
**BIOLOGICAL ASSESSMENT OF PROPOSED
COMMONS AT ZACA CREEK PROJECT (APN 137-170-068),
610 McMURRAY ROAD, BUELLTON, SANTA BARBARA
COUNTY, CALIFORNIA**



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Biological Assessment of Proposed Commons at Zaca Creek Project (APN 137-170-068), 610 McMurray Road, Buellton, Santa Barbara County, California.

1.0 Introduction. This document describes biological resources (vegetation, plant and animal habitats, special-status species occurrence, etc.) on and around a 4.25-acre parcel located at the northwestern edge of the City of Buellton. This document also identifies potential project-related impacts and presents mitigation measures designed to avoid or minimize impacts to these resources. A previous report on this parcel mapped existing vegetation and identified potential biological constraints to developing the parcel (Hunt & Associates Biological Consulting Services, 2015).

2.0 Project Description. The project proposes to construct a 55,000 square foot (s.f.) retail center that includes a public market, restaurants, tasting rooms, and retail space for craft food vendors and artisan retailers. The footprint of the buildings encompasses approximately 39,500 s.f., with parking and landscaping covering the remainder of the 55,000 s.f. building envelope. Buildings will be placed outside the 50-foot top-of-bank (TOB) setback. Parking areas and driveways will extend to within 10 feet of the TOB of Zaca Creek. A 275-foot long reach of an unnamed tributary of Zaca Creek in the northeastern portion of the property will be culverted to provide additional parking spaces and driveways (Fig. 1). The project also proposes to construct a pedestrian bridge over Zaca Creek in the southwestern corner of the property. The footings of this bridge will be placed outside the TOB of the creek.

3.0 Location. The 4.25-acre subject property, APN 137-170-068, is located at 610 McMurray Road, approximately 0.5 air mi NNE of the intersection of State Highway 101 and State Highway 246 in the City of Buellton (Figs. 2 and 3). The eastern boundary of the property coincides with the city limits.

4.0 Methods. All portions of the subject property, including Zaca Creek, were walked by Lawrence E. Hunt (Hunt & Associates Biological Consulting Services) on 1 July 2015 to map vegetation and assess habitat quality for special-status plants and animals, including California tiger salamanders (*Ambystoma californiense*) (CTS) and California red-legged frogs (*Rana draytonii*) (CRLF), two listed species that occur in the project region. This survey was not timed seasonally to detect special-status annual plants, but these types known from the project region have a low potential for occurring on the project site because of the land use history of the property. Protocol-level surveys for CTS and CRLF were not conducted because suitable habitat is not present on-site or in the subject reach of Zaca Creek. Special-status species occurrence in the project region was evaluated on the basis of historic and current land use of the parcel and historic locality records of special-status plants and animals maintained by the U.S. Fish and Wildlife Service (2008; 2017) and the California Department of Fish and Wildlife (CDFG, 2016). These species are evaluated in Tables 1 and 2.

The site was visited again on 22 June 2016 by Lawrence E. Hunt and Kevin Merk (Kevin Merk Associates) to meet with CDFW staff to further assess site conditions for project-related impacts and to identify potential constraints on development. Merk conducted a wetland delineation of the subject reach of Zaca Creek and the unnamed tributary in the northeastern corner of the subject property in September 2016 to determine presence/absence of Federal and State jurisdictional areas (KMA, 2016). References used in preparing this document are listed in Section 13.0.

