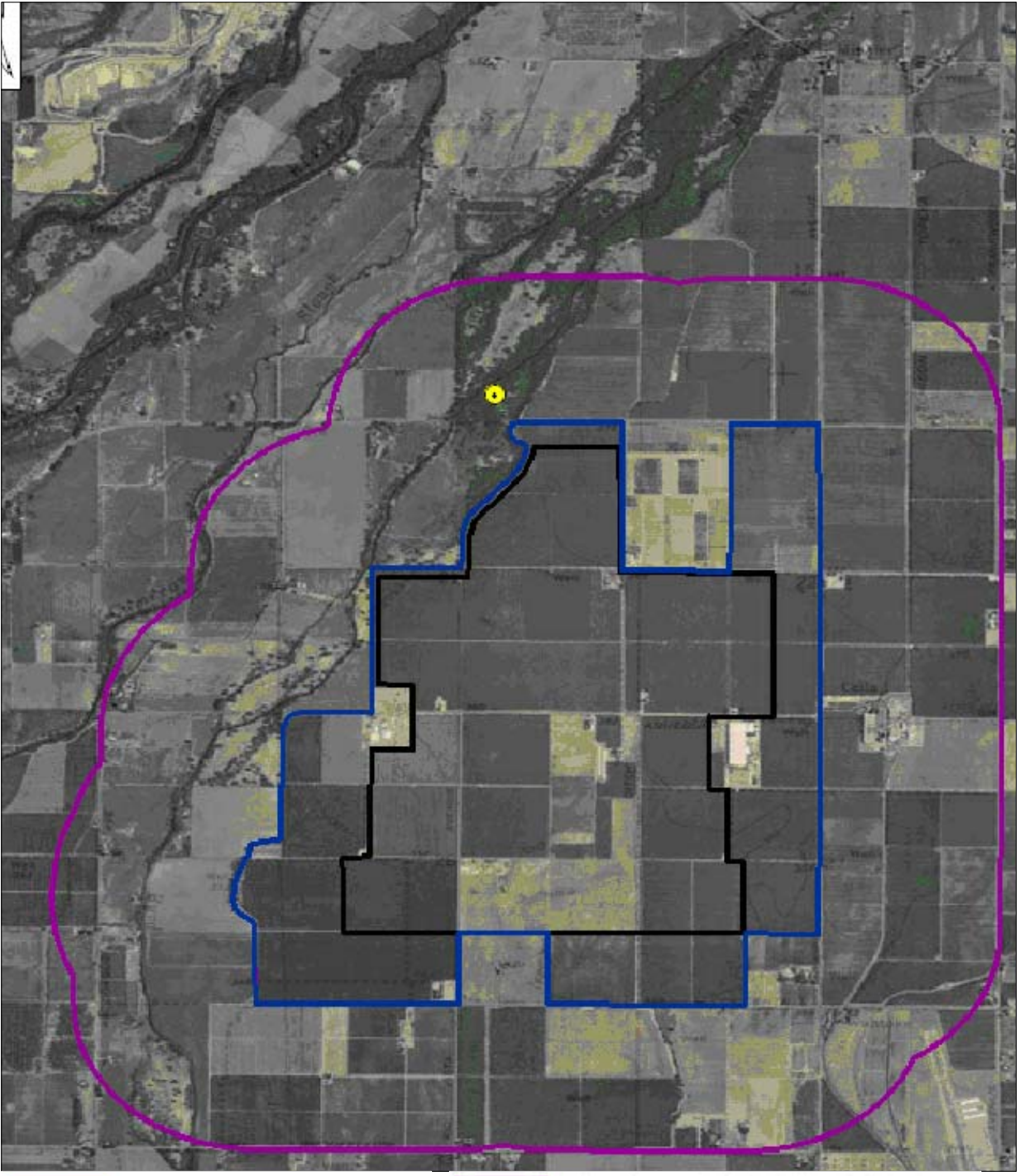
0 1/2 mile





SCALE: 1" = 1/2 mile

Carmelita Project CTS Map

BIOLOGICAL RESOURCES
CARMELITA PROJECT

SOURCE: Carmelita Project Biological Assessment Report, ESR, Inc. (10-2009)



-  Property Boundary
-  Project Boundary
-  Raptor Nest Search Buffer
-  Red-tail Hawk Nest



0 1/2 mile
SCALE: 1" = 1/2 mile

Carmelita Project Raptor Map
BIOLOGICAL RESOURCES
CARMELITA PROJECT

Colony Land Company, L.P.
Carmelita Project
Biological Assessment Report

Fresno County, CA

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SUMMARY OF FINDINGS AND CONCLUSIONS

This Biological Assessment Report completed by Environmental Site Restoration, Inc. (ESR) for Carmelita Resources, LLC (Carmelita Resources) describes existing biological resources on property owned by the Colony Land Company, L.P. (Colony Land Company). The report identifies potential impacts and proposes mitigation measures associated with implementation of the proposed Carmelita Project.

Approximately 1,500-acres west of Reed Avenue have been identified as a site for development of the Carmelita Project (Project) to be operated by Carmelita Resources that would include an aggregate production facility that would ultimately disturb up to 898 acres of the site. The site could support long-term production of construction aggregates for 100 years or more. The remaining 602 acres would continue to support tree fruit production on this and surrounding properties under Colony Land Company ownership.

Information on the biological resources was based on a review of agency data bases including the California Department of Fish and Game's (DFG) Natural Diversity Data Base (CNDDDB), the U.S. Fish and Wildlife Service (FWS) listing of Threatened and Endangered Species and the California Native Plant Societies (CNPS) Inventory of Rare and Endangered Plant Species. After completing the database searches, several specialized biological surveys were conducted between November 2008 and June 2009 including protocol level surveys for the Initial Site Assessment for California Tiger Salamander habitat, with focused surveys for Burrowing Owls, Valley Elderberry Longhorn Beetles, and nesting raptors. These species were identified as the species with the most potential to be impacted by the Project.

Site surveys were conducted during the appropriate time of the year as specified in the guidelines and protocols for the species to evaluate the likelihood of the species of concern occupying or being impacted by the proposed Project. In addition, no jurisdictional wetlands occur on the project site or within 100 feet of the site. The Finks ditch is a man-made irrigation ditch constructed through upland habitat and as such does not meet U.S. Army Corps of Engineers definition of a jurisdiction wetland. The project design is currently maintaining a minimum 25 foot buffer from the ditch to avoid any potential impacts.

The detailed surveys that were conducted resulted in none of the species being observed on the Project property nor is there a high probability of occurrence on the Project site due to the Project sites current extensive land use (disturbance). In addition, proposed mitigation measures, when implemented, will reduce the potential impacts to these species to a less than significant level.

1.0 INTRODUCTION

This Biological Assessment Report evaluates the biological resource impacts associated with the Carmelita Project and includes a discussion of the mitigation measures necessary to reduce these impacts to a less than significant level, where feasible. This Biological Assessment Report document is intended to provide the technical information for Fresno County (County) to use in its preparation of the environmental compliance documentation as required by the California Environmental Quality Act (CEQA). Figure 1 – Carmelita Project Vicinity Map provides a graphic depiction of the Project site vicinity.

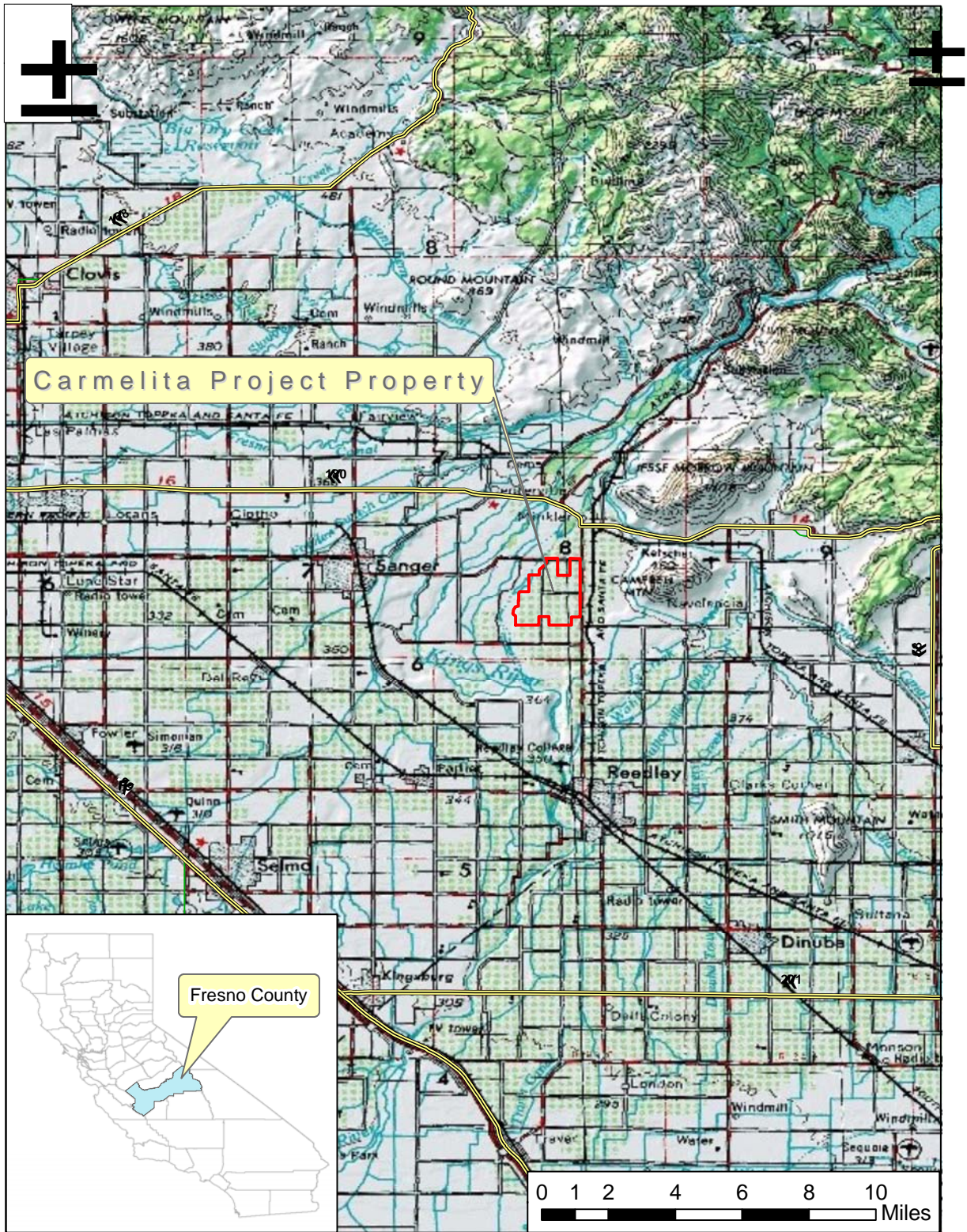


Figure 1 – Carmelita Project Vicinity Map

1.1 PROJECT DESCRIPTION

Carmelita Resources proposed project property (Property) is located in the vicinity of Reedley, 25 miles east of Fresno, California. The Property is under agricultural cultivation for production of stone fruits (peaches, plums, and nectarines). The Property lies within the alluvial fan of the Kings River, making the soils covering the Property very cobbly and rapidly drained. These soil conditions have been a challenge for farming practices in terms of disease, mechanical equipment maintenance, and inefficient water use.

The Property lies within a Mineral Resource Zone (MRZ); and has been designated by the California Department of Conservation as an area containing significant aggregate mineral deposits (MRZ-2). Confirmatory testing has determined that the Property contains construction aggregate materials of the quantity and quality that mineral extraction is a feasible use for the Property.

An approximate 1,500-acre site west of Reedley Avenue has been identified as a site for development of the Carmelita Project (Project), an aggregate production facility that would ultimately disturb up to 898 acres of the site. The site could support long-term production of construction aggregates for 100 years or more. The remaining 602 acres would continue to support tree fruit production on this and surrounding properties under Carmelita Resources ownership.

Operations would be typical of sand and gravel extraction operations, with conventional mining practices common to the industry. Soils and overburden would be removed and the underlying aggregate reserves excavated and transported to a rock processing plant site for washing and sizing. Mining will be scheduled in cells to minimize impacts to ongoing agricultural operations over the property. Overburden and accumulated unmarketable silts and clays

(wash fines) would be used as backfill in completed designated excavation areas, then covered with salvaged topsoil, and returned to agriculture-related post-mining land uses over about 40 percent of the site. Remaining areas would be reclaimed as water basins. Materials would be sold as washed aggregates, or used to make products, including asphaltic concrete and Portland cement concrete at on-site plants. A planned maximum production of 1.25 million tons per year is anticipated. Site access would be from Reed Avenue north to State Route 180 (SR 180), which is in the process of being reconstructed from a two-lane highway to a four-lane expressway.

Conditions for reclaimed land uses will be influenced by actual extraction depths, overburden and waste quantities, groundwater depths (known to vary significantly over time), and economic factors. Mining activities would occur incrementally and take many decades (up to 100 years) to complete. Meanwhile, tree farming would continue. At the completion of mining, 40 percent of the site would still remain in tree farming. Reclamation plans include a return to agricultural uses, and water basins providing irrigation to the hundreds of acres of trees on this and surrounding properties.

1.2 PURPOSE OF ASSESSMENT

A biological assessment is required to assess if the Project adversely affects sensitive biological resources and to propose appropriate mitigation measures where Project impacts could be potentially significant under CEQA.

1.2.1 Special Status Species

“Special Status Species” is a general term that refers to all taxa tracked by the DFG’s CNDDDB, regardless of their legal or protection status. These taxa generally fall into one or more of the following categories:

- Officially listed or proposed for listing under the State and/or Federal Endangered Species Acts.
- State or Federal candidate for possible listing.
- Taxa that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines.
- Taxa considered by the Department to be a “Species of Special Concern”.
- Taxa that are biologically rare; very restricted in distribution; declining throughout their range; or have a critical, vulnerable stage in their life cycle that warrants monitoring.
- Populations in California that may be on the periphery of a taxon range but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at an alarming rate e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.).
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization

For most animal taxa, the CNDDDB is interested in sightings that indicate the presence of a resident population; for many birds, however, the CNDDDB tracks only nesting locations. It is not necessary to actually locate a nest to confirm breeding status. Any indication of breeding (territorial males, adults carrying nest material or food, the presence of newly fledged young, etc.) is acceptable

evidence of nesting. For other taxa where only a certain part of a distribution range or life history is tracked, the area or life stage is indicated.

1.2.2 Sensitive Habitat

“Special Habitat” is a general term that refers to special areas generally tracked by the DFG’s CNDDDB. Sensitive habitats may include the following:

- native habitats of limited distribution (i.e. wetlands of various types, riparian habitat, native grasslands, etc.); or,
- native habitats used by state or federally listed threatened or endangered species; or,
- habitats supporting particularly high concentrations of native plants and animals; or,
- habitat that is within the jurisdiction of one or more state and federal resource agencies (i.e. wetland, endangered species habitat, etc.).

1.2.3 Migratory Corridors of Native Fish and Wildlife

Such corridors could include riparian habitats, ridge tops, spur ridges, etc. Some amphibians may make regular localized movements between breeding habitat and aestivation habitat through grasslands that are indistinguishable from adjacent grasslands that are not so used. Although this report focuses on the sensitive biotic resources of the project area, the broader environmental setting has been described. Thus, the various biotic habitats observed in the project area have been described and their component plants and animals discussions are presented in 4.0. This was done to provide context for the following discussion

to be more specifically related to special status species and other sensitive habitats.

1.3 STUDIES REQUIRED

Studies in support of this biological assessment have included the following:

- **Literature Review and Database Search:** A database and literature review was conducted to include some, or all, of the following: USFWS Federal Endangered and Threatened Species list (May, 2009), CNDDDB (CDFG, May, 2009), California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS, May 2009), other technical studies recently completed for other projects in the area, current listings for special status species (CDFG, 2009), U.S.G.S. topographic maps, Natural Resource Conservation Service (NRCS) soil maps, National Wetland Inventory Maps, etc.
- **Floristic Survey:** ESR, Inc. conducted driving and walking surveys of the project area, during which the biotic habitats were noted, and vascular plants recorded. Particular attention was given to habitats of the project site, which would be suitable, or potentially suitable, for special status plant species (state or federally listed species, candidate species, and species with CNPS listing status).
- **Wildlife Survey:** ESR, Inc. conducted driving and walking surveys of the project area, during which terrestrial vertebrates and their sign were recorded. Particular attention was given to the habitats of the project site, which would be suitable, or potentially suitable,

for special status animal species (state and federally listed species, species proposed for such listing, or candidate species).

1.4 SURVEY DATES AND PERSONNEL

Biological reconnaissance surveys were conducted on November 12, 2008, December 15, and 16, 2008, January 6 and 7, February 17, March 13, April 2 and April 17, 2009 to assess sensitive species, sensitive habitats, and other biological resource issues which might occur on or adjacent to the project site. The visits conducted by ESR Senior Biologists William Stolp and Scott Larson and Staff biologist Andy Glass were specifically designed to follow the general guidelines and protocols for the species that may potentially inhabit the site or within close proximity of the Project.

1.5 PROBLEMS ENCOUNTERED AND LIMITATIONS THAT MAY INFLUENCE RESULTS

No encumbering conditions (e.g. bad weather, access restrictions, etc.) that would bias the conclusions of this report were experienced during the conduction of the survey. On all days, weather was partly cloudy and slightly breezy with an approximate air temperature of between 65° F and 85° F. Upon each visit, the biologist collected data throughout the project site by conducting thorough pedestrian surveys with high optics and GPS units. The plant and wildlife species encountered were positively identified, wetlands were mapped, vegetative communities were categorized, and the general habitat quality was evaluated for the presence of rare species.

2.0 REGULATORY BACKGROUND

The following sections provide an overview of the federal, state, and local regulations that have been promulgated to address sensitive species and habitats.

2.1 FEDERAL ENDANGERED SPECIES ACT

The Federal Endangered Species Act (ESA) prohibits the “take” of federally-listed endangered or threatened wildlife species. “Take” is defined to include harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Actions that result in take can result in civil or criminal penalties. The federal ESA and Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered species. The US Army Corps of Engineers (ACOE or Corps) must consult with the U.S. Fish and Wildlife Service (USFWS), and if salmonid species are involved, the National Marine Fisheries Service (NMFS) when threatened or endangered species may be affected by the proposed project to determine whether issuances of a Section 404 permit would jeopardize the continued existence species. In the context of the project site, the federal ESA would be triggered if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could adversely affect or jeopardize a threatened or endangered species.

2.2 CALIFORNIA ENDANGERED SPECIES ACT

The California ESA (CESA) is similar to the federal ESA but pertains to state-listed endangered and threatened species and species proposed for listing. It requires state agencies to consult with the DFG when preparing CEQA documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. It directs agencies to consult with DFG on projects or actions that could affect listed species, directs DFG to determine whether jeopardy would occur, and allows DFG to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that there are “overriding considerations”; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species. The CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species and those proposed for listing. DFG exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. DFG may authorize “take” if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented.

2.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA applies to public agencies in California with discretionary authority over project approvals and permits. CEQA requires that impacts of proposed projects be assessed before the project is approved. Projects with significant impacts on the environment cannot be approved without feasible mitigation or compensation, unless a finding of overriding consideration is made.

Discretionary approval from public agencies may require avoidance measures or compensatory mitigation. CEQA also provides that less than significant impacts

of an individual project can be treated as significant if they contribute to significant cumulative impacts on the environment.

2.4 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, implements domestically a series of treaties (on behalf of Canada) between the United States and Great Britain, Mexico, Japan, and the former USSR. The MBTA provides for international migratory bird protection, and authorizes the Secretary of the Interior to regulate the “taking” of migratory birds. Specifically, the MBTA states that it shall be unlawful, except as permitted by regulations, to “at any time, by any means, or in any manner, to pursue, take, kill, possess, sale, purchase, ship, transport, carry, or export, at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird” (16 USC 703). The current list of species protected by the MBTA can be located in Title 50, CFR Section 10.13. The Wahtoke U.S.G.S. 7.5 minute quadrangle was used in the search for special status species potentially occurring within the project area or in the project area vicinity.

2.5 BIRDS OF PREY

Birds of prey are also protected in California under provisions of the State Fish and Game Code, (Section 3503.5, 1992) which states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird in the order Falconiformes or Strigiformes (bird of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise

lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the DFG.

2.6 SECTION 404 OF THE CLEAN WATER ACT

The US Army Corps of Engineers (ACOE) and the Environmental Protection Agency (EPA) regulate the discharge of dredged and fill material into “Waters of the United States” under Section 404 of the Clean Water Act (CWA). ACOE jurisdiction over non-tidal “Waters of the United States” extends to the “ordinary high water mark,” provided the jurisdiction is not extended by the presence of “wetlands” (33 CFR Part 328, Section 328.4). The discharge of dredged or fill material into Waters of the United States at a project site requires a Section 404 permit.

As discussed above, ACOE regulatory jurisdiction under Section 404 is founded on a connection between the water body in question and interstate commerce. This connection may be direct; through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. On January 9, 2001, the Supreme Court issued a decision in *Solid Waste Agency of Northern Cook County [SWANCC] v. U.S. Army Corps of Engineers* concerning Clean Water Act jurisdiction over isolated waters. This decision substantially affected the extent of Corps regulatory authority over “non-navigable, isolated, intrastate waters,” and particularly, the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. In addition, since *SWANCC* the U.S. Supreme Court case in the *Rapanos* case has also further restricted the application of the waters of the U.S. definition regarding ephemeral streams, ditches and other waters to ensure that the Corps document as appropriate.

The preamble to Corps regulations in the Preamble Section 328.3 – Definitions, states that the Corps does not generally consider the following waters to be waters of the U.S. The Corps does, however, reserve the right to regulate these waters on a case by case basis.

- Non-tidal drainage and irrigation ditches excavated on dry land,
- Artificially irrigated areas that would revert to upland if the irrigation ceased,
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing,
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons,
- Water filled depressions created in dry land incidental to construction activity and pits excavated in dry land for purposes of obtaining fill, sand or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the U.S.

2.7 SECTION 401 OF THE CLEAN WATER ACT

In association with obtaining a Section 404 permit, a Water Quality Certification must be obtained from the Regional Water Quality Control Board. Section 401 of the Clean Water Act requires that the project proponent for any project that affects Waters of the United States must request a 401 Water Quality Certification, which must be issued before the start of project construction. To obtain approval of the application for Water Quality Certification, projects must follow the Corps' 404(b)(1) Guidelines which specify avoidance of wetland

impacts and minimization and mitigation of impacts to any affected wetlands. However since a 404 permit is not anticipated to be required for the Project the associated 401 certification will also not be required.

2.8 FRESNO COUNTY GENERAL PLAN

The Fresno County General Plan (General Plan) (Fresno County Planning Department 2000) identifies specific policies regarding natural resources and productive resources including mineral resources. While this assessment analyzes the project's consistency with the Fresno County General Plan pursuant to CEQA Section 15125(d), the Fresno County Board of Supervisors would ultimately make the determination of the project's consistency with this General Plan. The Fresno County General Plan has adopted an Open Space and Conservation Element that recognizes the value of maintaining biological resources. In general, the Fresno County Open Space and Conservation Element regarding biological resources are consistent with, and are superseded by federal and state ESA's, CEQA, and Section 1603 of the Fish and Game Code (described above). The Project site is not located within a designated Natural Resource Area, and does not encompass any Key (Rare) Vegetative Habitat, Key Wildlife Habitat or Significant Wildlife Habitat. Additionally, the Project site is not designated as, and is not located near, deer migratory routes, wintering areas, or fawning areas.

3.0 PROJECT SETTING

The following sections provide background information on the geographic, vicinity and site setting of the proposed Project.

3.1 GEOGRAPHIC AREA SETTING

The Project site lies within Fresno County, specifically in the Wahtoke U.S. Geological Survey 7 ½ minute quadrangle, Section 5, Township 11 South, and Range 10 East of the Mt. Diablo Base and Meridian (MDBM). The County has a total area of 6,017 square miles (15,585 km²), of which, 5,963 square miles (15,443km²) of it is land and 55 square miles (142 km²) of it (0.91%) is water. Major watercourses are the San Joaquin, Kings River, Delta-Mendota Canal, Big Creek, Friant Kern Canal, Helm Canal and Madera Canal. It is bordered on the west by the Coast Range and on the east by the Sierra Nevada. It is the center of a large agricultural area, known as the most agriculturally rich county in the United States.

Fresno County encompasses portions of the following three geographic Regions within the California Floristic Province, as identified in the widely used Jepson Manual classification system: Central Western California (CW), Great Central Valley (GV), and the Sierra Nevada (SN). The project site is located within the Great Central Valley Region which is comprised of two sub regions – the Sacramento Valley (ScV) and the San Joaquin Valley (SnJV). The Project is specifically located within the San Joaquin Valley Sub-region which is characterized predominantly as grassland that has undergone extensive agricultural conversion with islands of valley oak savanna. The San Joaquin Valley is generally hotter and drier than the Sacramento Valley to the north and therefore supports some desert elements to the south.

3.2 VICINITY SETTING

The Property is located in the vicinity of Sanger, 15 miles east of Fresno, California. Several potential water features in the general vicinity were

identified including the Kings River, Byrd Slough, Cameron Slough, Centerville Kingsburg Canal, Friant-Kern Canal, and Alta Main Canal. Associated with the Kings River, Cameron Slough, and Byrd Slough are areas of fairly contiguous riparian habitat along their fringe including designations of Great Valley Riparian Habitat. The natural areas associated with these water features offer important habitat from a large number of native flora and fauna. The presence of these natural lands in the immediate site vicinity increases the study areas accessibility for many species of native wildlife. The habitats between the riparian areas; however, have been extensively developed for agricultural uses.