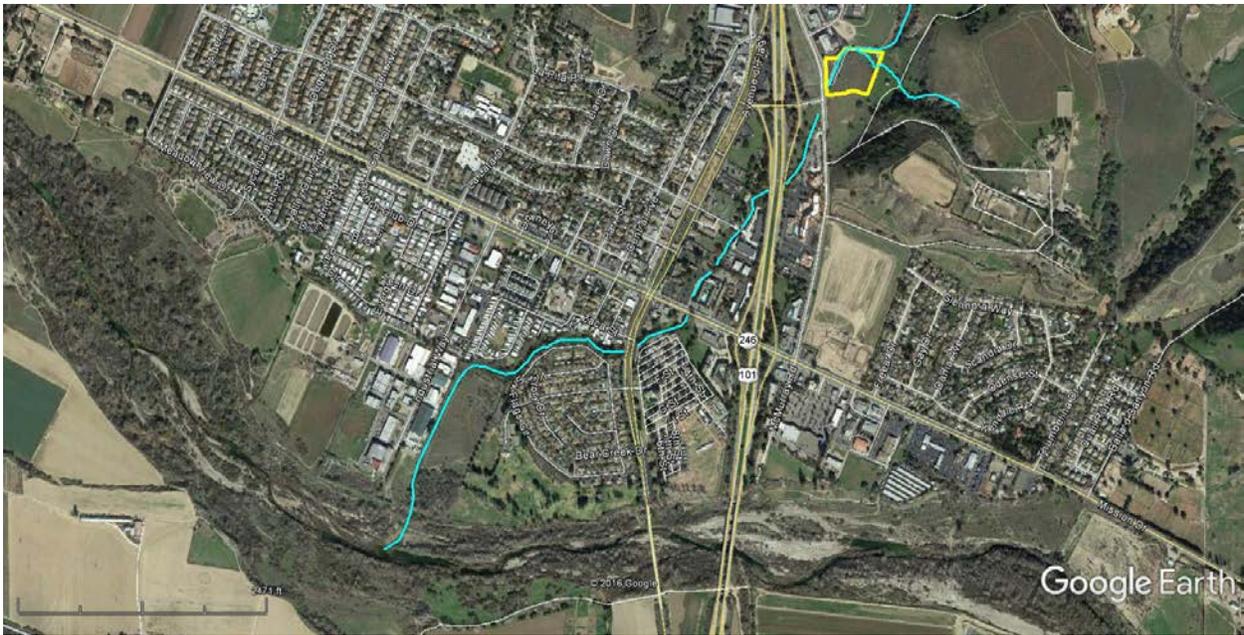


Figure 2. The location of subject property (yellow polygon) in City of Buellton area. The blue line demarcates the approximate centerline of Zaca Creek and an unnamed tributary across from the subject property to its confluence with the Santa Ynez River. Imagery taken 5 January 2015.



Figure 3. Close-up of subject property east of the intersection of McMurray Road x Damassa Street in Buellton. Approximate parcel boundary is shown by yellow lines and encompasses approximately 4.25 acres. Highway 101 is at left. Blue lines indicate approximate the centerlines of Zaca Creek and an unnamed tributary that crosses the northeastern portion of the subject property. Imagery taken 5 January 2015.

5.0 Existing Conditions.

5.1 Landforms and Land Use. The subject property is situated along the eastern edge of the Zaca Creek floodplain, about 1.2 air mi NNE (upstream) of the confluence of Zaca Creek and the Santa Ynez River. Portions of the project lie within the 100-year floodplain of Zaca Creek. Tablelands immediately east are drained by several incised ravines that form tributaries of Zaca Creek, one of which traverses the northeastern portion of the subject property (Figs. 2 and 3).

The parcel is bordered on the east by rangeland and active agriculture (row crops), on the north by commercial development and rangeland, on the south by commercial development, and on the west by McMurray Road and Highway 101. The subject property appears to have been regularly grazed and/or farmed in previous decades, but has been open space since at least 1994 (GoogleEarth imagery).

5.2 Soils. Shipman (1972) classifies soils throughout the subject property as Elder Sandy loam on 2-9% slopes (EdC2). These dark grey, sandy loams develop on floodplains in alluvium derived from acid shale and sandstone, which form the predominant parent materials in the surrounding watershed.

5.3 Drainages. An approximately 730-foot long reach of Zaca Creek abuts the subject property on the north. Approximately 380 feet of the drainage lies within the northwestern portion of the property (Fig. 3). The adjacent northern bank of this reach (across from the subject property) has been channelized or otherwise modified during commercial development of parcels north of the creek.

Zaca Creek enters a concrete box culvert in the southwestern corner of the property and is conveyed beneath the road to an open channelized reach that flows south-southwest between a parking lot and Highway 101, then enters a culvert beneath Highway 101, then flows through open surface channels and culverts beneath roadways (e.g., Highway 246) and across Zaca Creek Golf Course before contacting the Santa Ynez River approximately 1.2 air miles SSW of the subject property (Fig. 2).