Additionally, there are several other man-made water features located in the general vicinity. These features consisted primarily of ponds associated with agricultural or recreational use that retain water on a year-round basis. Each potential water feature location within the 3.1 miles (5 km) buffer was visited or evaluated to assess the likelihood of use by sensitive species. Limited, patchy, scattered and fragmented areas were identified that exhibited use by fossorial (burrowing, i.e. ground squirrels, gophers, etc.) mammals to the west of the property. The north, south, and eastern areas in the general vicinity are also in agricultural production with associated amenities to conduct the farming operations.

State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Road were all identified as within the general vicinity. Figure 2 – Carmelita Resources Property Location Map provides a depiction of the area surrounding the Project location.

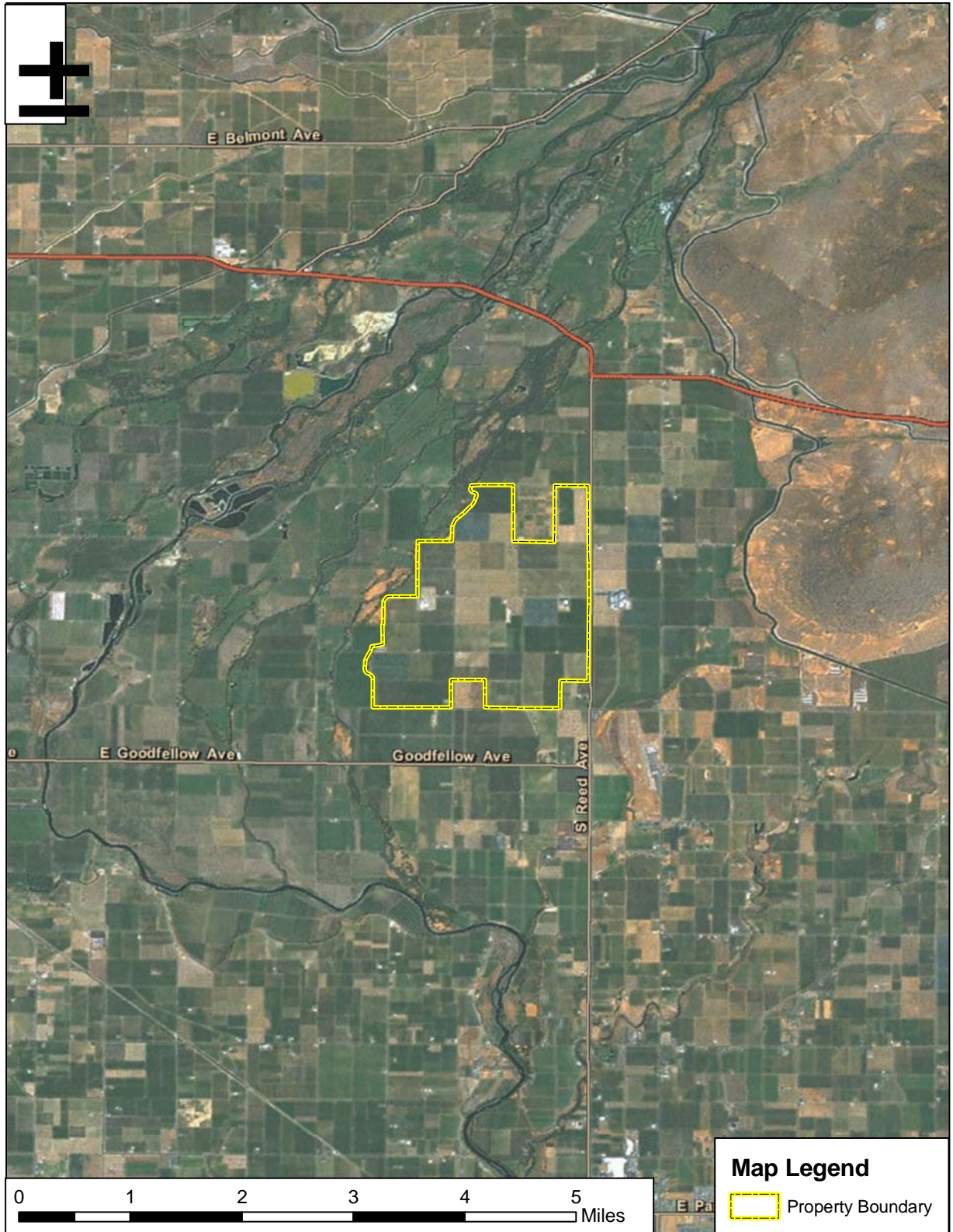


Figure 2 – Carmelita Resources Property Location Map

3.3 SITE SETTING

Colony Land Company owns 1,500 acres in the vicinity of Minkler, 15 miles east of Fresno, California. The Carmelita Project site consists of 898 acres within the 1,500 acres and is located in an agricultural setting within the floodplain of the Kings River. Agricultural areas consist of orchards, fields, pasture and rural residential uses. Figure 3 – Carmelita Project Site Map gives a depiction of the Project site and its current land uses while Figure 4 – Carmelita Project Land Use Map identifies the different land uses on and near [1.2 miles (2km)] the Project site. It is located in an unincorporated area of south-central Fresno County approximately 5.7 miles east of Sanger and 4.5 miles north of Reedley. More specifically, the Kings River and associated Byrd Slough lie immediately to the west; Reed Avenue is the eastern property boundary with the intersection of State Highway 180; and Reed Avenue to its northeast.

The site has been significantly altered for decades from its native state by the farming, commercial, and residential activities. This was verified by site surveys and it was further concluded that no native habitats exist within the study area. The study area consists of several land uses categorized as follows:

- orchard;
- ruderal, active, and inactive field;
- active and inactive pasture;
- commercial;
- residential; and,
- a man-made irrigation ditch excavated on previously dry land;

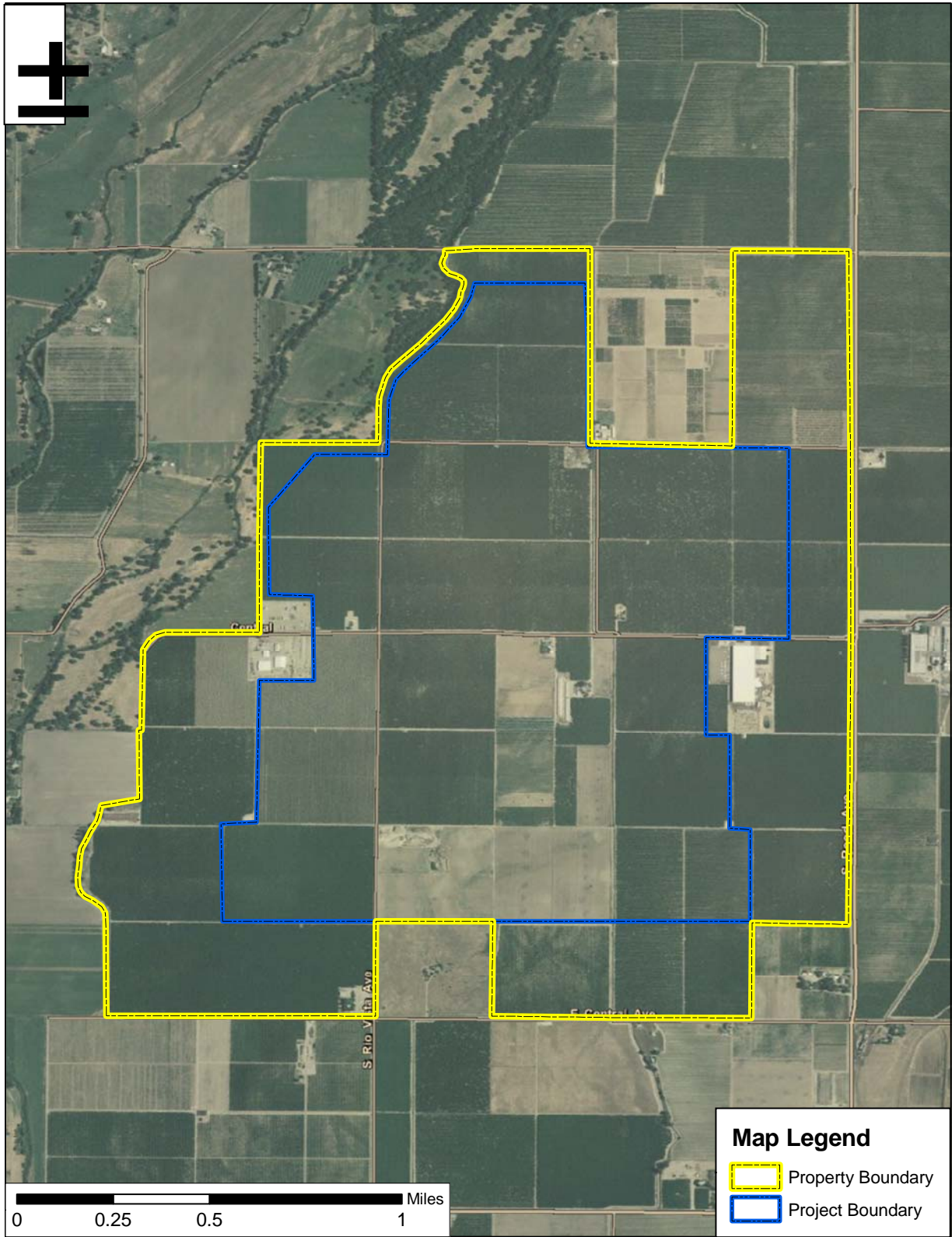


Figure 3 - Carmelita Project Site Map

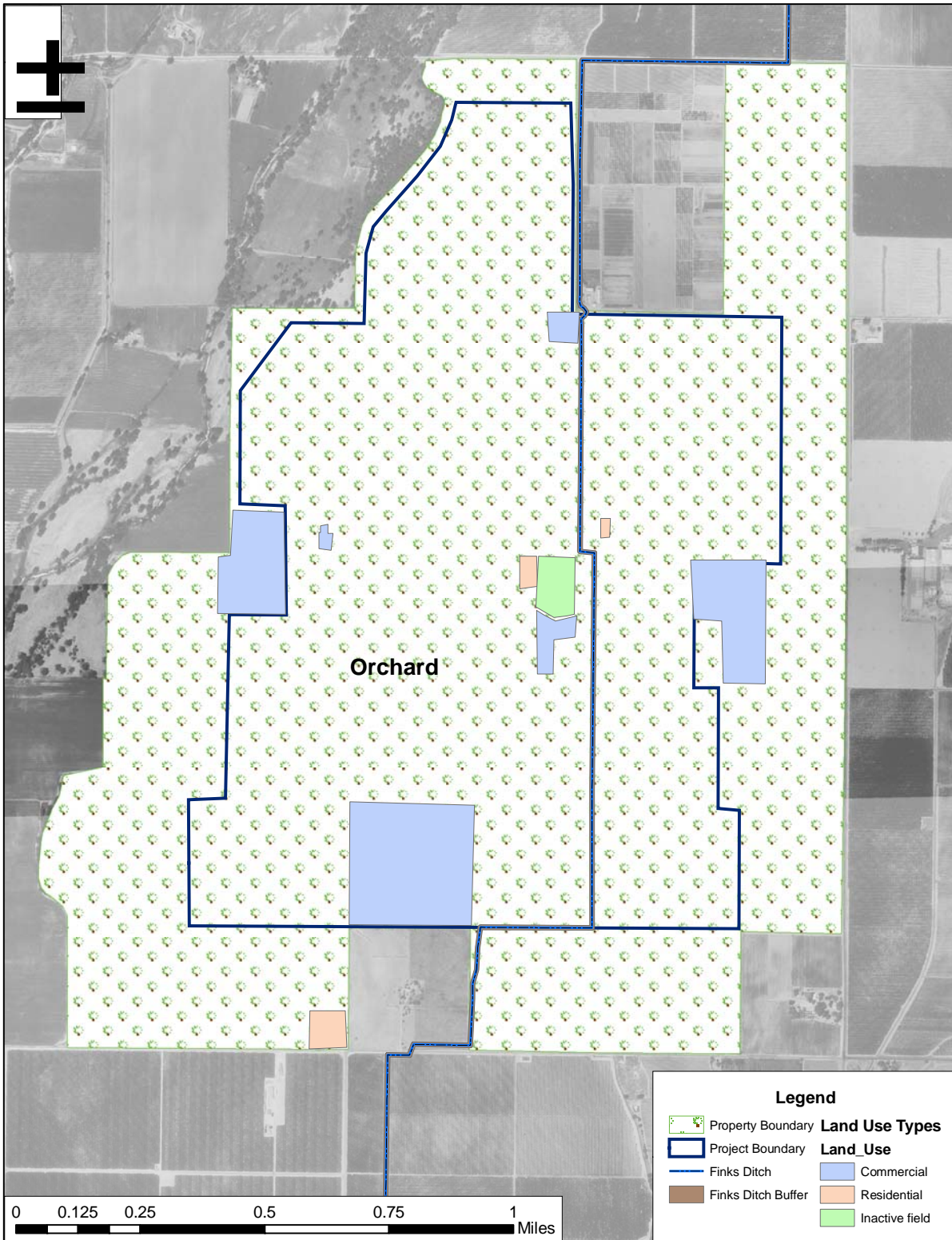


Figure 4 - Carmelita Project Land Use Map

The primary land use consists of orchard activities dominated by peaches, plums and nectarines with a smaller percentage of pomegranates. The orchard understory was well managed by the use of tilling and plowing of ruderal weed species. Some areas appeared to be in line for future disking. These areas were intermittently vegetated primarily with non-native grasses and forbs such as crabgrass (*Digitaria sanguinalis*), prostrate spurge (*Chamaesyce maculate*), horseweed (*Conyza Canadensis*), and nutgrass (*Cyperus rotundus*).

The commercial areas consisted chiefly of parking areas, and a soil screening and separation facility with associated aggregate and soils stockpiles. The area exhibited evidence of ongoing disturbances with little vegetative cover except in the marginal fringe areas. Those sparse areas exhibited horseweed, Johnson grass (*Sorghum halepense*), prostrate pigweed (*Amaranthus blitoides*), and puncture vine (*Tribulus terrestris*).

The inactive field is located behind one of the residential homes. It appears to have been used as an irrigated pasture with some evidence of a residual row crop that has now gone to seed. In addition to the other vegetative species found on the site, this area also contained prickly lettuce (*Lactuca serriola*).

The residential area consisted of three single-family units with the associated farm outbuildings. Vegetation in these areas consisted primarily of landscaped ornamental arrangements with some non-native plants such as hemlock (*Tsuga sp.*) eucalyptus (*Eucalyptus sp.*), olive (*Olea europaea*) and other ornamental trees and shrubs.

The Fink irrigation ditch is managed by the Kings River Water District. In some of the limited, fragmented areas there are remnant growths of herbaceous vegetation such as seep monkey-flower (*Mimulus guttatus*), curly dock (*Rumex crispus*), broadleaf arrowhead (*Sagittaria latifolia*), and curlytop knotweed

(*Polygonum lapathifolium*). No riparian vegetation was located in or along the Fink irrigation ditch. By definition, the Finks Ditch does not meet criteria as a ACOE jurisdictional wetland and no other water features exist on the project site or within 100 feet of it.

4.0 BIOLOGICAL COMMUNITIES

A community is an assemblage of populations of plants, animals, bacteria, and fungi that live in an environment and interact with one another, forming a distinctive living system with its own composition, structure, environmental relationships, development, and functions (Whittaker 1975). ESR uses both the Wildlife Habitat Relationship System (WHRS) and Holland Type to classify communities. These widely utilized methodologies subject classification to the dominant vegetation present. Dominance is contingent upon 1) amount or 2) an indicator unique to specific environmental conditions (Mayer and Laudenslayer 1988). As earlier indicated, the communities identified on the project site and within 1.2 mile (2 km) of its perimeter include Cropland, Annual Grassland, Pasture, Fresh Emergent Wetland, and Riverine. For presentation purposes, we also classify much of the area on the Project site as Disturbed. Common characteristics of these communities are discussed in general terms and potential habitat suitability for wildlife usage below.

4.1 CROPLAND

General Description: Cropland habitat characterizes all of the areas associated with active agricultural land uses (irrigated and non-irrigated) on the Project site and in its vicinity. The primary use of the Project property is peach, plum and nectarine orchards with some pomegranates also being grown. The surrounding areas are also in agricultural production with a variety of products. Although

most crops are planted in rows similar to the Project property there is other non-orchard or row crop such as alfalfa hay and small grains (barley and wheat) in the area that can form dense stands with up to 100 percent canopy closure.

Cropland habitats do not conform to normal habitat stages. Instead, cropland is regulated by the crop cycle in California. These habitats can be annual or perennial and vary according to location in the state, and germinate at various times of the year. Crops such as milo, wheat, cotton, rice and lettuce are common annual plants, whereas stone fruit, nuts, alfalfa, and strawberries are perennials. In addition, the crop rotation system can be used extensively in some areas. This type of planting system rotates crop types (usually between annual and perennials) to conserve soil nutrients, thus maintaining soil productivity (Mayer and Laudenslayer 1988).

Habitat Suitability: Croplands are established on the State's most fertile soils, which, prior to establishment of croplands, historically supported an abundance of wildlife unequalled in other sites. Croplands have greatly reduced the wildlife richness and diversity of California. Many species of rodents and birds have adapted to croplands and are controlled by fencing, trapping, and poisoning to prevent excessive crop losses. Prior to establishing State and Federal wildlife refuges, waterfowl depredation of crops was extensive. That problem has been essentially eliminated; however, some species of waterfowl depend on crop residuals that remain in the fields after harvesting. Deer and wild pigs forage in alfalfa and grain fields and can cause depredation problems (Mayer and Laudenslayer 1988).

Croplands can serve as habitat for wildlife species that are considered integral components of California tiger salamander (*Ambystoma californiense*; CTS) upland habitat. For example, the fossorial wildlife species often associated with croplands create the refugia necessary for salamander aestivation. Some

burrows were documented on the project site and in its vicinity during the survey. The project site therefore provides some of the requisite upland habitat features needed by CTS. However, the routine disturbances associated with cropland habitat, such as disking and tilling, and the lack of potential viable breeding ponds in the vicinity, would likely preclude the utilization of these burrows by aestivating CTS.

4.2 PASTURE

General Description: Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy closure. Height of vegetation varies, according to season and grazing levels, from a few inches to two or more feet on fertile soils before grazing. Old or poorly drained pastures could have patches of weeds in excess of two feet in height (Mayer and Laudenslayer 1988).

Pastures often occur in association with agricultural habitats. Moreover, irrigated pastures can be found adjacent to habitats such as Great Valley Mixed Riparian, Mixed Chaparral, Coastal Scrub, Fresh Emergent Wetland, Annual and Perennial Grassland eastside habitats such as Sagebrush and Bitterbrush as well as various desert habitats (Mayer and Laudenslayer 1988).

Habitat Suitability: Wildlife use pastures in a variety of ways depending upon geographic area and types of adjacent habitats. Ground-nesting birds, including waterfowl, nest in pastures if adequate residual vegetation is present at the onset of the nesting season. Flood irrigation of pastures provides feeding and roosting sites for many wetland-associated birds, including shorebirds, wading birds, gulls, waterfowl, and raptors. As with Croplands, Pastures can serve as habitat for wildlife species that are considered integral components of California tiger salamander upland habitat. The fossorial wildlife species typically associated

with Pastures can create the refugia necessary for salamander aestivation. Some burrows were documented within the Pasture habitat near the project site during the survey. The Project site area provides some isolated and fragmented patches of the requisite upland habitat features needed by CTS. However, because of its isolated and fragmented nature and because of the reasons that are discussed in the Initial Site Assessment for California tiger salamander (Appendix A-2), it is unlikely that CTS utilize the site.

4.3 ANNUAL GRASSLAND

General Description: This habitat is open grassland composed primarily of annual plant species located to the northeast of the site near Jesse Morrow and Campbell Mountains. Many of these species also occur as understory plants in Great Valley Mixed Riparian Woodland and other habitats. Structure in Annual Grassland depends largely on weather patterns and livestock grazing. Dramatic differences in physiognomy, both between seasons and between years, are characteristic of this habitat. Fall rains cause germination of annual plant seeds. Plants grow slowly during the cool winter months, remaining low in stature until spring, when temperatures increase and stimulate more rapid growth. Large amounts of standing dead plant material can be found during summer in years of abundant rainfall and light to moderate grazing pressure. Heavy spring grazing favors the growth of summer-annual forbs, such as tarweed (*Hemizonia* ssp) and turkey mullein (*Eremocarpus setigerus*), and reduces the amount of standing dead material. On good sites, herbage yield may be as high as 4900 kg/ha (4400 lb/ac) (Garrison et al. 1977).

Introduced annual grasses are the dominant plant species in this habitat. These include wild oats, soft chess, ripgut brome, red brome, wild barley, and foxtail fescue. Common forbs include broadleaf filaree, redstem filaree, turkey mullein, true clovers, bur clover, popcorn flower, and many others. California poppy, the

State flower, is commonly found in this habitat. Perennial grasses, found in moist, lightly grazed, or relic prairie areas include purple needlegrass and Idaho fescue. Species composition is also related to precipitation (Bartolome et al. 1980). Perennial grasses are more common on northern sites with mean annual rainfall greater than 150 cm (60 in). Soft chess and broadleaf filaree are common in areas with 65-100 cm (25-40 in) of rainfall, and red brome and red stem filaree are common on southern sites with less than 25 cm (10 in) of precipitation (Bartolome et al. 1980).

Habitat Suitability: Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. Characteristic reptiles that breed in Annual Grassland habitats include the western fence lizard, common garter snake, and western rattlesnake (Basey and Sinclear 1980). Mammals typically found in this habitat include the black-tailed jackrabbit, California ground squirrel, Botta's pocket gopher, western harvest mouse, California vole, badger, and coyote (White et al. 1980). The endangered San Joaquin kit fox is also found in and adjacent to this habitat (U.S. Fish and Wildlife Service 1983). Common birds known to breed in Annual Grasslands include the burrowing owl, short-eared owl, horned lark, and western meadowlark (Verner et al. 1980). This habitat also provides important foraging habitat for the turkey vulture, northern harrier, American kestrel, black-shouldered kite, and prairie falcon.

Like Croplands and Pastures, Annual Grasslands can serve as habitat for wildlife species that are considered integral components of CTS upland habitat. Fossorial wildlife species typically associated with Annual Grasslands, such as California ground squirrels (*Spermophilus beecheyi*), create the refugia necessary for salamander aestivation. California ground squirrel colonies were documented within this habitat during the survey primarily near Jesse Mountain and

Campbell Mountain. Thus, those distant areas (> 5 miles to the northeast) provide some of the requisite upland habitat features needed by CTS.

4.4 FRESH EMERGENT WETLAND

Fresh Emergent Wetlands were identified within 1.2 mile (2 km) of the Project site, primarily associated with the Cameron and Byrd Sloughs and the Kings River systems. These wetlands included some highly managed man-made ornamental, recreational and sediment ponds that are not in a natural state. During the field portion of the survey all of the accessed ponds were observed to be occupied by large numbers of non-native predatory species including, but not limited to, largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis* ssp.), blue gill (*Lepomis macrochirus*), and/or bullfrog (*Rana catesbeiana*).

General Description: Emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots to 2 m (6.6 ft) tall (Cheatham and Haller 1975, Cowardin et al. 1979). Typically, emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment (Gosselink and Turner 1978). The vegetation may vary in size from small clumps to vast areas covering several kilometers.

On the upper margins of Fresh Emergent Wetlands, saturated or periodically flooded, soils support several moist soil plant species including big leaf sedge, baltic rush, redroot nutgrass and on more alkali sites, saltgrass. On wetter sites, common cattail, tule bulrush, river bulrush, and arrowhead are potential dominant species (Cheatham and Haller 1975, U.S. Army Corps of Engineers 1978, Wentz 1981).

Fresh emergent wetland habitats may occur in association with terrestrial habitats or aquatic habitats including Riverine (RIV), Lacustrine (LAC) and Wet Meadows (WTM). The upland limit of Fresh Emergent Wetlands is the boundary between land with predominantly hydrophytic cover and land with primarily mesophytic or xerophytic cover or the boundary between hydric and non-hydric soils (Cowardin et al. 1979). The boundary between fresh emergent wetlands and deep water habitats (e.g., Lacustrine or Riverine) is the deep water edge of the emergent vegetation. It is generally accepted that this demarcation is at or above the 2 m (6.6 ft) depth (Cowardin et al. 1979, Zoltai et al. 1975). The 2 m (6.6 ft) lower limit for emergent wetlands was selected because it represents the maximum depth to which emergent plants normally grow (Welch 1952, Sculthorpe 1967).

Habitat Suitability: Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds (U.S. Comptroller General 1979), and numerous mammals, reptiles, and amphibians. Many species rely on Fresh Emergent Wetlands for their entire life cycle.

Fresh emergent wetland habitats occur on virtually all exposures and slopes provided a basin or depression is saturated or at least periodically flooded. However, they are most common on level to gently rolling topography. They are found in various landscape depressions or at the edge of rivers or lakes (Wentz 1981). Fresh emergent wetland vegetation zones characteristically occur as a series of concentric rings which follow basin contours and reflect the relative depth and duration of flooding. If the bottom of the wetland is very uneven, vegetation zones may be present in a patchy configuration rather than the classic concentric ring pattern (Millar 1976). Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed (Cowardin

et al. 1979). In some areas organic soils (peat) may constitute the primary growth medium (U.S. Army Corps of Engineers 1978).