The subject reach of Zaca Creek has a top-of-bank width of 15-25 feet and is 6-10 feet deep. The bed gradient is nearly flat and is composed of silt, sand, and fragments of Monterey Shale eroded from the heavily fractured bank exposures. A shallow, incised tributary drainage enters Zaca Creek from the east in the northeastern portion of the subject property (Fig. 3). Flows in this portion of Zaca Creek and the tributary drainage are highly seasonal and 'flashy'.

5.4 Vegetation Alliances (Plant Communities). In general, existing natural vegetation on the site has been significantly altered by decades of land use, primarily agricultural, activities. Existing vegetation is composed predominantly of non-native species and a few very large, remnant valley oaks. Because the site has been fallow for decades, native trees and shrubs are spreading from adjacent, less disturbed areas. Five vegetation alliances (Sawyer et al., 2008) occur on the subject property (Fig. 4):

- ***Baccharis pilularis* Shrubland Alliance.** This association occurs primarily in the upland bordering the south side of Zaca Creek (Fig. 3). Dominant shrubs include: coyote bush (*Baccharis pilularis*) and California sagebrush (*Artemisia californica*), coffeeberry (*Rhamnus californica*), and toyon (*Heteromeles arbutifolia*), with a variety of brome grasses and non-native forbs as understory plants.
- ***Baccharis salicifolia* Shrubland Alliance.** This plant community is closely associated with the channel bed and banks of Zaca Creek and the shallow tributary in the northern and northeastern portions of Parcel 1 (Fig. 4), where it interdigitates with *Salix laevigata* Woodland Alliance. This

is the Mulefat Scrub community of Holland (1986). Shrub species predominate and form a closed-canopy in most places along the creek: mule-fat (*Baccharis salicifolia*), coyote bush, coffeeberry, elderberry (*Sambucus mexicana*), creeping ryegrass (*Leymus triticoides*), and poison oak (*Toxicodendron diversiloba*).

- *Salix laevigata* Woodland Alliance. This community is closely associated with the bed of Zaca Creek where it is imbedded in Mulefat Scrub as discrete clumps of red willow (*Salix laevigata*) and arroyo willow (*Salix lasiolepis*) (Fig. 4). Other native riparian tree species are widely scattered as individual trees, including: coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), California black walnut (*Juglans californica*), and Fremont cottonwood (*Populus fremontii*). Creeping ryegrass (*Leymus triticoides*) occurs as an understory beneath some of the red willows here. **This alliance is the Southern Willow Scrub community of Holland (1986) and is considered a special-status plant community by the California Department of Fish and Wildlife (CDFG, 2002).**
- *Quercus lobata* Woodland Alliance with Bromus diandrus Semi-Natural Herbaceous Stand understory. Valley oaks (*Quercus lobata*) are scattered across the western portions of the subject property as remnants of oak savanna that probably occurred historically throughout the Zaca Creek floodplain. Valley oaks on-site range in size from seedlings to large, old trees over 72 inches dbh (diameter at breast height). The largest trees, ranging from 32-72 inches dbh are found in the northern portions of the subject property (Fig. 4). Trees in excess of 8 inches dbh are protected by City of Buellton statutes (Rincon Consultants, 2015).
- *Bromus diandrus* Semi-Natural Herbaceous Stand. This is the most extensive plant association on the subject property (Fig. 4). Dominants include ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), wild oats (*Avena* sp.), yellow star-thistle (*Centaurea solstitialis*), redstem filaree (*Erodium cicutarium*), telegraph weed (*Heterotheca grandiflora*), black mustard (*Brassica nigra*), horehound (*Marrubium vulgare*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Salsola* sp.), Italian thistle (*Carduus pycnocephalus*), and other invasive, non-native forbs. Native forbs and shrubs found in this alliance include narrow-leaved milkweed (*Asclepias fascicularis*) and California sagebrush (*Artemisia californica*). Non-native annual grassland covers most of the subject property, and also is a common understory in oak savanna and other plant communities on-site, indicating previous overgrazing or other frequent disturbance (farming).

Ornamental trees occur as landscaping around what appears to be a former ranch house or outbuildings on the parcel south of the subject property. These include Canary Island palm (*Phoenix canariensis*), black locust (*Robinia pseudoacacia*), Chinese elm (*Ulmus parvifolia*), Brazilian pepper (*Schinus molle*), rose (*Rosa* sp.), and periwinkle (*Vinca* sp.).

6.0 Special-Status Plant Communities. All of the plant communities found on-site show varying levels of anthropogenic disturbance. The few large valley oaks found here are remnants of valley oak savannah that formerly covered portions of the floodplain of Zaca Creek and which, if intact, would be considered special status by the California Department of Fish and Wildlife, CDFG, 2002). This oak savannah has been transformed into non-native annual grassland through decades of tree loss with little or no recruitment from remnant trees. Coast live oaks (*Quercus agrifolia*) and valley oaks (*Quercus lobata*) greater than 8 inches dbh are protected by City of Buellton statutes (Rincon Consultants, Inc., 2015).

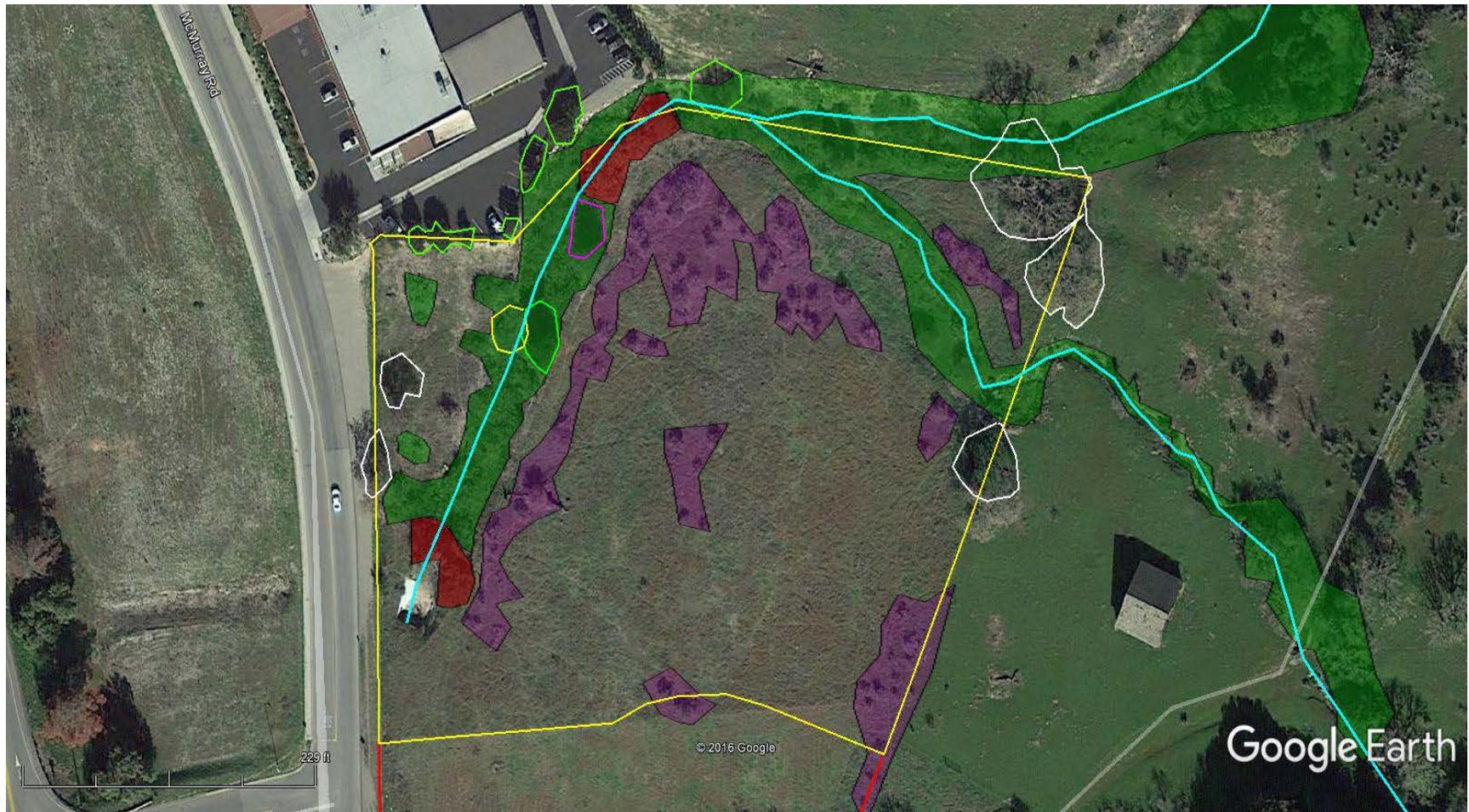


Figure 4. Vegetation on subject property: green = *Baccharis salicifolia* Shrubland Alliance; red = *Salix laevigata* Woodland Alliance; purple = *Baccharis pilularis* Shrubland Alliance; uncolored portions = former *Quercus lobata* Woodland Alliance with *Bromus diandrus* Semi-Natural Herbaceous Alliance understory. The canopies of native trees on-site are outlined: (green = coast live oak; white = valley oak; violet = coffeeberry; yellow = Fremont cottonwood. Approximate centerline of Zaca Creek and unnamed tributary shown in light blue line; approximate property boundary is shown in yellow. Imagery dated 5 January 2015.

Patches of *Salix laevigata* Woodland Alliance (aka Southern Willow Scrub of Holland, 1986) associated with Zaca Creek and its tributary in the northern and northeastern portions of the subject parcel (Fig. 4) are classified by the State as a special-status plant community (CDFG, 2002; Sawyer et al., 2008).