4.5 RIVERINE

General Description: Riverine habitat occurs within 1.2 mile (2 km) of the project site associated with the Kings River and the areas surrounding the Byrd and Cameron Sloughs, which lie south, west northwest of the Project site and trends along a northwest-southeast axis. Intermittent or continually running water distinguishes Riverine habitat. A stream originates at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease and the bottom will change from rocky to muddy (Mayer and Laudenslayer 1988).

Habitat Suitability: The majority of fast stream inhabitants live in riffles, on the underside of rubble and gravel, sheltered from the current. Characteristic of the riffle insects are the nymphs of mayflies, caddisflies, alderflies, stoneflies; and the larva and pupae of true flies. In pools, the dominant insects are burrowing mayfly nymphs, dragonflies, damselflies and water striders. Water moss and heavily branched filamentous algae are held to rocks by strong holdfasts and align with the current. Other algae grow in spheric, or cushionlike colonies with smooth, gelatinous surfaces. Algae growth in streams often exhibits zonation on rocks, which is influenced by depth and current. With increasing temperatures, decreasing velocities and accumulating bottom sediment, organisms of the fast water are replaced by organisms adapted to slower moving water. Mollusks and crustaceans replace the rubble-dwelling insect larvae. Backswimmers, water

boatmen and diving beetles inhabit sluggish stretches and backwaters. Emergent vegetation grows along river banks, and duckweed floats on the surface.

Abundant decaying matter on the river bottom promotes the growth of plankton populations that are not usually found in fast water (Mayer and Laudenslayer 1988).

Riverine habitats can occur in association with many terrestrial habitats.

Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats (Mayer and Laudenslayer 1988).

4.6 DISTURBED

No semblance of a natural biological community exists within these types of areas. The 1,500-acre Colony Land Company property area and in particular the 898 acres proposed for development by the Carmelita Project have been significantly altered through the historic and continued use by the agricultural operations. The disturbed areas at the project site and the surrounding areas consist of a small scale mining operation on-site, equipment storage buildings and prepared areas, paved farm roads, concrete and other impervious surface pads constructed for other numerous storage structures, residential or office complexes, stock piles of landscaping materials, and storage areas for agricultural amendments. The fringe areas near the boundaries of the property exhibit some semblance of native species but even those areas are not in a natural state with the species having become marginally established.

5.0 RECORD SEARCH RESULTS

The records search conducted included the DFG's CNDDDB, the FWS's Threatened and Endangered Species List, and the CNPS's List of Rare and Endangered Plants. The search was conducted for the nine quadrangles (Wahtoke, Reedley, Sanger, Selma, Round Mountain, Piedra, Pine Flat Dam, Orange Cove North and Orange Cove South) surrounding the Project location and have been summarized in the Table 1 – Record Search Results (Table 1), with the official Agency's list included in Appendix A-1. Table 1 provides information that includes Scientific Nomenclature, Common Name, Status (federal, State, CNPS rankings), Habitat Requirements, Occurrence Potential (potential to occur on the Project site) and Comments for each species listed in the various database searches.

The records search indicated that several federally listed species have the potential to occur in the study area. California Tiger Salamander (*Ambystoma californiense*), Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*), and the San Joaquin kit fox (*Vulpes macrotis mutica*) have been found in the general vicinity (10 mile radius). In addition, the California species of special concern such as Burrowing owl (*Athene cunicularia*), spotted bat (*Euderma maculatum*), Western Spadefoot Toad (*Spea hammondi*), western pond turtle (*Spea hammondi*) and potentially the Swainson's hawk (*Buteo swainsoni*) occur in the general vicinity. Limited vernal pools and more extensive waters of the US and wetlands have been recorded in the general vicinity of the Project but none of these types of habitat exists on the Project site.

The records search of the databases indicated that none of the federally listed species were found previously on the Property and that none occurred in the

Project area. It should be noted that this does not infer that the species doesn't exist there, but only that it has not been previously searched for or recorded.

As noted in Section 1.2.1 and Section 1.2.2, special status plants and wildlife are those species that are listed or proposed for listing as rare, threatened, or endangered by CDFG or USFWS, on formal lists as candidates for listing as threatened or endangered, on formal lists as species of concern, or otherwise recognized at the federal, State, or local level as sensitive. Sensitive habitats are those that are of limited extent and have experienced extensive loss or degradation resulting from development and/or agricultural practices in recent years.

Species that have not been recorded in the area but could potentially occur based on habitat suitability are also included in the table. ESR reviewed the specific habitats required by each species listed in Table 1 and the specific habitats and habitat conditions present on the Project site as well as our previous experience with these species were taken into consideration. Each of these factors was considered in our evaluation of the likelihood of each species listed in Table 1 as potentially occurring on the Project site. Species that were determined to potentially occur on the site based on availability of suitable habitat or other factors (i.e., at least a "Low" potential for occurrence in Table 1) are discussed more fully in Section 6.0. Species determined unlikely to occur on the Project site based on these same factors are documented accordingly in Table 1 and are not discussed further in this report.

Figure 5 – Carmelita Project CNDDDB Species Map provides a map depicting the location and type of sensitive species found on the CNDDDB for the general area.

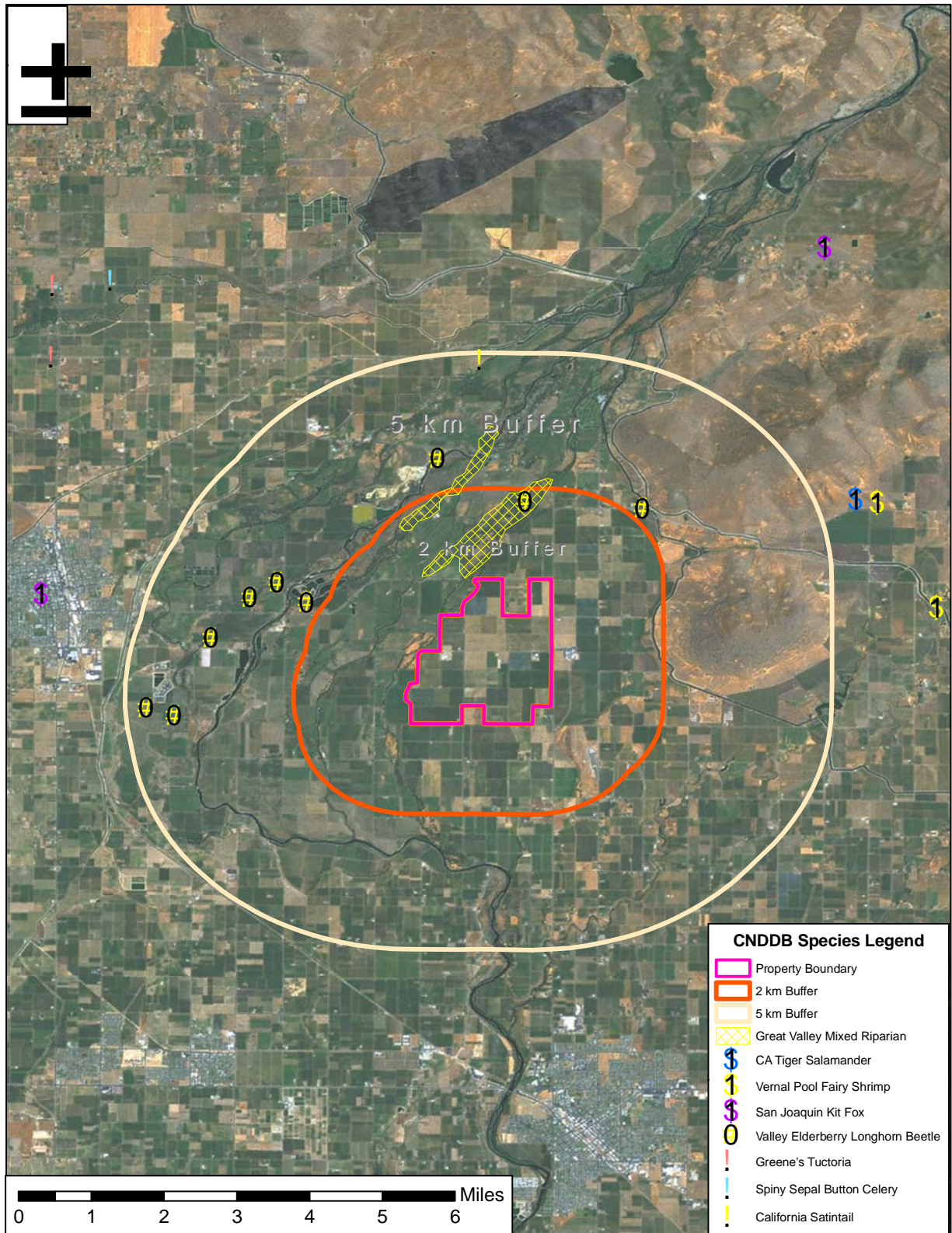


Figure 5 – Carmelita Project CNDDDB Species Map

Table 1 – Records Search Results

Scientific Name	Common Name	Status	Habitat Requirements	Occurrence Potential	Comments
Mammals					
<i>Antrozous pallidus</i>	Pallid bat	CA SC	Occurs in variety of habitat types; most common in xeric ecosystems. Roosts in rocky outcrops, cliffs, and crevices, trees, buildings, and in rocks near the ground.	Low (foraging)	No suitable habitat. Two CNDDDB occurrences are distant to the Project vicinity; opportunistic feeder in a variety of settings; may forage over grassland and seasonal wetland habitats.
<i>Euderma maculatum</i>	Spotted Bat	CA SC	Found in a variety of habitat types from sea level to 9,000 feet. Prominent rock features appear necessary for roosting.	Absent	No suitable habitat on Project property. One CNDDDB record distant to the project vicinity; may forage over grasslands near Project property.
<i>Lasiurus cinereus</i>	Hoary bat	CA SC	Habitats utilized by this species for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Sites that are preferred are hidden from above, have few branches below, and have ground cover of low reflectivity.	Low (foraging)	No suitable roosting habitat on Project property. No CNDDDB records near project vicinity; may forage over grasslands near Project property.
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, ST	Inhabits annual grasslands or grassy open stages with scattered shrubby vegetation. Requires loose-textured sandy soils for burrowing	Absent	No suitable habitat exists on the property, no dens or signs of presence have been observed. The Project property is east of the current range of this species. The closest CNDDDB occurrence is about 8.5 km to the west of the Project property
Birds					
<i>Agelaius tricolor</i>	Tricolored blackbird	CA SC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.	Absent	No suitable nesting or foraging habitat present on the Project property.

Table 1 – Records Search Results

Scientific Name	Common Name	Status	Habitat Requirements	Occurrence Potential	Comments
<i>Athene cunicularias</i>	Burrowing owl	CA SC	Occurs in open, valley grassland habitat, with short to moderate vegetation height, areas of bare ground and populations of burrowing mammals. Species depends on burrows dug by small mammals, most notably ground squirrels, for nest and roosting sites.	Low	No suitable habitat exists on the Project property. All off-site burrows examined exhibited no evidence of use by the species. "Low" evaluation given due to its migratory nature.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC, SE, G5T3Q, S1	Historically, the Yellow-billed Cuckoo was a common breeding species in riparian habitat throughout much of lowland California. Debate continues as to whether eastern and western are separate species.	Absent	Site not near breeding populations currently limited to the Sacramento River from Red Bluff to Colusa and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. CNDDDB occurrence was from a 1902 sighting 6 miles northeast of Fresno on Francher Creek.
Reptiles					
<i>Actinemys marmorata</i>	Pacific pond turtle	CA SC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. Lays eggs in upland habitat consisting of sandy banks or grassy, open fields.	Low	No suitable habitat for this species on the Project site. River and deeper ponds near site could support turtles. "Low" ranking due to its migratory range for nesting purposes.
Amphibians					
<i>Ambystoma californiense</i>	California tiger salamander	FT; SCE	Most commonly found in grasslands or open woodland habitats. Lives in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocket gopher), and occasionally other underground retreats, throughout most of the year. Lays eggs on submerged stems and leaves, usually in shallow ephemeral or semi-permanent pools and ponds that fill during heavy winter rains, sometimes in permanent ponds.	Low to Absent (unlikely aestivation)	No CTS identified within 5 km of Project property as per USFWS protocol. No breeding or aestivation habitat on site. Adjacent cultivated grassland to the west of Project property is low probability aestivation habitat due to lack of suitable refugia.
<i>Spea hammondi</i>	Western spadefoot toad	CA SC	Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Absent	Several CNDDDB records from project vicinity; man-made ponds and seasonal wetlands may provide suitable habitat for breeding. No suitable habitat on Project property.

Table 1 – Records Search Results

Scientific Name	Common Name	Status	Habitat Requirements	Occurrence Potential	Comments
Invertebrates					
<i>Calicina mesaensis</i>	Table Mountain harvestman	CA SA	Prefer mesic habitats but absent from saturated or periodically inundated areas; occur under medium to large rocks in contact with soil	Absent	Only known location is from under basalt rocks at Table Mountain about 8 miles north of the Project. No suitable habit on Project site.
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swales, earthen slumps, or basalt-flow depression pools.	Absent	Seven records from project vicinity (10 mile radius) nearest is over 3.5 miles; no suitable habitat is present on Project property.
<i>Linderiella occidentalis</i>	California linderiella	CA SA	Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions	Absent	One record from project vicinity (10 mile radius); no suitable habitat is present on Project property.
<i>Ledidurus packard</i>	Vernal pool tadpole shrimp	FE	Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions	Absent	No records from project vicinity (10 mile radius); no suitable habitat is present on Project property.
<i>Chrysis tularensis</i>	Tulare cuckoo wasp	G1G2	Occur in open, sunny habitats with abundant flowers and small shrubs, where they feed on nectar. Cuckoo wasps often lurk near the nests of their hosts (wild bees), waiting for an opportunity to sneak in and lay an egg.	Absent	No suitable habitat on Project site.
<i>Calicina piedra</i>	Piedra harvestman	G1 S1	Occur in mesic habitats, but are absent from situations where soils are saturated or periodically inundated. Most species occur under medium to large undisturbed rocks that are in contact with the soil.	Absent	No suitable habitat on Project site.

Table 1 – Records Search Results

Scientific Name	Common Name	Status	Habitat Requirements	Occurrence Potential	Comments
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers branches greater than 1 in (2.5 cm) in diameter.	Low	Elderberry plants occur along western fence line boundary of the property; however, the Carmelita Project will be beyond the 100' setback and no significant impact is anticipated as per USFWS protocol.
<i>Lyta moesta</i>	Moestan blister beetle	CA SA	Occurs in central California; associated with grassland habitats and vernal pools; larvae parasitic on solitary bees.	Absent	Only CNDDDB record is historical and undated; Project property within historic range of species but suitable habitat does not occur on site.
<i>Talanites moodyae</i>	Moody's gnaphosid spider	G1G2, S1S2	Occurs in two locations primarily in grassland under granite rocks and serpentine rocks on Smith Mountain and Granite Hill.	Absent	No suitable habitat on Project site.
Plants					
<i>Castilleja campestris ssp. succulenta</i>	Succulent owl's clover	FT, SE, CNPS 1B	Occurs in vernal pools in valley and foothill grasslands 25 – 750 m.	Absent	No suitable habitat located on Project property. May be located near vernal pools in distant vicinity.
<i>Erigeron nudum var. dimorphus</i>	Kings River buckwheat	G5T3Q, S2.2, CNPS 1B.2	Occurs in foothill woodlands and wetlands in another region, but occurs almost always under natural conditions in non wetlands in California between 492 and 984 feet. Blooms August-November.	Absent	No suitable habitat on Project site.

Table 1 – Records Search Results

Scientific Name	Common Name	Status	Habitat Requirements	Occurrence Potential	Comments
<i>Eryngium spinosepalum</i>	Spiny-sepaed button-celery	CNPS 1B	Occurs on vernal pools in valley and foothill grassland	Absent	Several distant CNDDDB records, especially north east of Project property; no suitable habitat present on Project property; species not observed during surveys
<i>Imperata brevifolia</i>	California satintail	CNPS 2	Perennial rhizomatous grass; occurs in mesic areas (meadows, stream sides, alkali seeps) in coastal scrub, chaparral, and riparian scrub.	Absent	CNDDDB listing within 5 km of site to the north. No suitable habitat on Project site.
<i>Leptosiphon serrulatus</i>	Madera leptosiphon	CNPS 1B	Cismontane woodland, lower coniferous forest. Meadows and decomposed granite. 300-1300 m. Blooms April-May.	Absent	No suitable habitat on Project property; this plant grows at higher elevations; species not observed during surveys.
<i>Orcuttia inaequalis</i>	San Joaquin Valley orcutt grass	FT, SE, CNPS 1B	Annual. Vernal pools. 10-755 m. Blooms April to September	Absent	One CNDDDB record over 6 miles from Project vicinity (10 mile search); species or habitat not observed during focused surveys.
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	FT, SE, CNPS 1B	Occurs in cismontane woodland, valley and foothill grassland; grows on grassy valley floors and rolling foothills; restricted to adobe clay soils.	Absent	Species known historically only from Fresno, Tulare and Kern Counties; closest records are from Round Mountain area, several miles northeast of site; Project property does not include adobe clay soils; no suitable habitat on Project site.
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE, G1 S1.1 CNPS 1B.1	Inhabits cismontane woodlands or valley and foothill grasslands with serpentine/clay soils, approximately 120-425 meters in elevation above sea level. Blooms between April and May.	Absent	No suitable habitat on site. Species not observed during surveys.
<i>Tuctoria greenei</i>	Greene's tuctoria	FE, SR, CNPS 1B	Dry bottoms of vernal pools in open grasslands. 30 – 70 m. Blooms May to September.	Absent	No CNDDDB records from within a mile of Subject property; species not observed during surveys; USFWS considers species extirpated from Fresno and Madera Counties.

FWS/CDFG Code Designation:

SE = State-listed as Endangered
ST = State listed as Threatened
FE = Federally listed as Endangered
FT = Federally listed as Threatened
SC = State Species of Concern
SCE = State candidate (Endangered)
SCT = State Candidate (Threatened)
SCD = State Candidate (Delisting)
FPE = Federally proposed (Endangered)
FPT = Federally proposed (Threatened)
FPD = Federally proposed (Delisting)

CNPS CodeDesignations:

List 1B: Rare, threatened, or endangered in California OR elsewhere.

- .1: Seriously endangered in California
- .2: Fairly endnagered in California
- .3: Not very endangered in California

List 2: Rare, threatened, or endangered in California, but more common elsewhere

List 3: We need more information about this plant (review list)

State rank:

- S1: Less than 6 occurrences or less than 1,000 individuals or less than 2,000 acres
- S2: 6-20 occurrences or 1,000 - 3,000 individuals or 2,000 - 10,000 acres
- S3: 21-80 occurrences or 3,000 - 10,000 individuals or 10,000 - 50,000 acres

Global Rank:

- G1: Less than 6 occurrences or less than 1,000 individuals or less than 2,000 acres
- G2: 6-20 occurrences or 1,000 - 3,000 individuals or 2,000 - 10,000 acres
- G3: 21-80 occurrences or 3,000 - 10,000 individuals or 10,000 - 50,000 acres

6.0 SPECIAL STATUS SPECIES ACCOUNTS

As indicated in Table 1, six special status animal species (Pallid bat, Hoary bat, Western burrowing owl, Pacific pond turtle, CTS, and VELB) were identified as potentially occurring on the subject property, based on at least a low probability of occurrence. In addition, due to the trees and riparian areas near the project, nesting raptors must also be considered. Following is additional detail, description, and habitat requirements for each of the potential species identified in Table 1.

6.1 PALLID BAT

The Pallid bat, a State Species of Special Concern occurs throughout California, except in the high Sierra Nevada, from Shasta to Kern counties and the northwestern corner of the state from Del Norte and western Siskiyou counties. It inhabits a variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up to 8,000 feet in mixed coniferous forests. They are common in grasslands and desert regions in the southwestern United States and most abundant in the Sonoran life zones. They are less abundant in evergreen and mixed forests than in vegetation assemblage's characteristic of lower elevations. In California, pallid bats are associated with oak woodlands at lower elevations and may roost in a variety of places including tree cavities, rock crevices and man-made structures. Pallid bats travel 0.3 to 1.6 mile from the day roost for foraging. They are intolerant of disturbance and may abandon a roost when disturbed, not to return for years. Pallid bats have one of the most unique feeding habits of any North American bat. Little, if any, of their food is captured in the air. Some of their favorite food includes scorpions, crickets, grasshoppers, and spiders.

The Pallid bat was not observed on the project site, but the trees in the Valley Oak Woodland and Sycamore Woodland along the Kings River provide potential roosting habitat for this species. However, suitably sized tree cavities were not readily observed in the woodlands. Therefore, potential impact to this species is considered low and less than significant.

6.2 HOARY BAT

The Hoary bat is the most widespread North American bat. Habitats utilized by this species for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Sites that are preferred are hidden from above, have few branches below, and have ground cover of low reflectivity. Numerous studies have shown that the hoary bat feeds primarily on moths, although various flying insects are taken.

Site surveys did not observe any roosting bats nor observe any potential winter hibernating habitat, although specific surveys for bats were not completed. Potential impacts to this species are considered to be low and less than significant.

6.3 WESTERN BURROWING OWL

The Western burrowing owl, a State Species of Special Concern is a migratory resident of open, dry grassland and desert habitats, as well as of grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. It occurs up to 1600 meters in elevation above sea level. It primarily consumes insects, but it also preys upon small mammals, reptiles, birds, and carrion. Western burrowing owls usually nest in abandoned burrows of fossorial mammals, but they may also dig their own burrows in soft soil. Their nest chambers are often lined with

excrement, pellets, debris, vegetation, or feathers. Western burrowing owls exhibit high site fidelity, reusing burrows year after year. A site should generally be assumed occupied if at least one Western burrowing owl has been observed occupying a burrow there within the previous three years. This species was historically common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains, but its numbers have been markedly reduced in recent decades. Habitat loss and ground squirrel poisoning have been the primary factors contributing to its decline.

Due the highly disturbed habitat that characterizes the Project site, it is unlikely that burrowing owls will utilize the site for nesting purposes, although potential burrow sites were observed. Therefore a more focused, protocol level survey was conducted and is discussed in Section 7.1, with the full survey report attached in Appendix A-2.

6.4 PACIFIC POND TURTLE

The Pacific pond turtle (PPT) is a State Species of Special Concern. Overall, PPT's have been described as habitat generalists. PPT's have been observed in slow-moving rivers and streams (*e.g.* in oxbows), lakes, reservoirs, permanent and ephemeral wetlands, stock ponds, and sewage treatment plants. PPT's prefer aquatic habitat with refugia such as undercut banks, submerged vegetation, rocks, logs and mud banks, and have been known to avoid areas with open water that lack refugia. Being ectotherms, pond turtles require emergent basking sites to thermoregulate their body temperature, taking advantage of mud banks, rocks, logs, root wads, and other opportunistic sites.

Despite their name, pond turtles regularly utilize upland terrestrial habitat, most often during the summer and winter, especially for oviposition (females), mate seeking (males), overwintering, and overland dispersal. Most often overland

movement events are part of normal turtle movements within a terrestrial home range, but pond turtles regularly overwinter in uplands, burying themselves beneath the leaf litter. Common predators of nests, nested hatchlings, and adult turtles in the wild include raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), and coyotes (*Canis latrans*), although the largest threats pond turtles face presently are the predation of hatchlings by introduced, non-native bullfrogs (*Rana catesbeiana*), and the loss of habitat due to urbanization.

Given that the PPT's are opportunistic and can inhabit a suite of aquatic and upland systems, the riparian habitat near the potential wetland areas and ponds provide more optimum upland refugia than the highly disturbed habitat that characterizes the Project site, therefore the potential for PPT to be impacted by the project is considered to be low and less than significant.

6.5 CALIFORNIA TIGER SALAMANDER

The California tiger salamander (CTS) is a Federally Threatened Species and is proposed endangered by the DFG. This species is restricted to grasslands and foothill regions below 2,000 ft where lowland aquatic sites are available for breeding. It prefers natural ephemeral (vernal) pools or ponds that mimic them (stock ponds that are allowed to go dry). Larvae require significantly more time to transform into juvenile adults than other amphibians such as the western spadefoot toad (*Scaphiopus hammondi*) and Pacific tree frog (*Pseudacris regilla*). Also, compared to the western toad or western spadefoot toad, CTS are poor burrowers. They require refuges provided by ground squirrels and other burrowing mammals in which to enter estivation during the dry months. The primary cause of the decline of CTS populations is the loss and fragmentation of habitat from human activities and the encroachment of nonnative predators. A typical salamander breeding population in a pond can drop to less than twenty

breeding adults and/or recruiting juveniles in some years, making these local populations prone to extinction. CTS therefore require large contiguous areas of vernal pools containing multiple breeding ponds to ensure recolonization of individual ponds. A strong negative association between bullfrogs and CTS has been documented. Although bullfrogs are unable to establish permanent breeding populations in vernal pools, dispersing immature frogs from permanent water bodies within two miles take up residence and prey on adult or larval salamanders in these areas during the rainy season. Louisiana swamp crayfish, mosquito fish, green sunfish and other introduced fishes also prey on adult or larval salamanders (USFWS 2004).

No CTS potential breeding pools occur on the Project site or within 1.2 miles (2 km) of the site and only marginal, isolated and fragmented areas that could potentially provide aestivation burrows occur on the project site or within the 1.2 mile (2 km) requisite search area. Given that such requisite habitat features, however marginal were observed, a USFWS protocol Initial Site Assessment Report was completed. The report is summarized in Section 7.2 and the full report is found in Appendix A-2.

6.6 VALLEY ELDERBERRY LONGHORN BEETLE

The Federally Threatened Valley Elderberry Longhorn Beetle (VELB) was listed August 8, 1980 (45 FR 52803) and was proposed for delisting by the USFWS after a 5 year review completed in February 2007. Critical beetle habitat has been designated in two areas along the American River in metropolitan Sacramento. Areas along Putah Creek, Solano County, and areas east of Nimbus Dam along the American River Parkway, Sacramento County, are considered critical habitat for VELB. Beetles have been found to extensively utilize these areas that currently support large numbers of mature elderberry plants (*Sambucus* species).

The VELB are dependent on elderberry plants as habitat for their larvae, although use of the plants by VELB is often not readily apparent. Evidence of an exterior exit hole prior to pupae development is often the only sign of VELB presence on a particular host plant. Larvae are found in elderberry stems with a basal diameter greater than one inch.

Elderberry plants that are utilized generally occur in wet riparian forests that consist of several upper and intermediate canopy layers with a dense understory. The overstory typically includes numerous overlapping crowns of cottonwoods (*Populus fremontii*), sycamores (*Platanus racemosa*), willows (*Salix sp.*), and valley oaks (*Quercus lobata*) while the subcanopy consists of maple (*Acer negundo var. californicum*), ash (*Fraxinus latifolia*), and elderberry (*Sambucus spp.*). Vines are also usually abundant in all canopy layers of riparian forests where VELB are found.

Research indicates that VELB dispersal patterns are restricted to riparian corridors, but Collinge et al. (2001) found that colonization of new elderberry sites within occupied drainages is rare and that dispersal between drainages probably does not occur at all. This pattern implies that even when an individual VELB disperses from its host plant to colonize new habitat, it will only travel along the riparian corridor within its natal drainage.

VELB was not identified on the Project site during surveys; however, several blue elderberry plants were observed and mapped on the fringe of the property. Survey results are discussed and summarized in Section 7.3 with the full report located in Appendix A-2.

6.7 NESTING RAPTORS

The Great Valley Riparian communities located west of the Project site along the Kings River provide potential nesting habitat for birds of prey, with one nest being utilized by red-tailed hawks observed during the surveys. Although the timing of the survey overlapped nesting season, no occupied nests were observed and no evidence of past breeding attempts was noted within the Project site, although foraging red-tail and red-shoulder hawks were observed. However, given that raptors utilize the Project site for foraging, future nesting attempts by raptors are plausible. If the project site becomes occupied by breeding birds of prey in the period immediately prior to project implementation, construction activities or removal of trees containing nests during the nesting period may destroy fertile eggs or nestlings or lead to nest abandonment.

Due the initial sighting of the hawks, a more detailed survey was conducted with the summary results presented in Section 7.4 with the complete survey report found in Appendix A-2.

7.0 FOCUSED SPECIES SURVEYS

Biological reconnaissance surveys were conducted on November 12, 2008, December 15, and 16, 2008, January 6 and 7, February 17, March 13, April 2 and April 17, 2009 to assess sensitive species, sensitive habitats, and other biological resource issues which might occur on or adjacent to the Project site.

ESR conducted site surveys during the appropriate time of the year as specified in the guidelines and protocols for the species to evaluate the likelihood of the sensitive species of concern occupying or being impacted by the proposed project. The guidelines and protocols provided by the FWS, the CDFG, and the Burrowing Owl Consortium (BOC) for the species were cited, referenced, and used to evaluate the site for occupation and the potential for the Project to impact

the specific species. The survey methodologies, assessments and results are provided in Appendix A-2 following the body of this report.

The focused surveys did not result in any of the sensitive species identified as potentially occurring on the Project being observed on the Project property or, in the professional opinion of ESR, have a probability of occurrence that could be deemed significant.

7.1 FOCUSED BURROWING OWL SURVEY RESULTS

The Western burrowing owl survey and assessment consists of three Phases:

- Phase I: Habitat Assessment;
- Phase II: Burrow Survey
- Phase III: Census and Mapping, if owls were found

It should be noted that the Phase III Census and Mapping effort would only be undertaken if evidence of use of the area by Western burrowing owls was observed during the surveys.

In summary, during both the nesting season survey and the winter survey, no owl sightings were made and no occupied burrows or burrows with owl sign (feathers, pellets, wash, prey remnants, etc.) were found. No census and mapping activities for occupied burrowing owl locations was necessary since none were found. Mitigation measures are not proposed at this time; however, prior to construction, a pre-construction survey may be a prudent step in the process to reaffirm that the subject property is not being used by migrating burrowing owls.

7.2 FOCUSED VELB SURVEY RESULTS

During the site reconnaissance survey at the Project site, 56 isolated and grouped elderberry plants were located with stems greater than one inch measured at ground level according to the 1999 USFWS Valley Elderberry Longhorn Beetle (VELB) protocol at a distance of greater than 100 feet from the project site. No VELB exit holes were observed on any of the stems, branches or trunk of the identified elderberry plants during the site reconnaissance. No Elderberry plants were found within a 100 foot radius of the area of interest for the development of the project. No communities of Elderberry plants, including the requisite supporting habitat, were located at the tentative Project site. Figure 6 – Carmelita Project Elderberry Plant Locations shows the location of elderberry plants found near the Project site.

According to the FWS VELB protocol, no impact to VELB will occur if Project disturbance is greater than 100 feet from the dripline of the elderberry plant. The Project design is beyond the 100 foot impact buffer and no impact is anticipated.

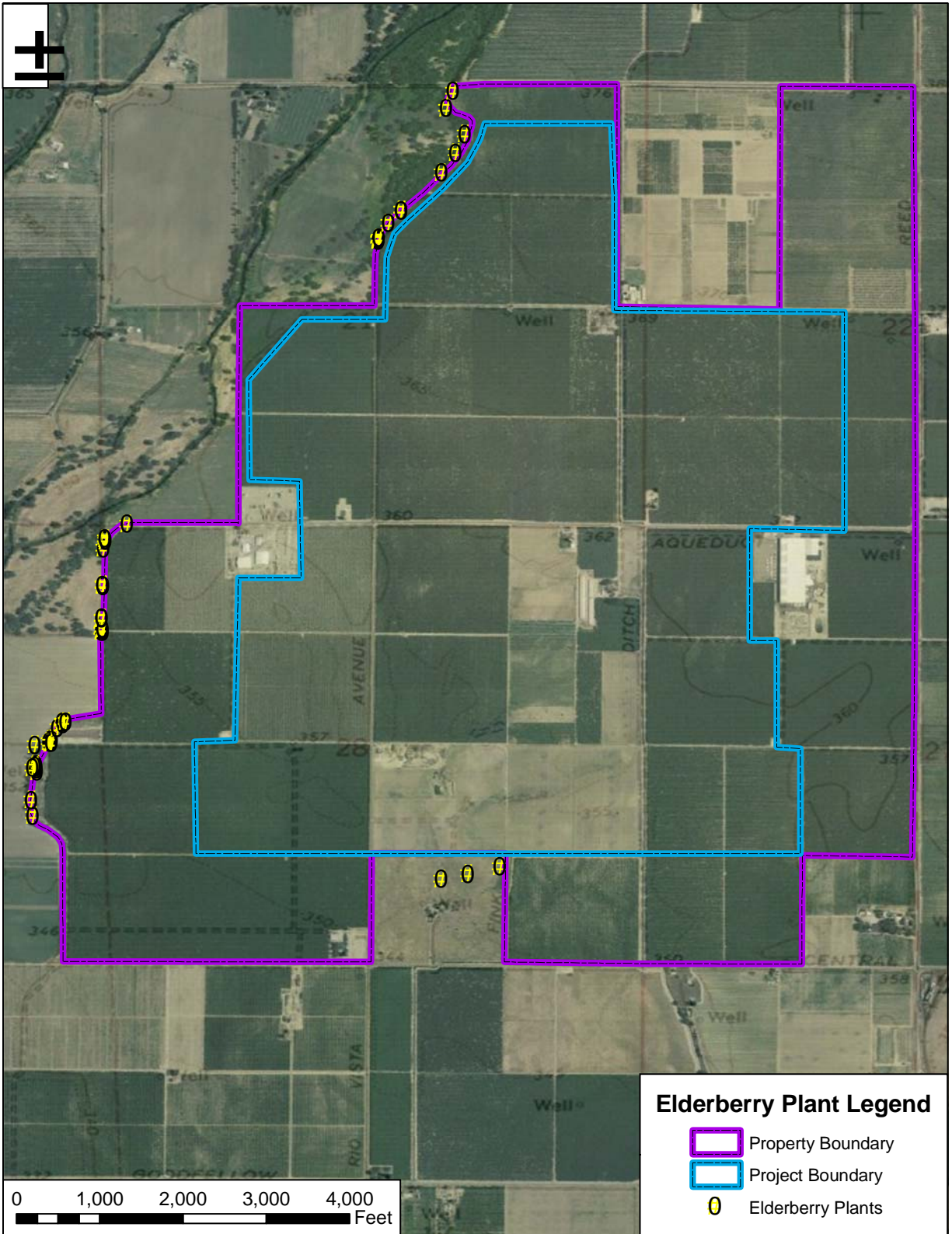


Figure 6 – Carmelita Project Elderberry Plant Locations

7.3 FOCUSED CTS SURVEY RESULTS

Potential, but marginal, isolated, and fragmented, areas of upland aestivation habitat for CTS was identified both on the Project site and within 1.2 mile (2 km) of its perimeter. The Pasture, Cropland, and Annual Grassland habitats supported limited fossorial wildlife species that create the requisite aestivation burrows. However, no potential breeding habitat was identified on the Project site or contiguous to it. The man made ponds to the south, west, northwest and north of the Project site do not allow for CTS breeding. Not only are the ponds managed far too intensively, but they are entirely isolated by high disturbance agricultural and mining activities. The wetlands west of the Project site, likewise, do not constitute breeding habitat for this sensitive species. They were each occupied by significant numbers of CTS predators including, but not limited to, largemouth bass, green sunfish, mosquito fish, blue gill, and bullfrogs. Such predators eliminate salamander populations within a short time span (Zeiner et al. 1990).

The Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Road were all identified as significant barriers that effectually isolate the Project site from potential CTS migration. The canal system is typically greater than 50 feet wide with sidewalls that are much too steep for CTS to traverse, intensively managed, fast flowing when utilized, and some are occupied by predatory fish as a consequence of carryover from where the water originates upstream.

Furthermore, the database search listed no historic occurrences of the CTS either on the project site, within 1.2 mile (2 km) of the perimeter or 5 km of the Project site. The closest occurrence documented by the CNDDDB is 5.13 miles (8.25 km) northeast of the Project site. Figure 7 – Carmelita Project CTS Map shows a graphic depiction of the location that the CNDDDB lists for CTS. Not only does this distance exceed the known migration distance of CTS, but the occurrence location is beyond the Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Road which were

all identified as significant barriers that effectually isolate the project site from potential CTS migration as previously mentioned.

Given the results of the site assessment, the Project site does not support CTS, transient or otherwise. Redeveloping the location to include the Project is not expected to impact this sensitive species. Consequently, the submittal of this report should fulfill the requirements to satisfy the USFWS Initial Site Assessment protocol regarding CTS, as the findings contained within it preclude the need to conduct a full Presence/Negative Finding Survey.

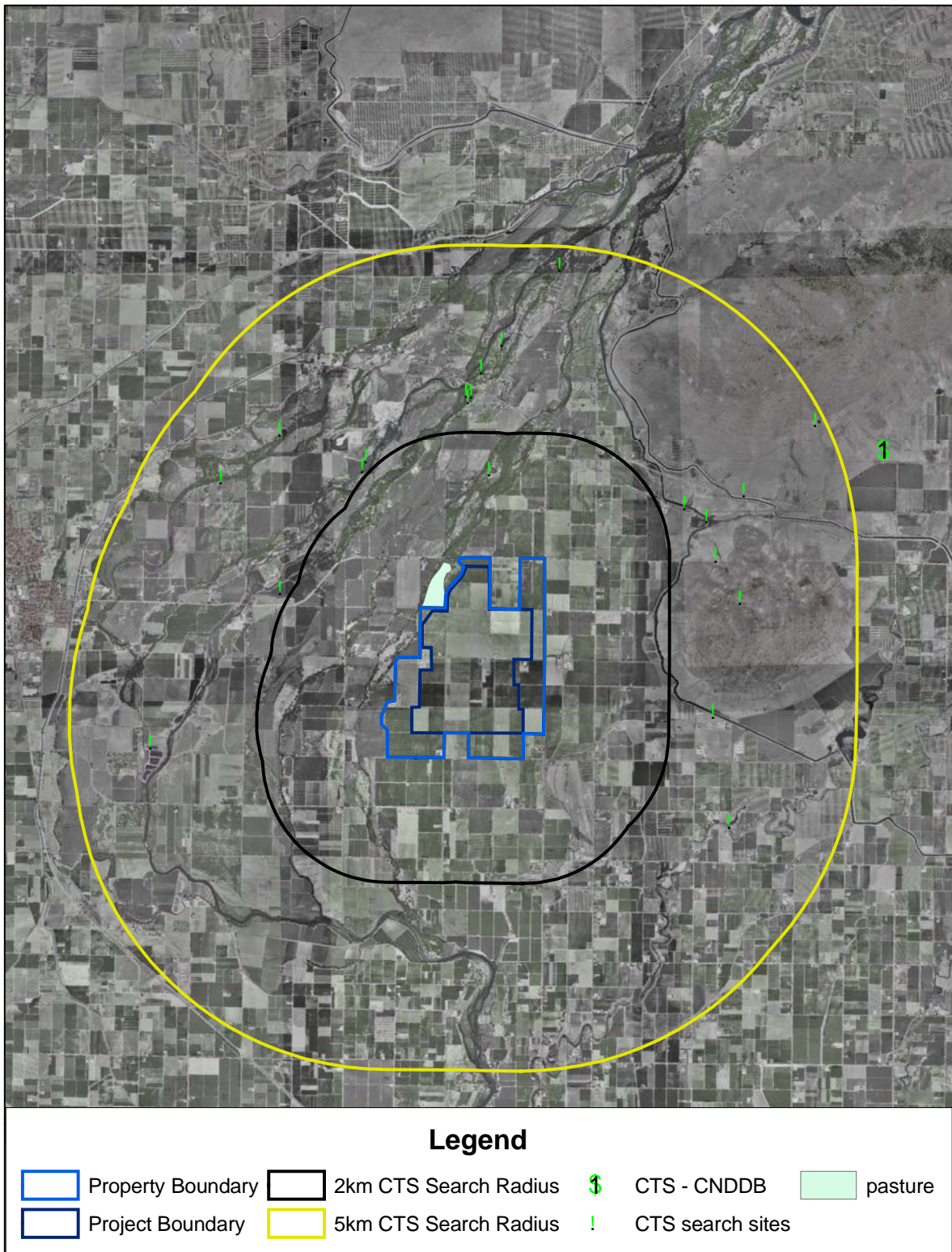


Figure 7 - Carmelita Project CTS Map

7.4 FOCUSED NESTING RAPTOR SURVEY RESULTS

One active raptor nest was identified within the survey perimeter. A female Red-tailed hawk (*Buteo jamaicensis*) was observed performing aerial displays and vocalizations to distract and deter the survey team from investigating a nest location approximately 1,125 feet northwest of the Project site. The adult male was observed throughout the survey foraging in the vicinity of the nest along the Kings River. The location of the nest is depicted in Figure 8 – Carmelita Project Raptor Map. An additional pair of Red-tailed hawks was observed engaging in aerial courtship displays north of the Project site, but no associated nest was documented. While two other raptors were observed south of the survey area along the riparian corridor of the Kings River, the survey revealed no additional active raptor nests within 0.5 mile of the Project site.

Although no active nests were observed during this survey, it is prudent that prior to construction, a pre-construction survey be completed to verify that nesting raptors have not become established on to the Project site or within 0.5 mile of it.

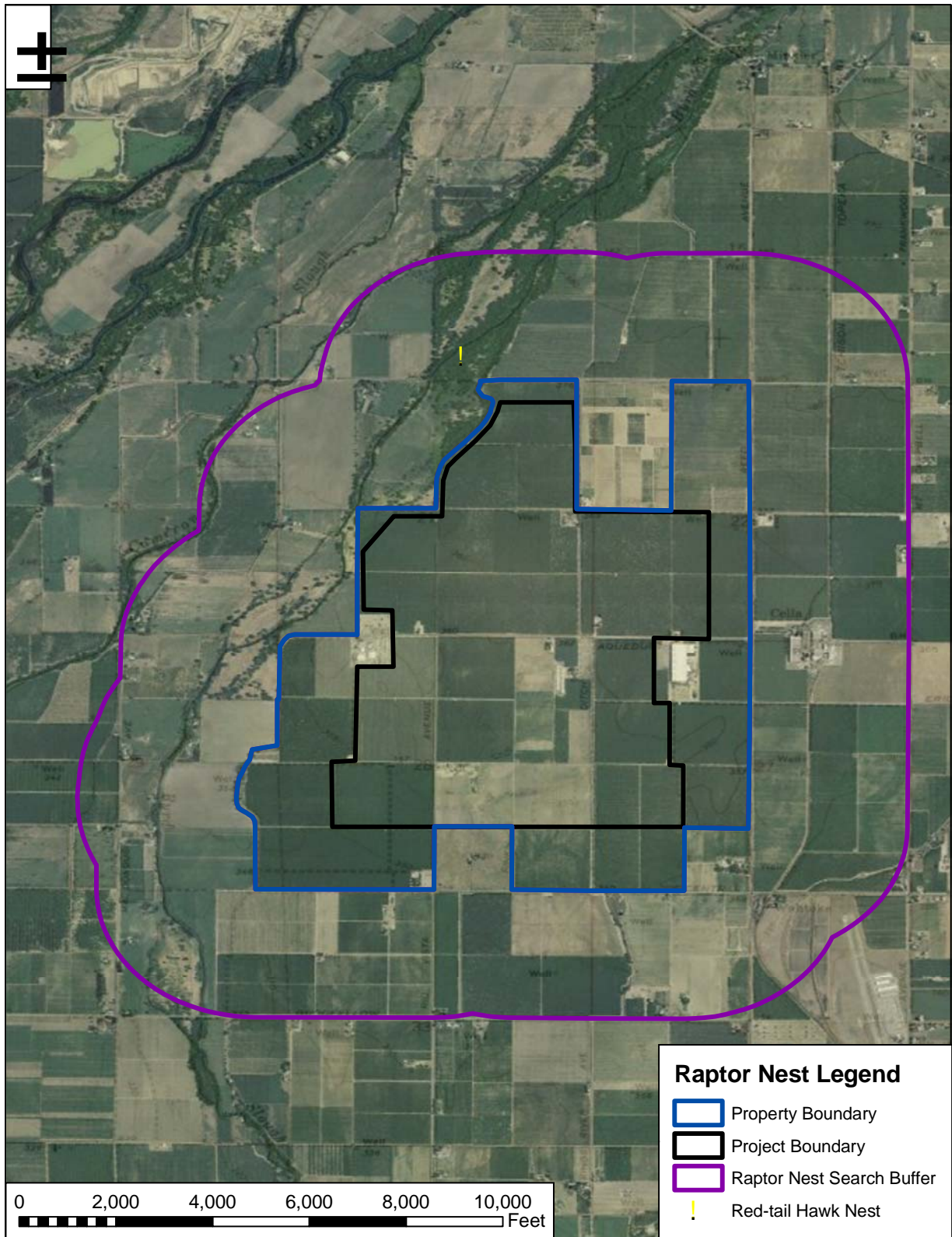


Figure 8 – Carmelita Project Raptor Map

8.0 MITIGATION MEASURES

The following sections provide recommended mitigation measures to maintain the level of impacts from biological issues to a less than significant rating for the purposes of the CEQA documentation.

8.1 IMPACTS TO SPECIAL STATUS ANIMAL SPECIES

There are no anticipated significant impacts to special status animal species potentially occurring within the bounds of the Project site if the following measures are implemented:

- **VELB Avoidance:** The USFWS VELB protocol specifically states that no impact to the VELB will be encountered if a 100 foot buffer from the dripline of the elderberry plants is established. The current boundary of development for the Carmelita Project is beyond the requisite 100 foot buffer. Prior to initiating site development, the 100 foot buffer should be delineated by installation of a construction barrier fence.
- **Western Burrowing Owl Preconstruction surveys:** Prior to commencing a new Phase of the Project in an area potentially suitable for Western Burrowing Owl habitat, a qualified biologist should conduct a preconstruction survey for Western burrowing owl in areas slated for development. Only if Western burrowing owls are identified during the preconstruction survey will an addendum to this report be prepared addressing the species.

- **Avoidance:** If Western Burrowing owls are found in areas slated for development, construction should be delayed until further consultations with the appropriate agencies are completed.
- **Nesting Raptor Preconstruction Surveys:** If construction activities are initiated during the raptor nesting season, a qualified biologist will conduct a pre-construction survey of the construction areas and the immediate vicinity (0.5 radius) for active raptor nests. The surveys should be conducted according to a protocol developed in consultation with the California Department of Fish and Game.
- **Avoidance:** If active raptor nests discovered during the preconstruction survey, consultation with the DFG will be initiated to determine the course of action.

8.2 IMPACTS TO SPECIAL STATUS PLANT SPECIES

There are no anticipated impacts to special status plant species potentially occurring within the bounds of the Project area given the heavy agricultural use and no existing on-site populations.

8.3 INTERFERENCE WITH WILDLIFE MOVEMENT

The project area could contain “movement corridors” for native wildlife; with species inhabiting vegetation associated with the adjoining riparian habitat west of the project location. Few native wildlife species occurring on the site (with the possible exception of some avian species) are migratory. Impacts attributable to the development of site are less than significant to movement corridors for native wildlife because the Project site is currently an active agricultural site.

9.0 REFERENCES

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Appendix A-1 - Official Agency Species Lists

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Portrait
 Gerawan Farms Carmelita Project

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 <i>Actinemys marmorata</i> western pond turtle	ARAAD02030			G3G4	S3	SC
2 <i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020			G2G3	S2	SC
3 <i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
4 <i>Antrozous pallidus</i> pallid bat	AMACC10010			G5	S3	SC
5 <i>Athene cunicularia</i> burrowing owl	ABNSB10010			G4	S2	SC
6 <i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
7 <i>Callicina macula</i> marbled harvestman	ILARAU8060			G1	S1	
8 <i>Callicina piedra</i> Piedra harvestman	ILARAU8080			G1	S1	
9 <i>Castilleja campestris ssp. succulenta</i> succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2	S2.2	1B.2
10 <i>Chrysis tularensis</i> Tulare cuckoo wasp	IIHYM72010			G1G2	S1S2	
11 <i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Candidate	Endangered	G5T3Q	S1	
12 <i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened		G3T2	S2	
13 <i>Eriogonum nudum var. regirivum</i> Kings River buckwheat	PDPGN0849F			G5T2	S2.2	1B.2
14 <i>Eryngium spinosepalum</i> spiny-sepalad button-celery	PDAP10ZDY0			G2	S2.2	1B.2
15 <i>Euderma maculatum</i> spotted bat	AMACC07010			G4	S2S3	SC
16 <i>Great Valley Mixed Riparian Forest</i>	CTT61420CA			G2	S2.2	
17 <i>Imperata brevifolia</i> California satintall	PMPOA3D020			G2	S2.1	2.1
18 <i>Laslurus cinereus</i> hoary bat	AMACC05030			G5	S4?	
19 <i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered		G3	S2S3	
20 <i>Leptosiphon serrulatus</i> Madera leptosiphon	PDPLM09130			G1?	S1?	1B.2
21 <i>Linderiella occidentalis</i> California linderiella	ICBRA06010			G3	S2S3	
22 <i>Lyza molesta</i> molestan blister beetle	IICOL4C030			G2	S2	
23 <i>Northern Hardpan Vernal Pool</i>	CTT44110CA			G3	S3.1	
24 <i>Orcuzia inaequalis</i> San Joaquin Valley orcutt grass	PMPOA4G060	Threatened	Endangered	G2	S2.1	1B.1
25 <i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G2	S2.1	1B.1

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Portrait
 Gerawan Farms Carmelita Project

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
26 <i>Sidalcea keckii</i> Keck's checkerbloom	PDMAL110D0	Endangered		G1	S1.1	1B.1
27 <i>Spea hammondi</i> western spadefoot	AAABF02020			G3	S3	SC
28 <i>Sycamore Alluvial Woodland</i>	CTT62100CA			G1	S1.1	
29 <i>Talanites moodyae</i> Moody's gnaphosid spider	ILARA98020			G1G2	S1S2	
30 <i>Tuторia greenei</i> Greene's tuторia	PMPQA6N010	Endangered	Rare	G2	S2.2	1B.1
31 <i>Vulpes macrotis musica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	

U.S. Fish & Wildlife Service- Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by
Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 090707060547

Database Last Updated: January 29, 2009

Quad Lists

ORANGE COVE NORTH (356A), WAHTOKE (356B), REEDLEY (356C),
ORANGE COVE SOUTH (356D), SANGER (357A), SELMA (357D), PIEDRA
(377C), PINE FLAT DAM (377D), ROUND MOUNTAIN (378D)

Listed Species

Invertebrates

Branchinecta conservatio - Conservancy fairy shrimp (E)

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus - delta smelt (T)

Amphibians

Ambystoma californiense - California tiger salamander, central population (T)

Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)

Thamnophis gigas - giant garter snake (T)

Mammals

Dipodomys nitratoides exilis - Fresno kangaroo rat (E)

Vulpes macrotis mutica - San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta - succulent (=fleshy) owl's-clover (T)

Critical habitat, succulent (=fleshy) owl's-clover (X)

Pseudobahia peirsonii - San Joaquin adobe sunburst (T)

Sidalcea keckii - Keck's checker-mallow (=checkerbloom) (E)

Critical habitat, Keck's checker-mallow (X)

Key:

(E) Endangered - Listed as being in danger of extinction.