7.0 Special-Status Plant Species. No special-status plants were found on-site during the reconnaissance-level surveys conducted for this document, but the surveys were not conducted at a time of year that would detect native annuals. Focused surveys, conducted in late winter and mid- to late spring, are necessary to detect annual species. However, given the land use history of long-term disturbance of the site, it is unlikely that any special-status annuals occur on the portions of the parcel proposed for development. Table 1 lists five special-status plants that are known from the project region. Two of these species have a moderate potential of occurring on the subject property in scrub habitats associated with Zaca Creek and/or its tributary in the northeastern portions of the property. None of these species were found on-site.

Table 1. Special-Status Plants Known From the Project Region with Potential to Occur on the Subject Property¹.

Scientific Name	Common Name	Regulatory Status	Nearest Locality Record	Observation Date	Comments and Potential for Occurrence in Project Area
<i>Agrostis hooveri</i>	Hoover's bent grass	List 1B.2	Ballard Cyn, 1.2 mi E Hwy 101 W Fork Ballard Cyn	2004 n.d.	Chaparral and valley grassland on sandy soils; similar soils found on-site in association with Zaca Creek and tributary on subject property; moderate potential.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	Mile's milk-vetch	List 1B.2	Foxen Canyon 2.5 mi W Buellton	n.d. 1935	Found in coastal scrub on clay soils; similar soils found on-site; low potential in Zaca Creek on subject property; low potential.
<i>California [Erodium] macrophylla</i>	Round-leaved filaree	List 1B.2	2.3 air mi W of summit of Figueroa Mtn, Sedgwick Preserve	2008	Cismontane woodland and valley grassland on clay soils; soils on site include clay loams and sandy loams; low potential.
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	List 1B.2	Alamo Pintado Creek, 7 mi N Los Olivos	1961	Chaparral and coastal sage scrub; moderate to high potential in Zaca Creek; perennial species not observed on parcel during surveys; moderate potential.
<i>Quercus palmeri</i>	Palmer's oak	Locally Rare	Bobcat Springs area; Purisima Hills east of Mission La Purisima (Smith, 1998)	1980-1990s	Found on sandy soils. Low potential to occur in Zaca Creek on subject property; low potential.

Key:

List 1B.2 = plants considered rare, threatened, or 'fairly' endangered in California and elsewhere by CNPS.

List 2 = plants rare, threatened, or endangered in California but more common elsewhere by CNPS.