(T) Threatened - Listed as likely to become endangered within the foreseeable future.

(P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.

(C) Candidate - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) Critical Habitat designated for this species

CNPS Species List – July 15, 2009

Nine Quad Search

Scientific Name	Common Name	Family	CNPS
Castilleja campestris ssp. succulenta	succulent owl's-clover	Scrophulariaceae	List 1B.2
Eriogonum nudum var. regirivum	Kings River buckwheat	Polygonaceae	List 1B.2
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	List 1B.2
Imperata brevifolia	California satintail	Poaceae	List 2.1
Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	List 1B.2
Mimulus acutidens	Kings River monkeyflower	Scrophulariaceae	List 3
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	List 1B.1
Pseudobahia peirsonii	San Joaquin adobe sunburst	Asteraceae	List 1B.1
Sidalcea keckii	Keck's checkerbloom	Malvaceae	List 1B.1
Tuctoria greenei	Greene's tuctoria	Poaceae	List 1B.1

Appendix A-2 - Supplemental Survey Data

Supplemental Survey Data for:

Western Burrowing Owl;

California Tiger Salamander;

Valley Elderberry Longhorn Beetle; and

Nesting Raptors

Colony Land Company, L.P.
Carmelita Project
Western Burrowing Owl
Initial Assessment Report

Fresno County, CA

Prepared for:

Mr. Michael P. Mallery, Esq.

Law Office of Michael P. Mallery

15749 E. Ventura Avenue

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Prepared by:

[ESR, Inc.](#)

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July 6, 2009

Updated July 2010

1.0 PROJECT LOCATION

Colony Land Company, L.P. (Colony Land Company) owns approximately 1,500 acres in the vicinity of Minkler, 15 miles east of Fresno, California. Specifically, the Carmelita Project (Project) site lies within Fresno County, Wahtoke U.S. Geological Survey 7 ½ minute quadrangle, Section 5, Township 11 South, and Range 10 East of the Mt. Diablo Base and Meridian (MDBM). The Project site is located in an agricultural setting within the floodplain of the Kings River. Agricultural areas consist of orchards, fields, pasture and rural residential uses. Figure 1 – Carmelita Project Site Map gives a depiction of the Project site and its current land uses while Figure 2 – Carmelita Project Land Use Map identifies the different land uses on and near [1.2 miles (2km)] the Project site. It is located in an unincorporated area of south-central Fresno County approximately 5.7 miles east of Sanger and 4.5 miles north of Reedley. More specifically, the Kings River and associated Byrd Slough lie immediately to the west; Reed Avenue is the eastern property boundary with the intersection of State Highway 180; and Reed Avenue to its northeast.

2.0 PROJECT DESCRIPTION

The Property is under agricultural cultivation for production of stone fruits (peaches, plums, and nectarines). The Property lies within the alluvial fan of the Kings River, making the soils covering the Property very cobbly and rapidly drained. These soil conditions have been a challenge for farming practices in terms of disease, mechanical equipment maintenance, and inefficient water use.

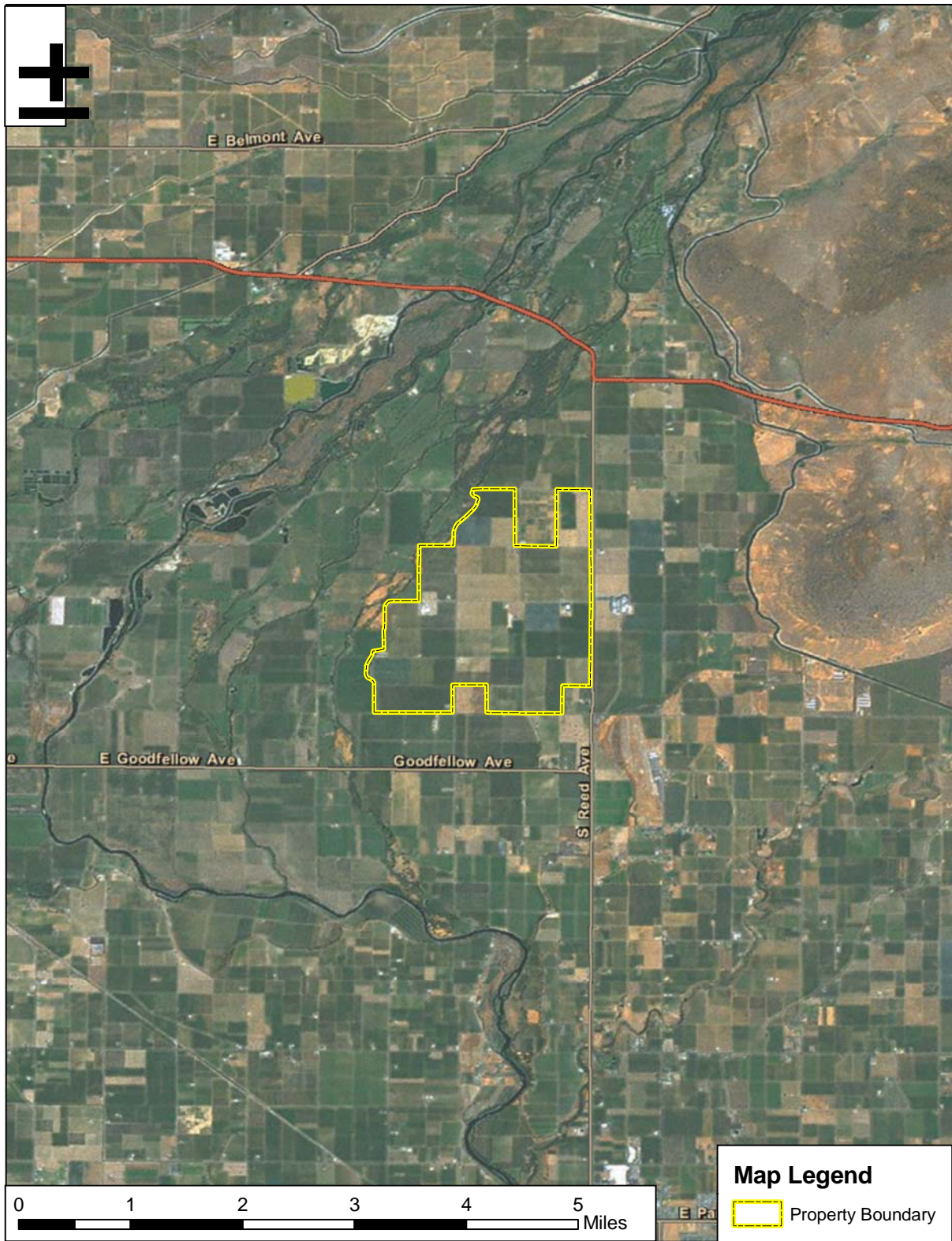


Figure 1: Carmelita Project Location

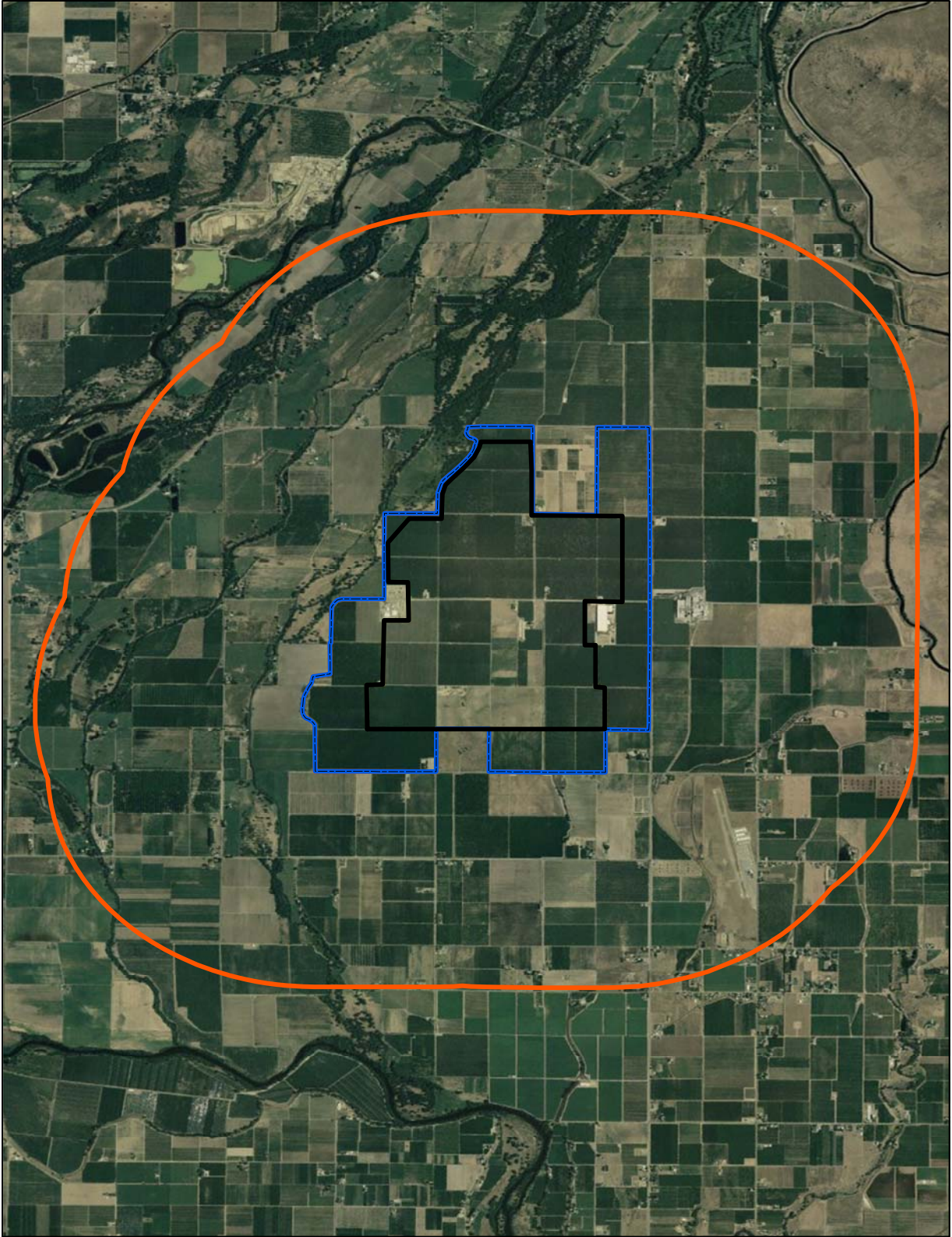


Figure 2: Carmelita Land Use Map

The Property lies within a Mineral Resource Zone (MRZ); and has been designated by the California Department of Conservation as an area containing significant aggregate mineral deposits (MRZ-2). Confirmatory testing has determined that the Property contains construction aggregate materials of the quantity and quality that mineral extraction is a feasible use for the Property.

An approximate 1,500-acre site west of Reed Avenue has been identified as a site for development of the Carmelita Project (Project), an aggregate production facility that would ultimately occupy up to 898 acres of the site. The site could support long-term production of construction aggregates for 100 years or more. The remaining 602 acres would continue to support tree fruit production on this and surrounding properties under Carmelita Resources ownership.

Operations would be typical of a sand and gravel extraction operation, with conventional mining practices common to the industry. Soils and overburden would be removed and the underlying aggregate reserves excavated and transported to a rock processing plant site for washing and sizing. Mining will be scheduled in cells to minimize impacts to ongoing agricultural operations over the property. Overburden and accumulated unmarketable silts and clays (wash fines) would be used as backfill in completed designated excavation areas, then covered with salvaged topsoil, and returned to agriculture-related post-mining land uses over about 40 percent of the site. Remaining areas would be reclaimed as water basins. Materials would be sold as washed aggregates, or used to make products, including asphaltic concrete and Portland cement concrete at on-site plants. A planned maximum production of 1.25 million tons per year is anticipated. Site access would be from Reed Avenue north to State Route 180 (SR 180), which is in the process of being reconstructed from a two-lane highway to a four-lane expressway.

Conditions for reclaimed land uses will be influenced by actual extraction depths, overburden and waste quantities, groundwater depths (known to vary significantly over time), and economic factors. Mining activities would occur incrementally and take

many decades (up to 100 years) to complete. Meanwhile, tree farming would continue. At the completion of mining, 40 percent of the site would still remain in tree farming. Reclamation plans include a return to agricultural uses, and water basins providing irrigation to the hundreds of acres of trees on this and surrounding properties.

3.0 WESTERN BURROWING OWL

The following report has been prepared in conclusion of the specific Western Burrowing owl (*Athene cunicularia*) assessment of the Project location that was completed.

3.1 BURROWING OWL INTRODUCTION

The Burrowing owl survey and assessment consists of three Phases:

- Phase I: Habitat Assessment;
- Phase II: Burrow Survey
- Phase III: Census and Mapping, if owls were found

It should be noted that the Phase III Census and Mapping effort would only be undertaken if evidence of use of the area by Burrowing owls was observed during the surveys (Phase II).

In summary, during both the nesting season survey and the winter survey, no owl sightings were made and no occupied burrows or burrows with owl sign (feathers, pellets, wash, prey remnants, etc.) were found. No census and mapping activities for occupied burrowing owl locations was necessary since none were found. Mitigation measures are not proposed at this time; however, prior to construction, a pre-

construction survey may be a prudent step in the process to reaffirm that the subject property is not being used by burrowing owls.

3.2 PHASE I: HABITAT ASSESSMENT

The dominant topography on the site is a 1,500 acre area that has been leveled and developed as an orchard with the typical associated amenities. The acres located along the western edge of the subject property exhibit ruderal grass and forb habitat. This grass and forb habitat (Figure 2) shows evidence of past manipulation by the property operators to control growth by mechanical means such as disking, scraping, or mowing. The area to the west of the subject property is considered to be grassland and is currently being utilized as grazing areas for cattle. Beyond the grassland and pasture area on the west are the riparian areas associated with the Kings River, Cameron Slough, and Bryd Slough. The properties to the north, south, east, and the southwest are developed as agricultural operations with some scattered commercial and residential units. Although, the burrowing owl habitat assessment was focused on the grassland areas to the west and northwest of the subject property, the orchards and other developed areas were also surveyed.

ESR completed site surveys on November 12, 2008, December 15, and 16, 2008, January 6 and 7, February 17 and 23, March 13 and 19, April 2 and April 17, 2009. Each survey date had a diurnal and/or crepuscular component, with an additional nocturnal component on January 9 and 26, and March 19 and 20, 2009. Other wildlife observations were made during these survey periods by ESR biologists Scott Larson, William Stolp and raptor specialist Andy Glass. This survey period sampled much of the spring bird migration and most of the local bird-nesting season.

The Western burrowing owl requires open, valley grassland habitat, with short to moderate vegetation height, areas of bare ground and populations of burrowing mammals. This species depends on burrows dug by small mammals, most notably ground squirrels, for nest and roosting sites; although manmade structures may also

serve this function. Burrowing owls feed mostly on insects and small mammals. They are crepuscular (active at twilight), but are also active at night, and are found perched outside of active burrows during the day. The regional burrowing owl population potentially consists of resident and migrant wintering owls. The breeding season spans February through September. Migrant owls are expected to be present from late September through March. The grassland habitat located near the western portion of the Project site contains several ground squirrel communities and therefore serves as potential habitat and required the more focused nesting season and wintering (migrant) season surveys.

3.3 PHASE II: BURROW SURVEY

Burrow surveys included a thorough search for potential burrows in suitable grassland habitat on the Project site and the adjoining ranch site. The survey transects of approximately 25 meters apart were conducted on foot and by vehicle seeking to identify all potential burrow sites. Concentrations of burrows made by fossorial mammals were not located on the Project site. An area near the northern fence line exhibiting sign of use by ground squirrels was thoroughly searched for burrowing owl sign. ESR biologists William Stolp, Scott Larson and Andy Glass conducted the winter resident surveys. The initial site observations and identification of potential burrow sites was conducted on the afternoon of January 8, 2009. Further site evaluations were done on January 9, 15, 16 and 17, 2009. Burrow communities were not identified at these times while conducting walking transects of approximately 25 – 50 foot widths of the suitable grassland habitat. The weather conditions on January 8, 2009 consisted of a slight drizzling rain with temperatures in the low 50's. On January 9, 2009, the rain had expired resulting in clear skies with excellent visibility. For the January 15-17, 2009 visits, the skies were clear, excellent visibility and temperatures ranging from the upper 20's in the early mornings to the low 50's in the late afternoons.

The grasslands along the western and northwestern property fence line showed evidence of being heavily grazed although the cattle were not currently on the pastures. The predominant vegetation consisted of redstem filaree (*Erodium cicutarium*) and annual bluegrass (*Poa annua*).

Available freshwater during these surveys was located primarily in two small water features; one feature approximately 250 feet west of the western edge of the entry road easement found in an area of heavily grazed fields and a second feature located approximately 950 feet west of the subject ingress road easement in heavily grazed pasture. There is also a year-round river (Kings River) that flows distant to the western border of the Project site that could be utilized by birds for drinking and hydrating purposes. The wildlife observed during these visits to the potential habitat sites consisted of the mammalian species California ground squirrel (*Spermophilus beecheyi*), Black-tailed jackrabbit (*Lepus californicus*) and coyote (*Canis latrans*). Avian species consisted of numerous Killdeer (*Charadrius vociferous*), Brewer's blackbird (*Euphagus cyanocephalus*), Rock wrens (*Salpinctes obsoletus*) and Lark sparrows (*Chondestes grammacus*). Numerous raptors were also present. These included the American kestrel (*Falco sparveius*), Red tailed hawk (*Buteo jamaicensis*), and a Northern Harrier (*Circus cyaneus*).

During the identification of these potential burrow sites, no sign of owl occupancy (feathers, droppings, prey remains, etc.) was detected. No sign of use by Western burrowing owls were identified on the project location or the surrounding buffer area; therefore, the Phase III portion (Census and Mapping) of the protocol was not compulsory.

Colony Land Company, L.P.
Carmelita Project
California Tiger Salamander
Initial Assessment Report

Fresno County, CA

Prepared for:

Mr. Michael P. Mallery, Esq.

Law Office of Michael P. Mallery

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July 6, 2009

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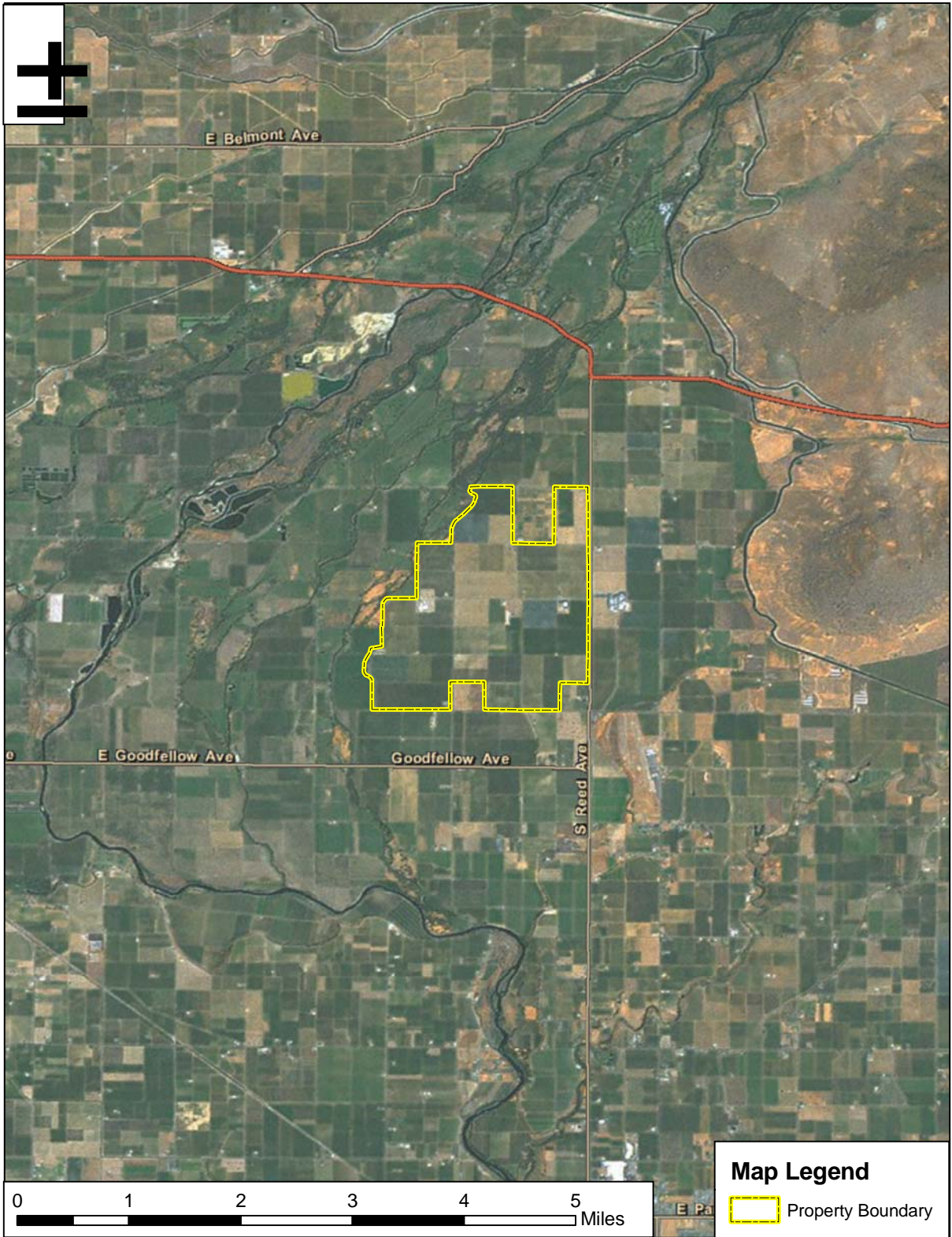


Figure 1: Carmelita Property Location Map

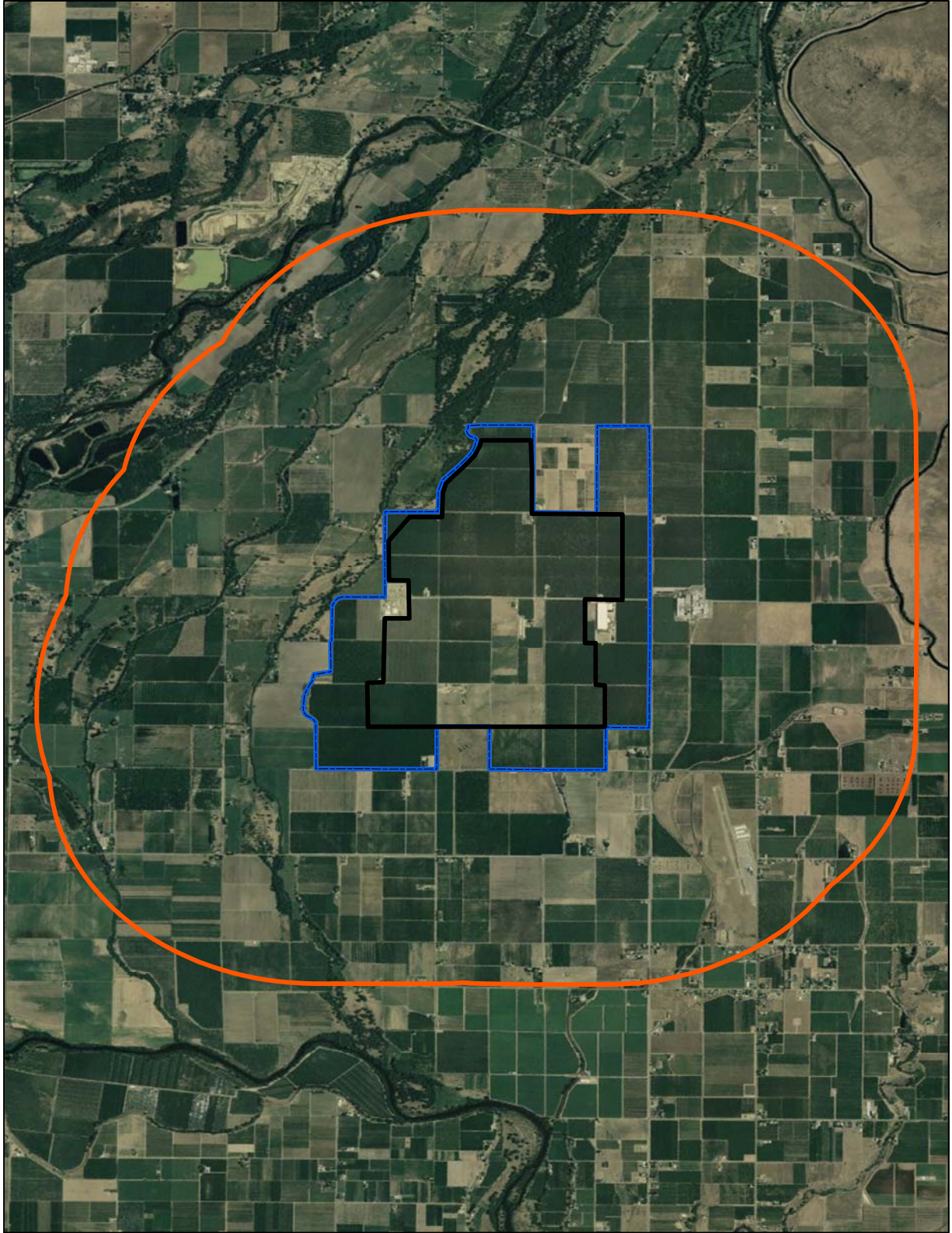


Figure 2: Carmelita Project Land Use Map

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significantly over time), and economic factors. Mining activities would occur incrementally and take many decades (up to 100 years) to complete. Meanwhile, tree farming would continue. At the completion of mining, 40 percent of the site would still remain in tree farming. Reclamation plans include a return to agricultural uses, and water basins providing irrigation to the hundreds of acres of trees on this and surrounding properties.

3.0 CALIFORNIA TIGER SALAMANDER

3.1 DISTRIBUTION

The California tiger salamander (*Ambystoma californiense*) (CTS) is restricted to California and does not overlap with any other species of tiger salamander. It is restricted to vernal pools and seasonal ponds from sea level to 2,000 feet in elevation above sea level in central California, from Yolo to Kern Counties. Along the coast, populations are scattered from Sonoma County in the northern San Francisco Bay area to Santa Barbara County up to elevations of 3,500 feet (USFWS 2008).

3.2 BREEDING

This species is restricted to grasslands and low foothill regions where lowland aquatic sites are available for breeding. They prefer natural ephemeral pools or ponds that mimic them (stock ponds that are allowed to go dry). Larvae require significantly more time to transform into juvenile adults than other amphibians such as the western spadefoot toad (*Scaphiopus hammondi*) and Pacific tree frog (*Pseudacris regilla*). Compared to the western toad (*Bufo boreas*) or western spadefoot toad, CTS are poor burrowers. They require refuges provided by

ground squirrels and other burrowing mammals in which to enter a dormant state called aestivation during the dry months (USFWS 2008).

3.3 THREATS

The primary cause of the decline of CTS populations is the loss and fragmentation of habitat from human activities and the encroachment of non-native predators. A typical salamander breeding population in a pond can drop to less than twenty breeding adults and/or recruiting juveniles in some years, making these local populations prone to extinction. CTS therefore require large contiguous areas of vernal pools containing multiple breeding ponds to ensure recolonization of individual ponds. A strong negative association between bullfrogs and CTS has been documented. Although bullfrogs are unable to establish permanent breeding populations in vernal pools, dispersing immature frogs from permanent water bodies within 2 miles (3.2 km) take up residence and prey on adult or larval salamanders in these areas during the rainy season. Louisiana swamp crayfish, mosquito fish, green sunfish and other introduced fishes also prey on adult or larval salamanders (USFWS 2008).

4.0 CNDDDB LISTINGS

The California Department of Fish and Game's data base provides listings of all recorded occurrences of sensitive species through their bio-geographic data branch to commercial users such as ESR, Inc.

4.1 PROJECT SITE

The California Natural Diversity Database (CNDDDB) was searched for listed historic occurrences of the CTS on the project site. However, the query identified no such listings. This is not indicative that the species does not exist on the site, but only that surveys for the species may never had been completed.

4.2 VICINITY

Per the USFWS protocol for CTS, the CNDDDB was also searched for listed occurrences of the species within 3.1 miles (5 km) of the Project site. No occurrences were identified within this radius. The closest documented occurrence is detailed below, and is depicted in Figure 3 – Carmelita Project CTS Map.

One occurrence (EO Index 5485) was identified in 1991 by H. B. Shaffer, R. N Fisher and S.E. Stanley approximately 5.13 miles (8.25 km) east of the project site along the north side of Highway 180 and 7.7 miles west of Highway 63 at the base of Jesse Morrow Mountain. The number of individual(s) and life stage of the sighting was not recorded.

5.0 INITIAL SITE ASSESSMENT CTS SURVEY

Following the procedures as outlined by the USFWS protocol for assessing CTS, ESR, Inc. conducted an Initial Site Assessment (Phase I) to assess whether the proposed Project was likely to impact the species.

5.1 SURVEY DATES AND PERSONNEL

The CTS site assessment that was conducted by ESR, Inc. at the project site was led by senior biologist Mr. Scott Larson. Senior biologist Mr. William Stolp assisted with the

survey. Mr. Larson was issued a USFWS recovery permit (TE096745-1) under section 10(a)(1)(A) of the Endangered Species Act, 16 U.S.C. 1531 *et seq.*, and its implementing regulations. The permit was issued on May 24, 2007, and is valid through May 23, 2011. The permit specifically authorizes Mr. Larson “to take (capture, handle, release, and kill and remove from the wild for the purpose of voucher specimens) the California tiger salamander (*Ambystoma californiense*).” The field component of the site assessment was conducted on January 22, 2008, February 26, March 2, and 27, April 2 and 3, 2009. The survey was conducted between 8:00 a.m. and 5:00 p.m.

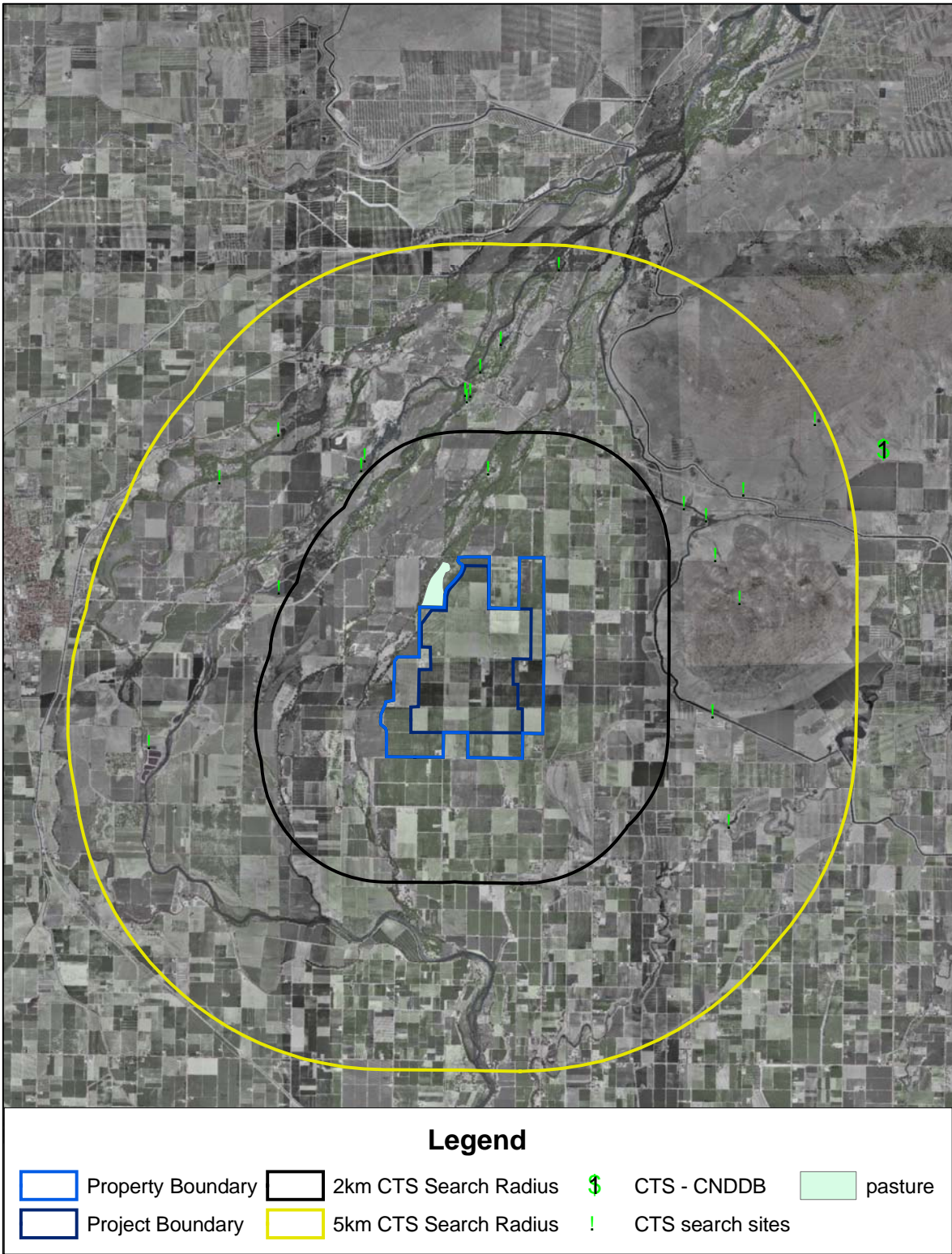


Figure 3: Carmelita Project CTS Map

5.2 PROBLEMS ENCOUNTERED AND LIMITATIONS THAT MAY INFLUENCE RESULTS

No encumbering conditions (e.g. bad weather, access restrictions, etc.) that would bias the conclusions of this report were experienced during the conduction of the CTS initial site assessment. On the days of the survey, weather varied between sunny to blustery accompanied by a significant cloud layer and scattered showers with an approximate air temperature of 54° F.

Some of the ponds located on private properties were not directly accessed if the property owner was not present or did not give permission to enter. Those ponds were analyzed by studying publically available aerial photography, assessing nearby accessible areas and interviewing residents.

5.3 DATA COLLECTION

The biologists collected data throughout the project site, and within 1.2 mile (3 km) of its perimeter, by conducting a combination of pedestrian and vehicular transects. Transects were meandering based on site conditions but thoroughly covered the area of interest. High quality optics and Global Positioning System (GPS) units were utilized. Vegetative communities were categorized, wetland features were mapped, and the general habitat quality was evaluated for the presence of CTS.

6.0 CONCLUSIONS

Potential, but marginal, isolated, and fragmented, areas of upland aestivation habitat for CTS was identified both on the Project site and within 1.2 mile (2 km) of its perimeter. The identified Pasture, Cropland, and Annual Grassland habitats supported limited fossorial wildlife species that create the requisite aestivation burrows. However, no potential breeding habitat was identified on the Project site or contiguous to it. The man made ponds to the south, west, northwest and north of the project site do not allow for CTS breeding (Figure 3). Not only are

they managed far too intensively, but they are entirely isolated by high disturbance agricultural and mining activities. The wetlands just west of the Project site, likewise, do not constitute breeding habitat for this sensitive species. The wetlands and the man-made ponds were each occupied by significant numbers of CTS predators including, but not limited to, largemouth bass, green sunfish, mosquito fish, blue gill, and bullfrogs. Such predators eliminate salamander populations within a short time span (Zeiner et al. 1990).

The Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Avenue were all identified as significant barriers, not necessarily individually but when considered in their entirety effectually isolate the project site from potential CTS migration. The canal system is typically greater than 50 feet wide with sidewalls that are much too steep for CTS to traverse, intensively managed, fast flowing when utilized, and some are occupied by predatory fish as a consequence of carryover from where the water originates upstream.

Furthermore, the database search listed no historic occurrences of the CTS either on the project site, within 1.2 mile (2 km) of the perimeter or 5 km radius of the project site. The closest occurrence documented by the CNDDDB was 5.13 miles (8.25 km) northeast of the Project site. Not only does this distance exceed the known migration distance of CTS, but the occurrence location is beyond the Centerville Kingsburg Canal, Friant Kern Canal, Alta Main Canal, State Route 180 and 183, Goodfellow Avenue, MacDonough Avenue, Central Avenue and Reed Avenue which were all identified as significant barriers that effectually isolate the Project site from potential CTS migration as previously mentioned.

Given the results of the site assessment, it is the opinion of ESR that the Project site does not support CTS, transient or otherwise. Redeveloping the location to include the proposed mining operation is not expected to impact this sensitive species. Consequently, the submittal of this report should fulfill the requirements to satisfy the USFWS Initial Site Assessment Survey (Phase I) protocol regarding CTS, as the findings contained within it preclude the need to conduct a full Presence/Negative Finding Survey.

Colony Land Company, L.P.
Carmelita Project
Valley Elderberry Longhorn Beetle
Initial Assessment Report

Fresno County, CA

Prepared for:

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2.0 PROJECT DESCRIPTION

Colony Land Company's Property (Property) is located in the vicinity of Reedley, 15 miles east of Fresno, California. The Property is under agricultural cultivation for production of stone fruits (peaches, plums, and nectarines). The Property lies within the alluvial fan of the Kings River, making the soils covering the Property very cobbly and rapidly drained. These soil conditions have been a challenge for farming practices in terms of disease, mechanical equipment maintenance, and inefficient water use.

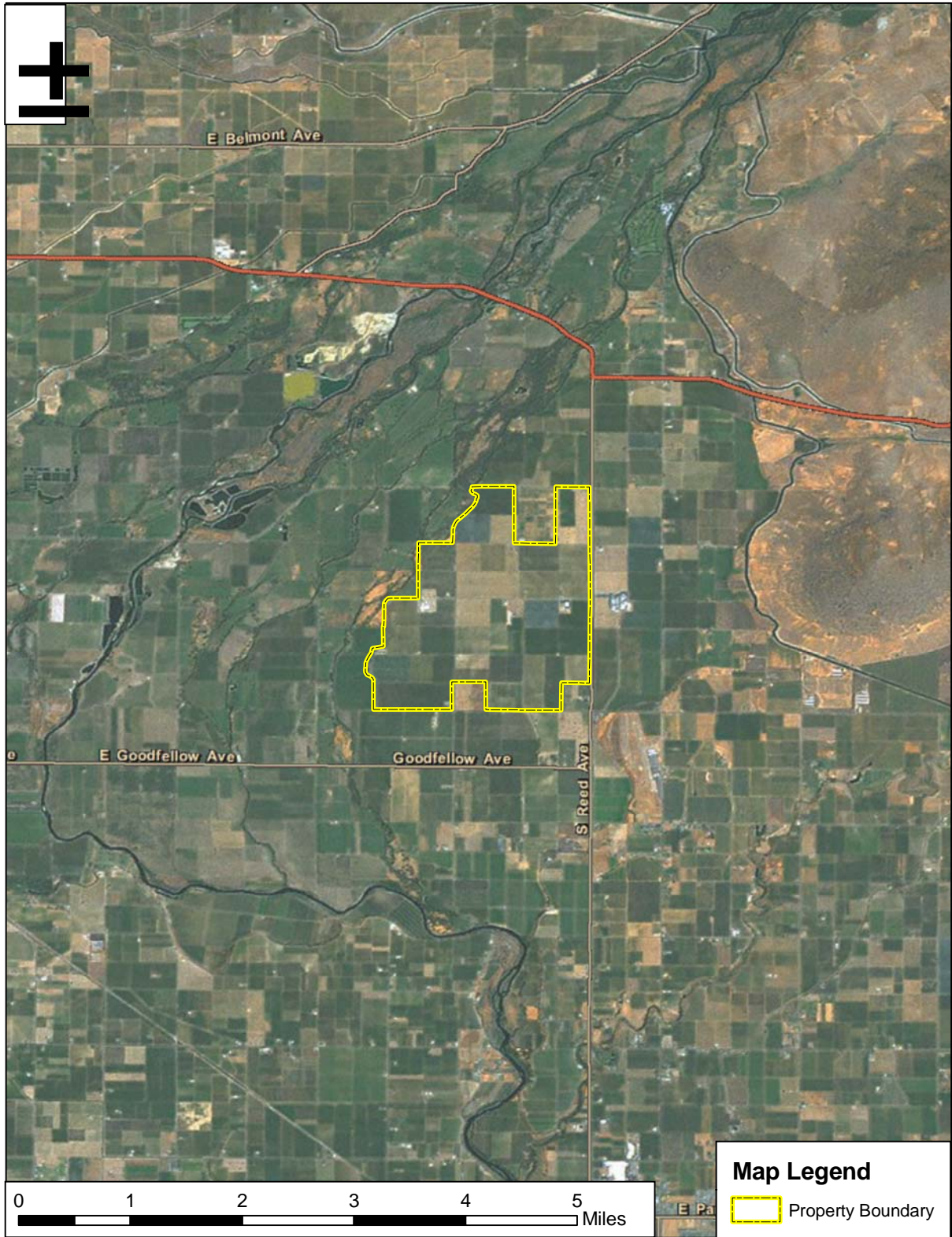


Figure 1: Carmelita Project Location Map

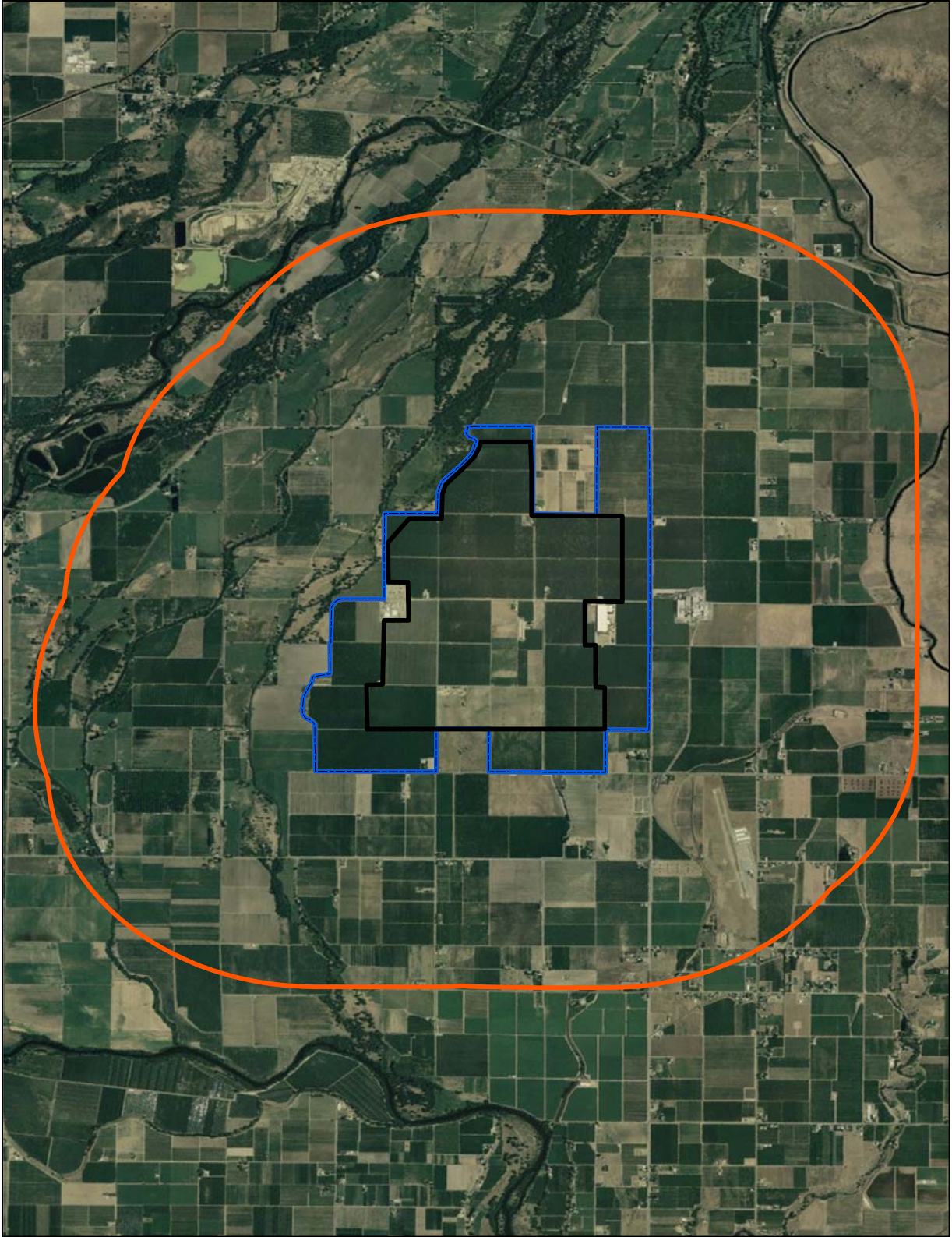


Figure 2: Carmelita Land Use Map

The Property lies within a Mineral Resource Zone (MRZ); and has been designated by the California Department of Conservation as an area containing significant aggregate mineral deposits (MRZ-2). Confirmatory testing has determined that the Property contains construction aggregate materials of the quantity and quality that mineral extraction is a feasible use for the Property.

An approximate 1,500-acre site west of Reed Avenue has been identified as a site for development of the Carmelita Project (Project), an aggregate production facility that would ultimately occupy up to 898 acres of the site. The site could support long-term production of construction aggregates for 100 years or more. The remaining 602 acres would continue to support tree fruit production on this and surrounding properties under Carmelita Resources ownership.

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significantly over time), and economic factors. Mining activities would occur incrementally and take many decades (up to 100 years) to complete. Meanwhile, tree farming would continue. At the completion of mining, 40 percent of the site would still remain in tree farming. Reclamation plans include a return to agricultural uses, and water basins providing irrigation to the hundreds of acres of trees on this and surrounding properties.

3.0 VELB DESCRIPTION

The Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) was listed as a federally threatened species on August 8, 1980 (45 CFR 52803) and after a 5 year review by the USFWS completed in February 2007, it was recommended for delisting. Critical beetle habitat has been designated in two areas along the American River in metropolitan Sacramento. Areas along Putah Creek, Solano County, and areas east of Nimbus Dam along the American River Parkway, Sacramento County, are considered critical habitat for VELB. VELB have been found to extensively utilize these areas that currently support large numbers of mature elderberry plants (*Sambucus sp.*).

VELB are dependent on elderberry plants that provide habitat for their larvae, although use of the plants by VELB is often not readily apparent. Evidence of an exterior exit hole prior to pupae development is often the only sign of VELB's presence on a particular host plant. Larvae are found in elderberry stems with a basal diameter greater than one inch.

VELB densities are thought to be historically low, and given the apparent poor dispersal capabilities of the animal, VELB seems to be negatively affected by fragmentation of elderberry plants. The present distribution of VELB from Redding to Bakersfield in the Central Valley is patchy. VELB are locally common in population clusters that are unevenly distributed throughout available

elderberry host plants. VELB often utilizes clustered groups of elderberry plants over a period of years. Mature elderberry plants are preferred by VELB, whereas younger stands are often unoccupied.

In all the data reviewed and evaluated together with discussions with USFWS personnel, the habitat requirements are based on the reoccurring and required need for the VELB to use clumps of elderberry host plants that are endemic to moist valley oak woodlands associated with riparian systems that occur contiguously along rivers and streams (e.g. perennial rivers and stream corridors).

The data researched stated that the required wet riparian forest should consist of several upper and intermediate canopy layers with dense riparian undergrowth. The riparian forest needed for VELB to exist should have an assemblage of upper canopy layers typically including numerous overlapping crowns of cottonwoods (*Populus fremontii*), sycamores (*Platanus racemosa*), willows (*Salix sp.*), and valley oaks (*Quercus lobata*) while the intermediate canopies should consist of maple (*Acer negundo var. californicum*), ash (*Fraxinus latifolia*), and elderberry (*Sambucus sp.*). Vines should also be abundant in all canopy layers of these riparian forests.

Research indicates that the VELB dispersal patterns follow wet riparian corridors and further evidence indicates that dispersion rarely occurs overland, i.e. from drainage to drainage over upland areas (Placer Legacy Scientific Working Group, 2003).

Collinge et al. (2001) found that colonization of new elderberry sites within occupied wet drainages is rare and that dispersal between drainages probably does not occur at all. This pattern implies that even when an individual VELB disperses from its host plant to colonize new habitat, it will only travel along the wet riparian corridor within its home drainage. Most remaining VELB habitat

and riparian vegetation exist in small isolated patches; consequently, the distance between VELB populations and unoccupied VELB habitat limits the taxon's ability to successfully colonize new sites.

4.0 BIOLOGICAL SURVEY METHODOLOGY

The VELB survey was conducted using a pedestrian transect methodology across the developed and undeveloped portions of the property near the edges of the established orchards and the associated amenities including but not limited to support buildings and facilities, equipment and storage yards, and irrigation ditches with a focused, vegetative identification process at locations of floral community variation. These focused surveys were primarily conducted where the community changes occurred in the poorly mixed grassland and marginal upland drainage areas adjacent to the farm road system around the perimeter of the established orchards. Plant species observed were identified using taxonomy keys provided in the Jepson Manual of Higher Plants of California and supplemental materials as cited in this report.

5.0 VELB SURVEY METHODOLOGY

Fields methods during the reconnaissance survey included walking or driving the edge of the property, the irrigation ditches, and the areas between the floral communities and the developed property. The 56 elderberry plants were readily identified as individual or grouped plants with various basal stems greater than one inch in diameter. The identified elderberry plants were given a unique attribute table number and marked on the site map. Additional scrutiny was directed to the study area to ensure that a detailed assessment was given to the identified species of concern.

Metal calipers and a Forester's diameter tape were used to measure the basal diameter of each elderberry stem. If the stem measured greater than one inch in basal diameter it was further classified as being either greater than one inch but less than three inches or greater than three inches but less than five inches or greater than five inches. The stems were then referenced to a specific plant and recorded. The elderberry plant and stems were also examined for evidence of beetle exit holes.

6.0 SURVEY RESULTS

During the site reconnaissance survey, 56 isolated and grouped elderberry plants were located with stems greater than one inch measured at ground level according to the 1999 USFWS VELB protocol at a distance of greater than 100 feet from the project site. No VELB exit holes were observed on any of the stems, branches or trunk of the identified elderberry plants during the site reconnaissance. No elderberry plants were found within the 100 feet of the proposed Project area. No community of elderberry plants, including the requisite supporting habitat, was located at the tentative project site. Figure 3: Carmelita Project Elderberry Plant Locations Map shows the location of where the identified plants were found near the Project site. The elderberry plants were, for the most part, beyond the property boundary but near or along the existing fencing which served to isolate the plants from any impacts from the existing agricultural operations or the proposed mining operations.