¹Sources: CDFG (2016) for Foxen Canyon, Los Alamos, Los Olivos, Solvang, Santa Rosa Hills, Santa Ynez, Sisquoc, Zaca Creek, Zaca Lake quadrangles; CNPS website: www.rareplants.cnps.org; and www.calflora.org.

8.0 Special-Status Wildlife. No special-status wildlife species were observed on the subject property during the site visit for this report. Table 2 lists 22 species of special-status amphibians, reptiles, birds, and mammals that are known from the project region and could potentially occur as seasonal transients or residents on-site because of the presence of suitable habitat and proximity to or physical connections with special habitats such as the Santa Ynez River via Zaca Creek or adjacent other larger open space parcels along the southwestern edge of the Purisima Hills. Four listed species, California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*), are known to occur within a five-mile radius of the subject property (Table 2).

Table 2. Special-Status Wildlife Known From Project Region With Potential to Occur in Project Area¹.

Scientific Name	Common Name	Regulatory Status	Nearest Locality Record	Observation Date	Comments and Potential for Occurrence in Project Area
AMPHIBIANS (2 species)					
<i>Ambystoma californiense</i>	California tiger salamander	FE/SE	0.16 mi WNW jct Domingo's Rd x Hwy 246, 5 mi W of Buellton Along Hwy 246 in Santa Rita Valley Hwy 246 x Campbell Rd, 8 mi NW Buellton	2008 2008 1982-2008	Known CTS breeding sites are at least 5 miles west of the subject property. A known CTS breeding site, SARO-1, occurs about 4 air mi W of the subject property, and a potential CTS breeding site, ZACR-10, occurs approximately 3 air mi NW of the property. There are agricultural ponds on open space parcels W of Highway 101, but the highway is expected to present a complete barrier to dispersal. The subject property is at the edge of the mapped geographic distribution of CTS. No potential for occurring on-site.
<i>Rana draytonii</i>	California red-legged frog	FT/SSC	AOR Hwy 246, 0.9 mi NW jct Drum Cyn Rd x Hwy 246, 6.8 mi NW Buellton Hwy 246 x Campbell Rd, 8 mi NW Buellton Nojoqui Crk, 2.2 mi S Buellton S side Santa Ynez River, 1.3 air mi SE jct SYR x Hwy 101 Zaca Creek at mouth Canada Botella (Jonata Park Rd)	1982 2008 2007 2007 2000	There is no breeding habitat for CRLF present on the subject property. Zaca Creek at this locality is highly seasonal. The nearest breeding habitat is found in the Santa Ynez River, about 1.2 creek miles S of the subject property and two air miles upstream of the property, in perennial reaches of Zaca Creek. CRLF could use the drainage as a dispersal corridor, but CRLF are not expected to occur on-site.

			Zaca Crk at jct Hwy 101 x Hwy 154	2000 (Hunt, pers. observ.)	
REPTILES (2 species)					
<i>Thamnophis hammondi</i>	Two-striped garter snake	None/SSC	Santa Ynez River at confluence Alisal Creek	2007 (Hunt, pers. observ.)	Probably associated with wetted reaches of Zaca Creek; frequently inhabits dry upland habitats in floodplain environments. Moderate potential.
<i>Salvadora hexalepis virgulata</i>	Coast patch-nosed snake	None/SSC	Regional occurrences	various	Scrub in Zaca Creek and grassland habitat elsewhere on-site provides suitable habitat. Low to moderate potential.
BIRDS (20 species)					
<i>Accipiter cooperi</i>	Cooper's hawk	None/WL	On-site	various	Oaks on-site and woodland on adjacent properties provides suitable nesting and foraging habitat for this resident species. High potential as transient or nesting species.
<i>Accipiter striatus</i>	Sharp-shinned hawk	None/WL	Regional occurrences	various	Oaks on-site and woodland on adjacent provides suitable nesting and foraging habitat for this fall and winter transient species. High potential as transient.
<i>Ammodramus savannarum</i>	Grasshopper sparrow	None/SSC	Regional occurrences	various	May nest and/or forage in grassland and scrub on-site. Moderate potential.
<i>Athene cunicularia</i>	Burrowing owl	BBC/SSC	Regional occurrences	various	May use weedy grassland on-site as foraging habitat during fall and winter; no known local nesting or overwintering records.
<i>Baeolophus inornatus</i>	Oak titmouse	BBC	Regional occurrences	various	Expected to occur in riparian scrub along Zaca Creek in project site and in oaks on-site
<i>Buteo regalis</i>	Ferruginous hawk	None/WL	Along Hwy 101, N side of Buellton	1992	Grassland and open scrub provides suitable foraging habitat for this winter visitor. High potential as transient.
<i>Buteo swainsoni</i>	Swainson's hawk	None/ST	Regional occurrences	various	Grassland and open scrub provides suitable foraging habitat for this winter visitor. Moderate potential as transient.
<i>Circus cyaneus</i>	Northern harrier	None/SSC	Regional occurrences	various	Grassland, open scrub, and agricultural fields provide suitable foraging habitat for this winter transient. High potential as transient.
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	BBC	Regional occurrences	various	May forage in grassland and riparian scrub on-site
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE/SE	Santa Ynez River west of Highway	2002	Known to breed along Santa Ynez River, W of Hwy 101, approx. 1.5 air mi SSW of project area. Project

			101, incl confluence Zaca Creek		reach of Zaca Creek contains limited amount of willow thickets and mule-fat scrub favored by this species for nesting and foraging. Low potential.
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	FE/SE	Santa Ynez River west of Highway 101, incl confluence Zaca Creek	2002	Known to breed along Santa Ynez River, W of Hwy 101, approx. 1.5 air mi SSW of project area. Project reach of Zaca Creek does not contain cottonwood-willow riparian woodland used by this species as nesting/foraging habitat. Low potential.
<i>Dendroica petechia brewsteri</i>	Yellow warbler	None/SSC	Regional occurrences	various	Willow thickets along Zaca Creek on the subject property provide suitable foraging habitat for this species. Moderate potential as transient.
<i>Elanus leucurus</i>	White-tailed kite	None/FP	Regional occurrences	various	Oak woodland, oak savanna, and remnant live and valley oaks on-site provide suitable roosting and foraging habitat for this species. Moderate potential as transient.
<i>Eremophila alpestris actia</i>	California horned lark	None/WL	Regional occurrences	various	Grassland on-site provides suitable foraging habitat for this resident. High potential as transient.
<i>Lanius ludovicianus</i>	Loggerhead shrike	None/SSC	W of Hwy 101 in vicinity of Parcel 1	2013 (Hunt, pers. observ.)	Observed in scrub habitats on parcels W of Highway 101 across from subject property in 2013; may forage and possibly nest in Zaca Creek on-site. Moderate to high potential.
<i>Melanerpes lewis</i>	Lewis' woodpecker	BBC	Regional occurrence	various	Frequents oak savanna habitats; may include valley oaks and coast live oaks in foraging area; low potential to nest in on-site oaks.
<i>Passerella iliaca</i>	Fox sparrow	BBC	Multiple records in region	various	Coastal sage scrub and riparian scrub along Zaca Creek may provide nesting and foraging habitat; may forage in grassland on-site.
<i>Pica nuttallii</i>	Yellow-billed magpie	BBC	Multiple records in region	various	Likely to occur on-site in oaks and weedy grassland.
<i>Picoides nuttallii</i>	Nuttall's woodpecker	BBC	Multiple records in region	various	Observed on adjacent parcels during surveys for this document; likely forages and may nest in oaks on-site.
<i>Selasphorus sasin</i>	Allen's hummingbird	BCC	Multiple records in region	various	Coastal sage scrub and riparian scrub along Zaca Creek may provide nesting and foraging habitat; may nest in oaks on-site.
MAMMALS (6 species)					
<i>Antrozous pallidus</i>	Pallid bat	None/SSC	Zaca Creek at Jonata Park Rd bridge, near mouth of Canada Botella	2001	Grassland and open scrub habitat provides suitable foraging habitat; roosting habitat on-site is limited. Old barn and Canary Island palms