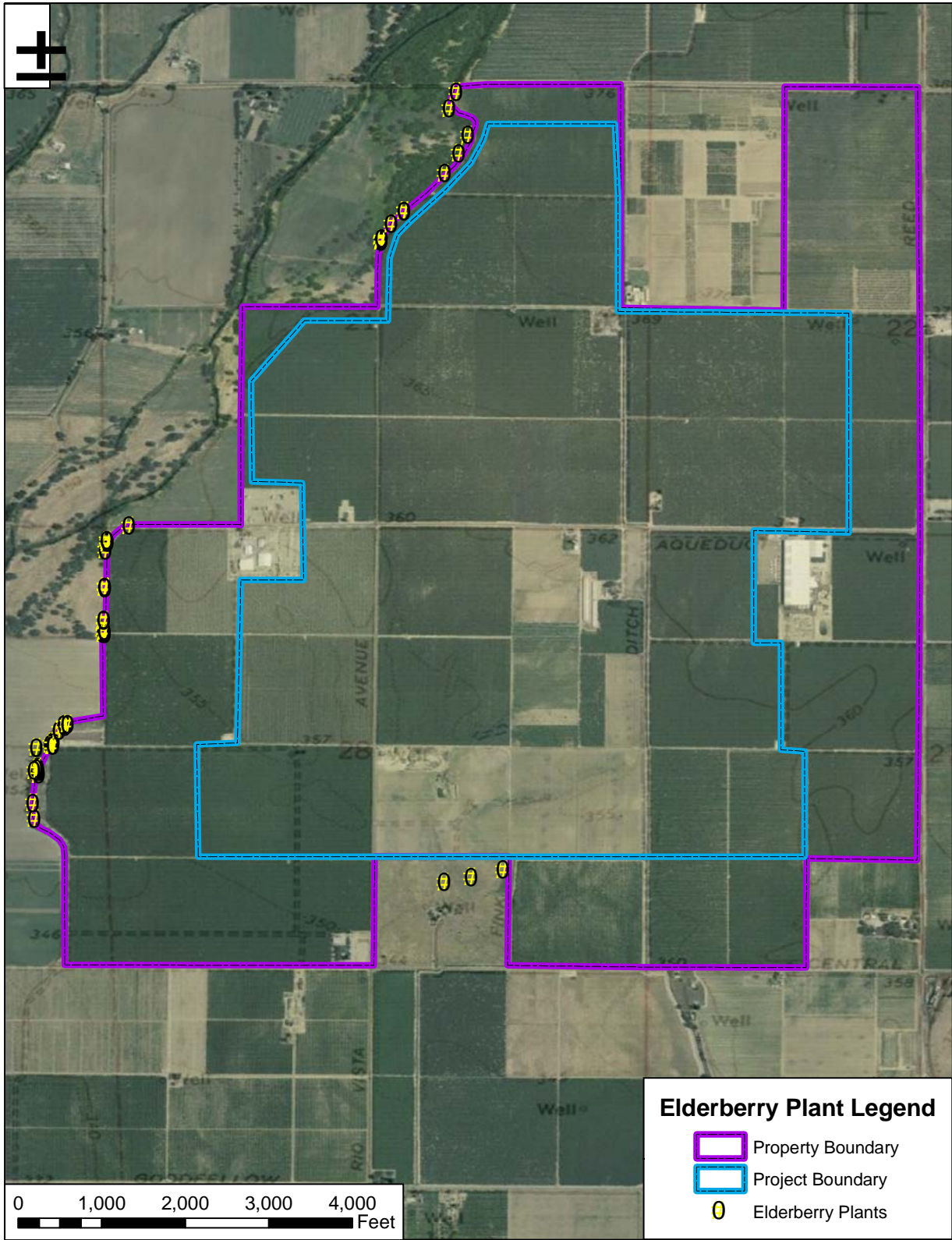


Figure 3: Carmelita Project Elderberry Plant Locations Map

7.0 CONCLUSIONS

ESR has reviewed the requirements of the mitigation guidelines for the Valley Elderberry Longhorn beetle issued July 9, 1999, the referenced technical data, and after further discussions with USFWS, the identified plants located near the study area may not meet the requirement of VELB habitat. This is based on the following conditions:

- In all the data reviewed and evaluated together with discussions with USFWS personnel, this conclusion is based on the reoccurring and required need for the VELB to use clumps of elderberry host plants that are endemic to moist valley oak woodlands associated with riparian systems that occur contiguously along rivers and streams (e.g. perennial river and stream corridors), which do not exist on the Project site but are near or adjacent to the western boundary of the property. The area evaluated consists of 56 individual or clumped elderberry bushes that are located primarily in highly disturbed mixed upland habitat. The drainage course located approximately 250 to 950 feet to the west on the adjacent parcel has been impacted by mechanical equipment at some previous time.
- The data researched stated that the required wet riparian forest should consist of several upper and intermediate canopy layers with dense riparian undergrowth. The riparian forest needed for VELB to exist should have an assemblage of upper canopy layers typically including numerous overlapping crowns of cottonwoods (*Populus fremontii*), sycamores (*Platanus racemosa*), willows (*Salix sp.*), and valley oaks (*Quercus lobata*) while the intermediate canopies should consist of maple (*Acer negundo var. californicum*), ash (*Fraxinus latifolia*), and elderberry (*Sambucus spp.*). Vines should also be abundant in all canopy layers of these riparian forests. Although some of these individual species may exist at the Project site, a

wet riparian forest is not evident at the Project location due to the historical and current agricultural practices. The unconsolidated, sparse upper and intermediate canopy assemblage coupled with the lack of the wet riparian forest characteristics indicate that the on-site habitat does not meet the VELB habitat definition. This is even more evident when assessing the location of elderberry plants in a highly disturbed mixed upland grass and scrub habitat.

- Research indicates that the VELB dispersal patterns follow wet riparian corridors and further evidence indicates that dispersion rarely occurs overland, i.e. from drainage to drainage over upland areas (Placer Legacy Scientific Working Group, 2003). As previously stated, the study area near the Project location may meet the definition of a wet riparian corridor but is located primarily in upland grassland habitat with various species of Oaks, Ceanothus and Coyote bush in fragmented and scattered to fairly conglomerated communities. Developments (agricultural operations, quarrying operations, buildings, roads, landscaping, etc.) between the site and the elderberry population add further barriers to potential VELB dispersion. The ESR evaluation is that the bushes are not prime VELB habitat and would not likely be used during dispersal due to the isolation of the site by natural and man-made barriers for population by VELB which is an indicator that the Project location is currently poor potential habitat for the VELB.
- The USFWS VELB protocol specifically states that if a buffer of 100 feet is established around the dripline of an elderberry plant that there will be no impact to the beetle due to avoidance. The design of the Project will not impact the property within 100 feet of the dripline of any of the identified elderberry

plants. Therefore, the likelihood of impact to VELB habitat is negligible and under CEQA would be considered less than significant.

It should be emphasized that according to 45 CFR 52803 published on August 8, 1980 and the subsequent 1999 VELB critical habitat protocol issued by the USFWS that the elderberry plant itself is not protected by the regulations but rather the VELB habitat is protected (i.e. not every elderberry plant is VELB habitat but all VELB habitat includes a community of elderberry plants). The elderberry plants will not be impacted and will be avoided since the Project will be developed beyond the 100 foot radius of the existing plants and under USFWS guidance, no impact will occur.

Colony Land Company, L.P.
Carmelita Project
Nesting Raptor Survey

Fresno County, CA

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Updated July 2010

1.0 PROJECT LOCATION

Colony Land Company, L.P. (Colony Land Company) owns approximately 1,500 acres in the vicinity of Minkler, 15 miles east of Fresno, California. Specifically, the Carmelita Project (Project) to be operated by Carmelita Resources, site lies within Fresno County, Wahtoke U.S. Geological Survey 7 ½ minute quadrangle, Section 5, Township 11 South, and Range 10 East of the Mt. Diablo Base and Meridian (MDBM). The Project site is located in an agricultural setting within the floodplain of the Kings River. Agricultural areas consist of orchards, fields, pasture and rural residential uses. Figure 1 – Carmelita Project Site Map gives a depiction of the Project site and its current land uses while Figure 2 – Carmelita Project Land Use Map identifies the different land uses on and near [1.2 miles (2km)] the Project site. It is located in an unincorporated area of south-central Fresno County approximately 5.7 miles east of Sanger and 4.5 miles north of Reedley. More specifically, the Kings River and associated Byrd Slough lie immediately to the west; Reed Avenue is the eastern property boundary with the intersection of State Highway 180; and Reed Avenue to its northeast.

2.0 PROJECT DESCRIPTION

Colony Land Company's proposed project property (Property) is located in the vicinity of Reedley, 15 miles east of Fresno, California. The Property is under agricultural cultivation for production of stone fruits (peaches, plums, and nectarines). The Property lies within the alluvial fan of the Kings River, making the soils covering the Property very cobbly and rapidly drained. These soil conditions have been a challenge for farming practices in terms of disease, mechanical equipment maintenance, and inefficient water use.

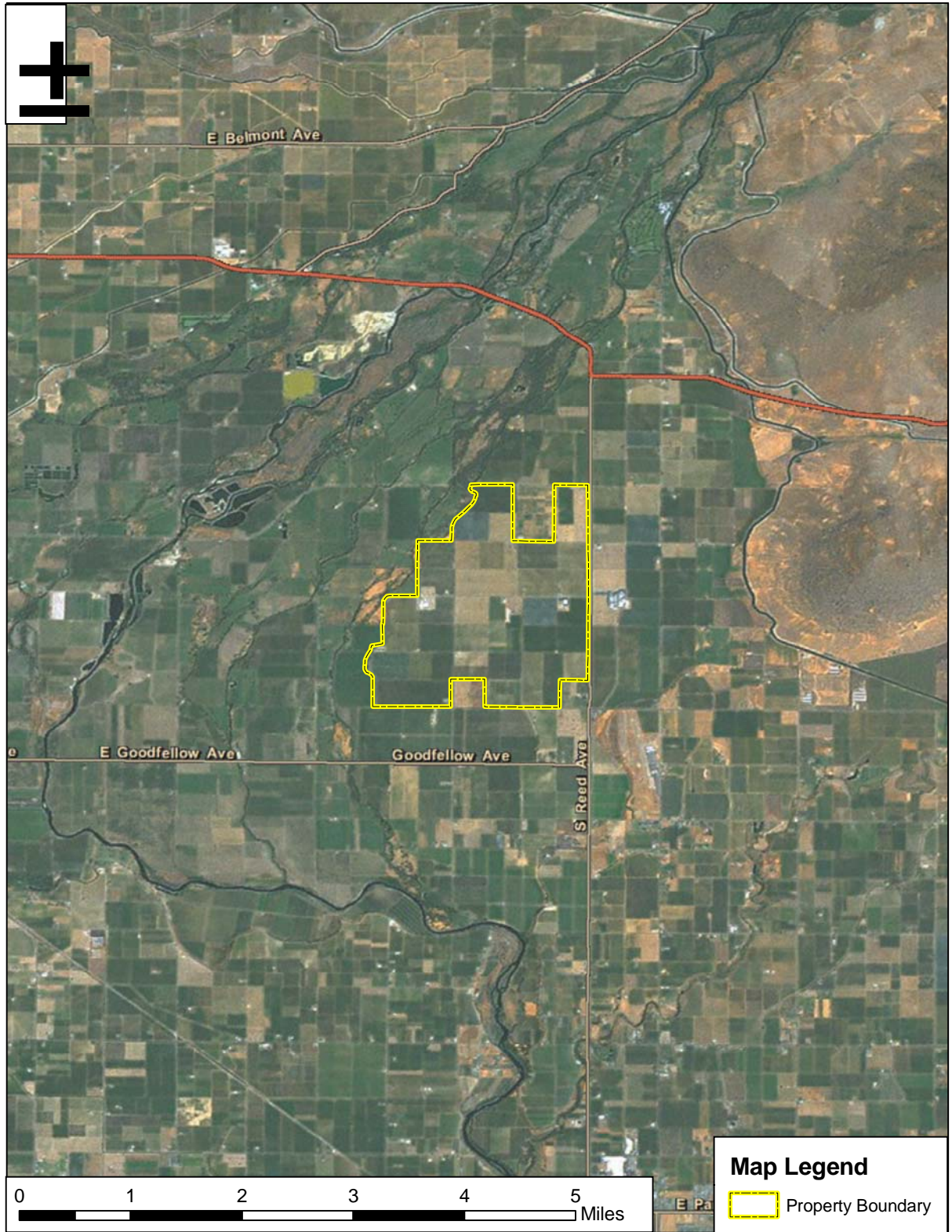


Figure 1: Carmelita Project Location Map

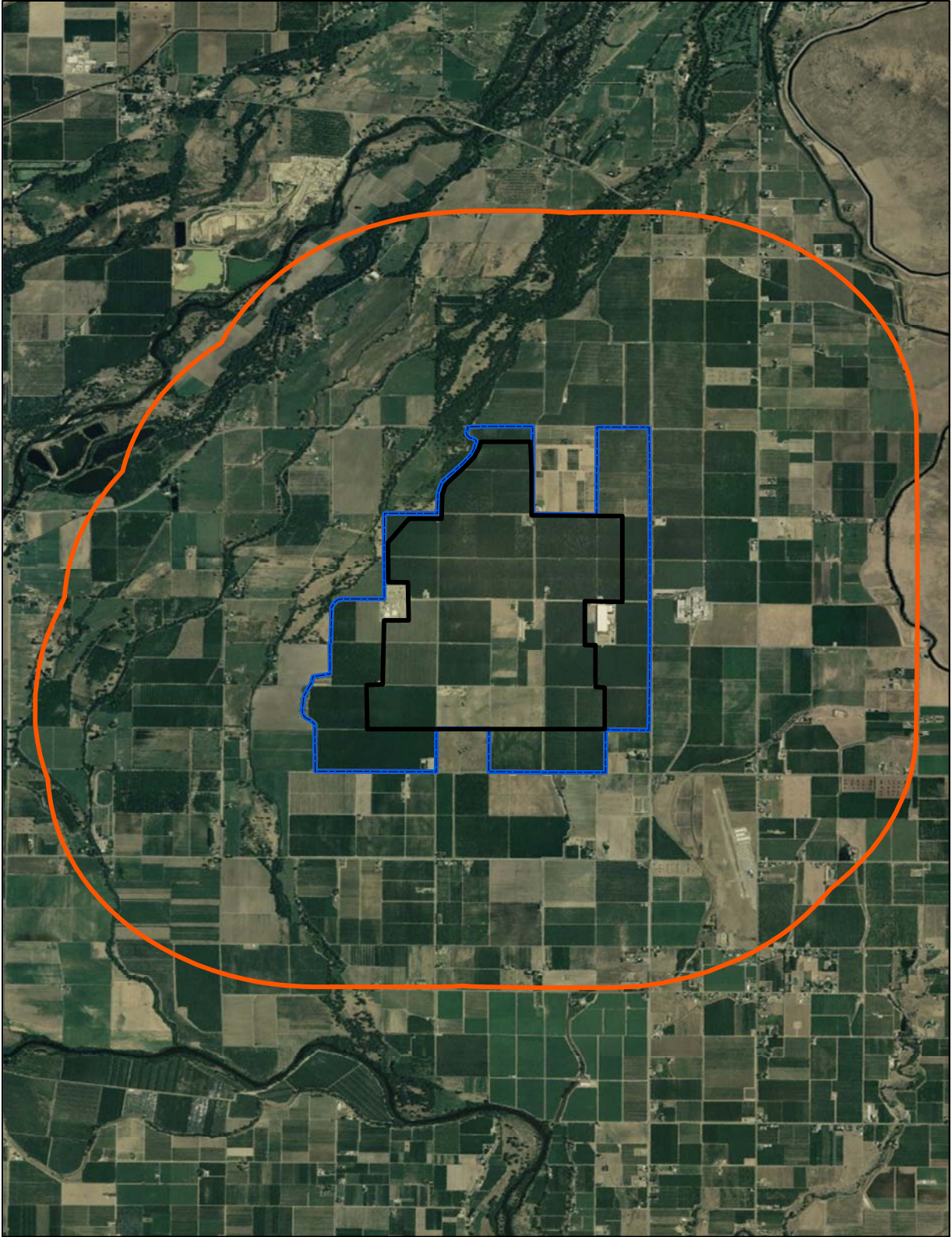


Figure 2: Carmelita Project Land Use Map

The Property lies within a Mineral Resource Zone (MRZ); and has been designated by the California Department of Conservation as an area containing significant aggregate mineral deposits (MRZ-2). Confirmatory testing has determined that the Property contains construction aggregate materials of the quantity and quality that mineral extraction is a feasible use for the Property.

An approximate 1,500-acre site west of Reed Avenue has been identified as a site for development of the Carmelita Project (Project), an aggregate production facility that would ultimately occupy up to 898 acres of the site. The site could support long-term production of construction aggregates for 100 years or more. The remaining 602 acres would continue to support tree fruit production on this and surrounding properties under Carmelita Resources ownership.

Operations would be typical of sand and gravel extraction operations, with conventional mining practices common to the industry. Soils and overburden would be removed and the underlying aggregate reserves excavated and transported to a rock processing plant site for washing and sizing. Mining will be scheduled in cells to minimize impacts to ongoing agricultural operations over the property. Overburden and accumulated unmarketable silts and clays (wash fines) would be used as backfill in completed designated excavation areas, then covered with salvaged topsoil, and returned to agriculture-related post-mining land uses over about 40 percent of the site. Remaining areas would be reclaimed as water basins. Materials would be sold as washed aggregates, or used to make products, including asphaltic concrete and Portland cement concrete at on-site plants. A planned maximum production of 1.25 million tons per year is anticipated. Site access would be from Reed Avenue north to State Route 180 (SR 180), which is in the process of being reconstructed from a two-lane highway to a four-lane expressway.

Conditions for reclaimed land uses will be influenced by actual extraction depths, overburden and waste quantities, groundwater depths (known to vary significantly over time), and economic factors. Mining activities would occur incrementally and take many decades (up to 100 years) to complete. Meanwhile, tree farming would continue. At the completion of mining, 40 percent of the site would still remain in tree farming. Reclamation plans include a return to agricultural uses, and water basins providing irrigation to the hundreds of acres of trees on this and surrounding properties.

3.0 NESTING RAPTORS

The following sections provide the results of the nesting raptor survey conducted at the Project site for the Carmelita Project.

3.1 NESTING RAPTOR REGULATORY BACKGROUND

Regarding impacts to avian species, the CDFG Code states the following:

- Section 3503. It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.
- Section 3503.5. It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.
- Section 3513. It is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any

part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

As indicated above in the CDFG Code, the Migratory Bird Treaty Act (MBTA) also affords legal protection to migratory birds, which include nesting raptors. The MBTA, first enacted in 1918, domestically implements a series of treaties (on behalf of Canada) between the United States and Great Britain, Mexico, Japan, and the former USSR. The MBTA provides for international migratory bird protection, and authorizes the Secretary of the Interior to regulate the “taking” of migratory birds. Specifically, the MBTA states that it shall be unlawful, except as permitted by regulations, to “at any time, by any means, or in any manner, to pursue, take, kill, possess, sale, purchase, ship, transport, carry, or export, at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird” (16 USC 703). Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFG. The current list of species protected by the MBTA can be located in Title 50, CFR Section 10.13.

3.2 NESTING RAPTOR SURVEY METHODOLOGY

ESR conducted a nesting raptor survey at the Project site, to ensure compliance of the proposed Project with the above regulations. Senior Biologists William Stolp and Scott Larson with ESR, Inc. visited the project site on April 2, 2009, to complete the survey initiated during previous survey dates performed in conjunction with the other biological surveys. The survey was conducted in accordance with generalized raptor survey protocols established by CDFG, *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley* (Swainson’s Hawk Technical Advisory Committee, May 31, 2000) (Appendix A) to maximize the potential for observing nesting raptors within the local area. The survey encompassed the entire Project site as well as

all areas within 0.5 mile of its perimeter. The Project site and survey boundary are depicted in Figure 3 – Carmelite Project Raptor Survey Map. A meandering pedestrian survey was conducted throughout this survey footprint. High quality optics and a Global Positioning System (GPS) unit were utilized to ensure optimum visibility and accurate mapping.

Subject trees identified as potential nesting locations were surveyed from multiple angles to increase the probability of detecting active nests. Efforts were focused on visual cues such as perching, provisioning, and territoriality, which are all good indicators of breeding status. Aural cues were also noted, as vocalizations often occur during territorial displays, courtship, and provisioning of young, and nestlings can sometimes be heard begging for food.

3.3 NESTING RAPTOR NEST RESULTS

One active raptor nest was identified within the survey perimeter. A female Red-tailed hawk (*Buteo jamaicensis*) was observed performing aerial displays and vocalizations to distract and deter the survey team from investigating a nest location approximately 1,125 feet northwest of the Project site. The adult male was observed throughout the survey foraging in the vicinity of the nest along the Kings River. The location of the nest is depicted in Figure 3. An additional pair of Red-tailed hawks was observed engaging in aerial courtship displays north of the Project site, but no associated nest was documented. While two other raptors were observed south of the survey area along the riparian corridor of the San Joaquin River, the survey revealed no additional active raptor nests within 0.5 mile of the Project site.

3.4 NESTING RAPTOR CONCLUSION

The nesting raptor survey conducted by ESR, Inc. at the Project site on April 2, 2009 identified one active raptor nest within 0.5 mile of its perimeter. A female Red-tailed hawk was documented protecting a nest location approximately 1,125 feet northwest of the project site. To mitigate potential impacts to this breeding pair, construction activities initiated prior to completion of breeding (i.e. fledging of young) should be restricted appropriately. This typically includes establishment of a 300 foot construction-free buffer zone around the tree by means of fencing or stakes with conspicuous flagging, if appropriate. The exact distance of the buffer zone should be determined in consultation with CDFG. Once the nest becomes inactive, as determined by a qualified biologist, construction would be allowed to commence within the buffer zone.

The general Project area provides ample foraging and roosting habitat for various species of raptors such as American Kestrels, Red-tailed Hawks, Barn Owls, etc.; however, due to the current state of disturbance and continued use of the site by a variety of activities, the potential as a raptor breeding or nesting site is considered low. The general Kings River riparian area does not have the potential to be nesting habitat for Bald eagles but may serve as foraging habitat.

Additionally, the Project proponent should have a qualified biologist conduct a survey of the Project site and immediate vicinity for active raptor nests within 30 days of initiation of Project activities, if occurring during future breeding seasons. The breeding season for raptors typically extends between February and August. The surveys should be conducted according to a protocol consistent with State and Federal guidelines.

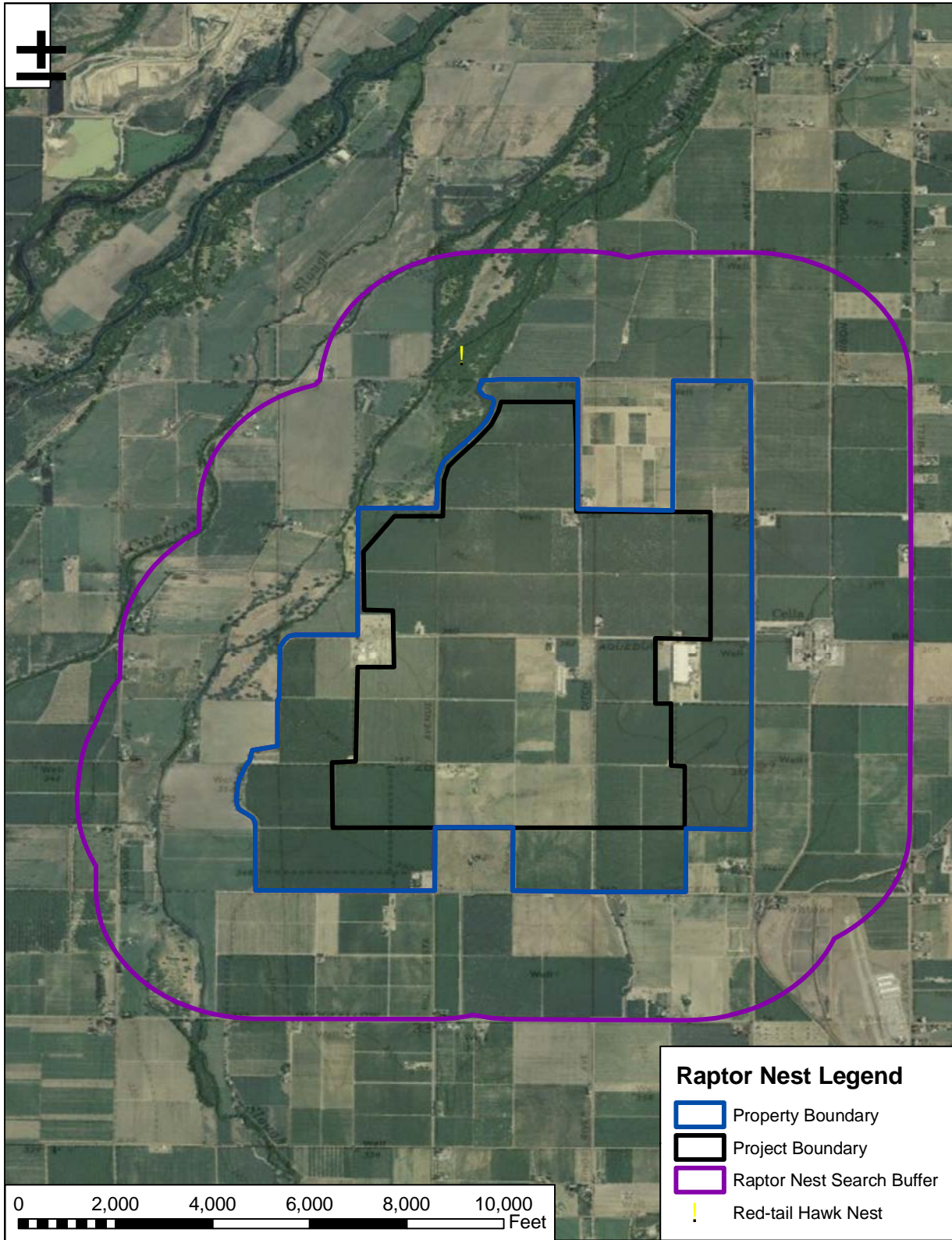


Figure 3: Carmelita Project Raptor Map

Appendix A

Swainson's Hawk Survey Protocol

RECOMMENDED TIMING AND METHODOLOGY FOR SWAINSON'S HAWK NESTING SURVEYS IN CALIFORNIA'S CENTRAL VALLEY

Swainson's Hawk Technical Advisory Committee

May 31, 2000

This set of survey recommendations was developed by the Swainson's Hawk Technical Advisory Committee (TAC) to maximize the potential for locating nesting Swainson's hawks, and thus reducing the potential for nest failures as a result of project activities/disturbances. The combination of appropriate surveys, risk analysis, and monitoring has been determined to be very effective in reducing the potential for project-induced nest failures. As with most species, when the surveyor is in the right place at the right time, Swainson's hawks may be easy to observe; but some nest sites may be very difficult to locate, and even the most experienced surveyors have missed nests, nesting pairs, misidentified a hawk in a nest, or believed incorrectly that a nest had failed. There is no substitute for specific Swainson's hawk survey experience and acquiring the correct search image.

METHODOLOGY

Surveys should be conducted in a manner that maximizes the potential to observe the adult Swainson's hawks, as well as the nest/chicks second. To meet the California Department of Fish and Game's (CDFG) recommendations for mitigation and protection of Swainson's hawks, surveys should be conducted for a ½ mile radius around all project activities, and if active nesting is identified within the ½ mile radius, consultation is required. In general, the TAC recommends this approach as well.

Minimum Equipment

Minimum survey equipment includes a high-quality pair of binoculars and a high quality spotting scope. Surveying even the smallest project area will take hours, and poor optics often result in eye-strain and difficulty distinguishing details in vegetation and subject birds. Other equipment includes good maps, GPS units, flagging, and notebooks.

Walking vs Driving

Driving (car or boat) or "windshield surveys" are usually preferred to walking if an adequate roadway is available through or around the project site. While driving, the observer can typically approach much closer to a hawk without causing it to fly. Although it might appear that a flying bird is more visible, they often fly away from the observer using trees as screens; and it is difficult to determine from where a flying bird

came. Walking surveys are useful in locating a nest after a nest territory is identified, or when driving is not an option.

Angle and Distance to the Tree

Surveying subject trees from multiple angles will greatly increase the observer's chance of detecting a nest or hawk, especially after trees are fully leafed and when surveying multiple trees in close proximity. When surveying from an access road, survey in both directions. Maintaining a distance of 50 meters to 200 meters from subject trees is optimal for observing perched and flying hawks without greatly reducing the chance of detecting a nest/young: Once a nesting territory is identified, a closer inspection may be required to locate the nest.

Speed

Travel at a speed that allows for a thorough inspection of a potential nest site. Survey speeds should not exceed 5 miles per hour to the greatest extent possible. If the surveyor must travel faster than 5 miles per hour, stop frequently to scan subject trees.

Visual and Aural Ques

Surveys will be focused on both observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting Swainson's hawks. In addition, vocalizations are extremely helpful in locating nesting territories. Vocal communication between hawks is frequent during territorial displays; during courtship and mating; through the nesting period as mates notify each other that food is available or that a threat exists; and as older chicks and fledglings beg for food.

Distractions

Minimize distractions while surveying. Although two pairs of eyes may be better than one pair at times, conversation may limit focus. Radios should be off, not only are they distracting, they may cover a hawk's call.

Notes and Species Observed

Take thorough field notes. Detailed notes and maps of the location of observed Swainson's hawk nests are essential for filling gaps in the Natural Diversity Data Base; please report all observed nest sites. Also document the occurrence of nesting great homed owls, red-tailed hawks, red-shouldered hawks and other potentially competitive species. These species will infrequently nest within 100 yards of each other, so the presence of one species will not necessarily exclude another.

TIMING

To meet **the minimum level** of protection for the species, surveys should be completed for **at least** the two survey periods immediately prior to a project's initiation. For example, if a project is scheduled to begin on June 20, you should complete 3 surveys in Period III and 3 surveys in Period V. However, it is always recommended that surveys be completed in Periods II, III and V. **Surveys should not be conducted in Period IV.**

The survey periods are defined by the timing of migration, courtship, and nesting in a "typical" year for the majority of Swainson's hawks from San Joaquin County to Northern Yolo County. Dates should be adjusted in consideration of early and late nesting seasons, and geographic differences (northern nesters tend to nest slightly later, etc). If you are not sure, contact a TAC member or CDFG biologist.

Survey dates	Survey time	Number of Surveys
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Justification and search image		
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I. <i>January-March 20 (recommended optional)</i>	<i>All day</i>	<i>1</i>
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Prior to Swainson's hawks returning, it may be helpful to survey the project site to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites, as well as becoming familiar with the project area. It also gives the surveyor the opportunity to locate and map competing species nest sites such as great homed owls from February on, and red-tailed hawks from March on. After March 1, surveyors are likely to observe Swainson's hawks staging in traditional nest territories.

II. <i>March 20 to April 5</i>	<i>Sunrise to 1000</i> <i>1600 to sunset</i>	<i>3</i>
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Most Central Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; they are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns.

Most trees are leafless and are relatively transparent; it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, but typically soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays, and circling the nest territory. Potential nest sites identified by the observation of staging Swainson's hawks

will usually be active territories during that season, although the pair may not successfully nest/reproduce that year.

III. *April 5 to April 20*

*Sunrise to 1200
1630 to Sunset*

3

Although trees are much less transparent at this time, activity at the nest site increases significantly. Both males and females are actively nest building, visiting their selected site frequently. Territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. This period may require a great deal of “sit and watch” surveying.

IV. *April 21 to June 10*

*Monitoring known nest sites only
Initiating Surveys is not recommended*

Nests are extremely difficult to locate this time of year, and even the most experienced surveyor will miss them, especially if the previous surveys have not been done. During this phase of nesting, the female Swainson’s hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible.

Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

V. *June 10 to July 30 (post-fledging)*

*Sunrise to 1200
1600 to sunset*

3

Young are active and visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, and adults.

DETERMINING A PROJECT'S POTENTIAL FOR IMPACTING SWAINSON'S HAWKS

LEVEL OF RISK	REPRODUCTIVE SUCCESS (INDIVIDUALS)	LONTERM SURVIVABILITY (POPULATION)	NORMAL SITE CHARACTERISTICS (DAILY AVERAGE)	NEST MONITORING
HIGH	<p>Direct physical contact with the nest tree while the birds are on eggs or protecting young. (Helicopters in close proximity)</p> <p>Loss of nest tree after nest building is begun prior to laying eggs.</p> <p>Personnel within 50 yards of nest tree (out of vehicles) for extended periods while birds are on eggs or protecting young that are < 10 days old.</p> <p>Initiating construction activities (machinery and personnel) within 200 yards of the nest after eggs are laid and before young are > 10 days old.</p> <p>Heavy machinery only working within 50 yards of nest.</p> <p>Initiating construction activities within 200 yards of nest before nest building begins or after young > 10 days old.</p> <p>All project activities (personnel and machinery) greater than 200 yards from nest.</p>	<p>Loss of available foraging area.</p> <p>Loss of nest trees.</p> <p>Loss of potential nest trees.</p> <p>Cumulative: Multi-year, multi-site projects with substantial noise/personnel disturbance.</p> <p>Cumulative: Single-season projects with substantial noise/personnel disturbance that is greater than or significantly different from the daily norm.</p> <p>Cumulative: Single-season projects with activities that "blend" well with site's "normal" activities.</p>	<p>Little human-created noise, little human use: nest is well away from dwellings, equipment yards, human access areas, etc.</p> <p><i>Do not include general cultivation practices in evaluation.</i></p> <p>Substantial human-created noise and occurrence: nest is near roadways, well used waterways, active airstrips, areas that have high human use.</p> <p><i>Do not include general cultivation practices in evaluation.</i></p>	MORE
LOW				LESS

Appendix A-3 - NatureServe Ranking Definitions

NatureServe Ranking Definitions

Determining which plants and animals are thriving and which are rare or declining is crucial for targeting conservation towards those species and habitats in greatest need. NatureServe and its natural heritage member programs have developed a consistent method for evaluating the relative imperilment of both species and ecological communities. These assessments lead to the designation of a conservation status rank. For plant and animal species these ranks provide an estimate of extinction risk, while for ecological communities they provide an estimate of the risk of elimination. There is currently no conservation status ranks determined for Ecological Systems.

Conservation status ranks are based on a one to five scale, ranging from critically imperiled (G1) to demonstrably secure (G5). Status is assessed and documented at three distinct geographic scales-global (G), national (N), and state/province (S). These status assessments are based on the best available information, and consider a variety of factors such as abundance, distribution, population trends, and threats.

Interpreting NatureServe Conservation Status Ranks

The conservation status of a species or community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = Global, N = National, and S = Subnational). The numbers have the following meaning:

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure.

For example, G1 would indicate that a species is critically imperiled across its entire range (i.e., globally). In this sense the species as a whole is regarded as being at very high risk of extinction. A rank of S3 would indicate the species is vulnerable and at moderate risk within a particular state or province, even though it may be more secure elsewhere.

Extinct or missing species and ecological communities are designated with either an "X" (presumed extinct or extirpated) if there is no expectation that they still survive, or an "H" (possibly extinct or extirpated) if they are known only from historical records but there is a chance they may still exist. Other variants and qualifiers are used to add information or indicate any range of uncertainty. See the following conservation status rank definitions for complete descriptions of ranks and qualifiers.

Global, National, and Sub-national Assessments

The overall status of a species or ecological community is regarded as its "global" status; this range-wide assessment of condition is referred to as its global conservation status rank (G-rank). Because the G-rank refers to the species or community as a whole, each species or community can have just a single global conservation status rank. The condition of a species or community can vary from one country to another, and national conservation status ranks (N-rank) document its condition in a particular country. A species or community can have as many N-ranks as countries in which it occurs. Similarly, status can vary by state or province, and thus sub-national conservation status ranks (S-rank) document the condition of the species or community within a particular state or province. Again, there may be as many sub-national conservation status ranks as the number of states or provinces in which the species or community occurs.

National and sub-national status ranks must always be equal to or lower than the global rank for a particular species or community (in this sense a "lower" number indicates greater risk). On the other hand, it is possible for a species or

community to be more imperiled in a given nation or state/province than it is range-wide. As an example, a species may be common and secure globally (G5), vulnerable in the United States as a whole (N3), yet critically imperiled in Florida (S1). In the United States and Canada, the combination of global and sub-national ranks (e.g., G3S1) is widely used to place local priorities within a broader conservation context.

Global conservation status assessments generally are carried out by NatureServe scientists with input from relevant natural heritage member programs and experts on particular taxonomic groups. NatureServe scientists similarly take the lead on national-level status assessments in the United States and Canada, while state and provincial member programs assess the sub-national conservation status for species found in their respective jurisdictions.

Status assessments ideally should reflect current conditions and understanding, and NatureServe and its member programs strive to update these assessments with new information from field surveys, monitoring activities, consultation, and scientific publications. NatureServe Explorer (Web application) users with significant new or additional information are encouraged to contact NatureServe or the relevant natural heritage program.

To ensure that NatureServe's central databases represent the most current knowledge from across our network of member programs, data exchanges are carried out with each natural heritage program at least once a year. The sub-national conservation status ranks (S-ranks) presented in NatureServe Explorer are therefore only as current as the last data exchange with each local natural heritage program, coupled with the latest web site update (shown in the "small print" at the bottom of each NatureServe Explorer report). Although most sub-national conservation status ranks do not change frequently, the most current S-ranks can be obtained directly from the relevant local natural heritage.

Status Assessment Criteria

Use of standard criteria and rank definitions makes NatureServe conservation status ranks comparable across organism types and political boundaries. Thus, G1 has the same basic meaning whether applied to a salamander, a moss species, or a forest community. Similarly, an S1 has the same meaning whether applied to a species or community in Manitoba, Minnesota, or Mississippi. This standardization in turn allows NatureServe scientists to use the sub-national ranks assigned by local natural heritage programs to help determine and refine global conservation status ranks.

Status assessments are based on a combination of quantitative and qualitative information. Criteria for assigning ranks serve as guidelines, however, rather than arithmetic rules. The assessor's overall knowledge of the species or community allows them to weigh each factor in relation to the others, and to consider all pertinent information. The general factors considered in assessing species and ecological communities are similar, but the relative weight given to each factor differs.

For species, the following factors are considered in assessing conservation status:

- total number and condition of occurrences (e.g., populations)
- population size
- range extent and area of occupancy
- short- and long-term trends in the above factors
- scope, severity, and immediacy of threats
- number of protected and managed occurrences
- intrinsic vulnerability
- environmental specificity

For ecological communities, the association level generally is the classification unit assessed and. Only global conservation status ranks are currently available

for ecological communities on *NatureServe Explorer*. The primary factors for assessing community status are:

Species known in an area only from historical records are ranked as either H (possibly extirpated/possibly extinct) or X (presumed extirpated/presumed extinct). Other codes, rank variants, and qualifiers are also allowed in order to add information about the element or indicate uncertainty. See the lists of conservation status rank definitions for complete descriptions of ranks and qualifiers.

- total number of occurrences (e.g., forest stands); and,
- total acreage occupied by the community.

Secondary factors include the geographic range over which the community occurs, threats, and integrity of the occurrences. Because detailed information on these factors may not be available, especially for poorly understood or inventoried communities, preliminary assessments are often based on the following:

- geographic range over which the community occurs
- long-term trends across this range
- short-term trend (i.e., threats)
- degree of site/environmental specificity exhibited by the community; and,
- imperilment or rarity across the range as indicated by sub-national ranks assigned by local natural heritage programs.

Relationship to Other Status Designations

NatureServe conservation status ranks are a valuable complement to legal status designations assigned by government agencies such as the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in administering the U.S.

Endangered Species Act (ESA), and the Canadian Wildlife Service in administering the Species at Risk Act (SARA). NatureServe status ranks, and the documentation that support them, are often used by such agencies in making official determinations, particularly in the identification of candidates for legal protection. Because NatureServe assessment procedures-and subsequent lists of imperiled and vulnerable species-have different criteria, evidence requirements, purposes, and taxonomic coverage than official lists of endangered and threatened species, they do not necessarily coincide.

The IUCN Red List of threatened species is similar in concept to NatureServe's global conservation status assessments. Due to the independent development of these two systems, however, minor differences exist in their respective criteria and implementation. Recent studies indicate that when applied by experienced assessors using comparable information, the outputs from the two systems are generally concordant. NatureServe is an active participant in the IUCN Red List Programme, and in the region covered by *NatureServe Explorer*, NatureServe status ranks and their underlying documentation often form a basis for Red List threat assessments.

Global Conservation Status Definitions

Listed below are definitions for interpreting NatureServe global conservation status ranks (G-ranks). These ranks reflect an assessment of the condition of the species or ecological community across its entire range. Where indicated, definitions differ for species and ecological communities.

NatureServe Global Conservation Status Ranks

Basic Ranks

Rank	Definition
<p>GX</p>	<p>Presumed Extinct (species) — Not located despite intensive searches and virtually no likelihood of rediscovery.</p> <p>Eliminated (ecological communities)— Eliminated throughout its range, with no restoration potential due to extinction of dominant or characteristic species.</p>
<p>GH</p>	<p>Possibly Extinct (species) — Missing; known from only historical occurrences but still some hope of rediscovery.</p> <p>Presumed Eliminated — (Historic, ecological communities)- Presumed eliminated throughout its range, with no or virtually no likelihood that it will be rediscovered, but with the potential for restoration, for example, American Chestnut Forest.</p>
<p>G1</p>	<p>Critically Imperiled — At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.</p>
<p>G2</p>	<p>Imperiled — At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.</p>
<p>G3</p>	<p>Vulnerable — At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.</p>

Rank	Definition
G4	Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5	Secure — Common; widespread and abundant.

Variant Ranks

Rank	Definition
G#G#	Range Rank — A numeric range rank (e.g., G2G3) is used to indicate the range of uncertainty in the status of a species or community. A G2G3 rank would indicate that there is a roughly equal chance of G2 or G3 and other ranks are much less likely. Ranges cannot skip more than one rank (e.g., GU should be used rather than G1G4).
GU	Unrankable — Currently unrankable due to lack of information or due to substantially conflicting information about status or trends. Whenever possible, the most likely rank is assigned and a question mark qualifier may be added (e.g., G2?) to express minor uncertainty, or a range rank (e.g., G2G3) may be used to delineate the limits (range) of uncertainty.
GNR	Unranked — Global rank not yet assessed.
GNA	Not Applicable — A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

Rank Qualifiers

Rank	Definition
?	Inexact Numeric Rank — Denotes some uncertainty about the numeric rank (e.g. G3? - Believed most likely a G3, but some chance of either G2 or G4).
Q	Questionable taxonomy — Taxonomic distinctiveness of this entity at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or the inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority conservation priority.
C	Captive or Cultivated Only — At present extant only in captivity or cultivation, or as a reintroduced population not yet established.

Intraspecific Taxon Conservation Status Ranks

Intraspecific taxa refer to subspecies, varieties and other designations below the level of the species. Intraspecific taxon status ranks (T-ranks) apply to plants and animal species only; these T-ranks do not apply to ecological communities.

Rank	Definition
T#	Intraspecific Taxon (trinomial) — The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T-rank cannot imply the subspecies or variety is more abundant than the species as a whole—for example, a G1T2 cannot occur. A vertebrate animal population, such as those listed as distinct population segments under the U.S. Endangered Species Act, may be considered an intraspecific taxon and assigned a T-rank; in such cases a Q is used after the T-rank to denote the taxon's informal taxonomic status. At this time, the T rank is not used for ecological communities.

National and Sub-national Conservation Status Definitions

Listed below are definitions for interpreting NatureServe conservation status ranks at the national (N-rank) and sub-national (S-rank) levels. The term "sub-national" refers to state or province-level jurisdictions (e.g., California, Ontario).

Assigning national and sub-national conservation status ranks for species and ecological communities follows the same general principles as used in assigning global status ranks. A sub-national rank, however, cannot imply that the species

or community is more secure at the state/province level than it is nationally or globally (i.e., a rank of G1S3 cannot occur), and similarly, a national rank cannot exceed the global rank. Sub-national ranks are assigned and maintained by state or provincial natural heritage programs and conservation data centers.

National (N) and Sub-national (S) Conservation Status Ranks

Status	Definition
<p>NX</p> <p>SX</p>	<p>Presumed Extirpated — Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.</p>
<p>NH</p> <p>SH</p>	<p>Possibly Extirpated (Historical) — Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.</p>
<p>N1</p> <p>S1</p>	<p>Critically Imperiled — Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.</p>
<p>N2</p> <p>S2</p>	<p>Imperiled — Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.</p>

Status	Definition
N3 S3	Vulnerable — Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
N4 S4	Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors.
N5 S5	Secure — Common, widespread, and abundant in the nation or state/province.
NNR SNR	Unranked — Nation or state/province conservation status not yet assessed.
NU SU	Unrankable — Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
NNA SNA	Not Applicable — A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
N#N# S#S#	Range Rank — A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
Not Provided	Species is known to occur in this nation or state/province. Contact the relevant natural heritage program for assigned conservation status.

Breeding Status Qualifiers

Qualifier	Definition
B	Breeding – Conservation status refers to the breeding population of the species in the nation or state/province.
N	Nonbreeding – Conservation status refers to the non-breeding population of the species in the nation or state/province.
M	Migrant – Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province.

Note: A breeding status is only used for species that have distinct breeding and/or non-breeding populations in the nation or state/province. A breeding-status S-rank can be coupled with its complementary non-breeding-status S-rank if the species also winters in the nation or state/province, and/or a migrant-status S-rank if the species occurs regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. The two (or rarely, three) status ranks are separated by a comma (e.g., "S2B,S3N" or "SHN,S4B,S1M").

Other Qualifiers

Rank	Definition
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ESR, Inc.

Rank	Definition
?	Inexact or Uncertain — Denotes inexact or uncertain numeric rank. (The ? qualifies the character immediately preceding it in the S-rank.)

USFWS Key

(E) Endangered - Listed as being in danger of extinction.

(T) Threatened - Listed as likely to become endangered within the foreseeable future.

(P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.

(C) Candidate - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) Critical Habitat designated for this species



Carmelita Project EIR Technical Report Review

SUBJECT/RESOURCE AREA:	Biological Resources
REPORT PREPARED BY:	Benchmark Resources, July 2010
REVIEWED BY:	David Young URS Corporation
DATE OF REVIEW:	July 20-August 4 2010

Technical Report Summary:

The technical report, Carmelita Project Biological Resources Environmental Assessment Report (Report), dated July 2010, was authored by ESR, Inc. and prepared by Benchmark Resources. The Report addresses the presence of biological resources, analyzes affects associated with the project and recommends mitigation measures that would reduce or lessen impacts.

URS biologists performed a technical evaluation of the Report. The evaluation involved literature reviews, database searches and field survey of the Carmelita project area. Also, the California Department of Fish and Game (DFG) was consulted regarding potential updates to sensitive animal species in and adjacent to the project area, specifically on the northwest side. The reconnaissance survey, performed on July 29, 2010, included driving and walking the project site and perimeter roads. Habitat characteristics were compared with the report's descriptions. URS compared updated wildlife/botanical species list and surveys to the Report. Minor changes to species presence and mitigation measures are recommended. URS believes the Report does not provide sufficient information to assess the project's indirect impacts to the riparian forest community adjacent to the project.

Conclusions/Areas of Concern:

URS reviewed the Report and compared the findings to Appendix G CEQA Guidelines for Biological Resources. The review included literature reviews, coordination with California Department of Fish and Game (CDFG). A reconnaissance survey was performed on July 29, 2010, by URS biologist Heidi Dunbar and Mary McClanahan.

Areas of Concern:**Identification of special status species in project area**

1. The Reports' CNDDDB species list is dated May 2, 2009; information generated from this list expired on November 2, 2009. The species list is out of date.
2. The Report states that the State status for the California tiger salamander, *Ambystoma californiense*, (CTS) is a species proposed for listing by the Fish and Game Commission. The CTS was listed as a State Threatened species on May 20, 2010. This determination still needs to be finalized by the Office of Administrative Law.
3. During the site visit URS found 3 northern California black walnut trees, *Juglans hindsii* along the proposed Project's western boundary. This species was not identified in the Report. Three trees, one a large specimen approximately 30 ft tall, with a diameter at breast height (DBH) of 3.1 ft, and two smaller saplings were found east of the fence line and presumably within the Project property boundary. Northern California black walnuts are trees native to California and endemic to California. The species is a 1B.1 on the California Native Plant Society's 1B.1 list, Plants Rare, Threatened, or Endangered in California and Elsewhere (California Department of Fish and Game 2010). Plants categorized as 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code.
4. The Report identifies a mitigation measure to avoid Valley Elderberry Longhorn Beetle, *Desmocerus californicus dimorphus*, VELB. In particular, the Report recommends construction of a 100-foot buffer from the drip line of the elderberry plant, *Sambucus spp.*, on the northwest side of the project. Valley oak, *Quercus lobata*, trees were observed growing on the northwest property line and may have a dripline which extends further east. No buffer area for valley oak or the black walnut was stipulated in the Report.

5. Mitigation Measure BIO-4 Nesting Raptor Preconstruction Survey should include a Swainson's hawk CDFG approved protocol survey. CDF recommends this procedure in order to determine the status of listed species as part of the CEQA and 2081 Management Authorization process.

Identification of riparian habitat and sensitive natural communities

1. The northern California black walnut, in addition to the following plant species were identified along the western edge of the project site: Valley oak, *Quercus lobata*, California sycamore, *Platanus racemosa*, boxelder, *Acer negundo*, Fremont cottonwood, *Populus fremontii*, black willow, *Salix gooddingii*, arroyo willow, *S. lasiolepis*, elderberry *Sambucus* sp., California wild grape, *Vitus californica*, and wild rose, *Rosa* sp., and annual grasses, primarily ripgut brome, *Bromum diandrus*. These species are part of the Valley Oak woodland community, a rare Natural Plant Community. The Report does not identify the presence of this community.

Substantial adverse effects on riparian habitat

1. A riparian forest community is immediately adjacent to the western edge of the project's property line. In view of the project's potential impacts to groundwater and indirect impacts to riparian habitat, surveys for special status plants and natural plant communities including quantification of the riparian habitat were not conducted.

The Following Revisions are recommended to be incorporated into the Report and the Environmental Impact Report (EIR):

1. Update the status of CTS to a State Threatened species.
2. Modify the mitigation measure for the 100-foot elderberry buffer to include a barrier fence 100 feet from the dripline of Valley oak and black walnut. The barrier fence must be installed and maintained for the duration of project operation.
3. Additional information should be obtained to assist in the assessment of impacts to riparian forest riparian communities west of the project site. Specifically, the area of affect and plant species composition should be described.

URS will prepare an updated CNDDDB species list for the project.

Certification:


Signature

I, David Young, have reviewed the report referenced herein and find the report has been prepared in accordance with the standards and practices of the industry. Additional data may be requested following preparation of the Administrative Draft of the EIR. I further certify that I have no present or contemplated future interest in the project nor am I associated with the project applicant in any manner.