					on parcel south and east of subject property may provide suitable roosting habitat. Ground around all trees on-site and on adjacent parcel to south were checked for guano deposits, indicating repeated use as roost—no evidence found. Barn on parcel E of subject property may provide roosting habitat. Moderate potential.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Communal roosts on Santa Ynez River Zaca Creek at Jonata Park Rd bridge, near mouth of Canada Botella	1985-2000 2001	Grassland and open scrub habitat provides suitable foraging habitat; there is no roosting habitat for this species on-site, but abandoned barn on parcel east of subject property furnishes roost sites. Low to moderate potential.
<i>Myotis yumanensis</i>	Yuma myotis	None/SSC	Santa Ynez River riparian corridor at Hwy 101	2013 (Hunt, pers. observ.)	Species is common in project region and may use Zaca Creek and vicinity as foraging habitat; no suitable roosting habitat on-site; abandoned barn on parcel E of subject property may provide roosting habitat. Moderate to High potential.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC	W of Hwy 101 in vicinity of Parcel 1	2013 (Hunt, pers. observ.)	Observed in grassland W of Hwy 101 across from subject property in 2013; may forage on subject property but not resident on-site. Moderate to high potential.
<i>Puma concolor</i>	Mountain lion	None/FPF	Lion sightings are routine around the Buellton area	2012-2013	One or more individuals may include subject property in home range as foraging habitat. Moderate to high potential.
<i>Taxidea taxus</i>	American badger	None/SSC	Several DOR sightings along Hwy 101, N of Buellton in vicinity of subject property DOR Hwy 101, approx. 1 mi S jct Santa Rosa Rd	1985-2000 (Hunt, pers. observ.) 2013 (Hunt, pers. observ.)	Suitable foraging habitat in grassland and open scrub habitat on subject property; may include site as foraging habitat as part of larger home range in region. Moderate to high potential.

Key:

FE = listed as Endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (ESA)

FT = listed as Threatened by the USFWS under the ESA

SE = listed as Endangered in the State of California by CDFW under the California Endangered Species Act (CESA)

ST = listed as Threatened in the State of California by CDFW under CESA

FP = Fully Protected species in California (CDFW)

FPF = Fully Protected Furbearer in California (CDFW)

BCC = Birds of Conservation Concern (USFWS, 2008, 2017) at IPaC website: <https://ecos.fws.gov/ipac/>

SSC = California Species of Special Concern (CDFW)

WL = 'watch list' species in California (CDFW).

¹ Sources for wildlife records: CNDDDB (2016) for the Foxen Canyon, Los Alamos, Los Olivos, Solvang, Santa Rosa Hills, Santa Ynez, Sisquoc, Zaca Creek, Zaca Lake quadrangles; relevant environmental documents for region; L.E. Hunt field notes (2000-2016); IPaC website (USFWS, 2017).

8.1 California Tiger Salamander Habitat Evaluation. The subject property was evaluated for the presence/absence, extent, and quality of aquatic and upland habitat for California tiger salamander (CTS) because the site lies within the geographic range of CTS in Santa Barbara County (USFWS, 2013). CTS populations require ponds for breeding, egg deposition, and larval development as well as upland habitat around the breeding site for juvenile and adult salamanders. Pondered aquatic features must have a minimum hydroperiod of about 70 days to allow CTS larvae to successfully metamorphose. Juvenile and adult CTS spend most of their lives underground in burrows excavated and maintained by burrowing rodents, such as pocket gophers (*Thomomys bottae*), California ground squirrels (*Spermophilus beecheyi*), kangaroo rats (genus *Dipodomys*), and/or pocket mice (genus *Perognathus*). Most or all of these rodent species occur in or east/northeast of the subject property. Hundreds to several thousands of feet may separate upland CTS refugia sites from breeding ponds, i.e., viable CTS populations are scattered over hundreds of acres around breeding sites.

In evaluating whether or not a property potentially supports CTS, the U.S. Fish and Wildlife Service and California Department of Fish and Game have developed a joint protocol (USFWS, 2009) based on four questions. Applied to the subject property, these questions (and their answers) are:

- *Is the project area within the geographic range of CTS?* The subject property lies about one air mile south of the southeastern edge of the geographic range of CTS. Note: the geographic range limits of CTS in Santa Barbara County as depicted on USFWS maps is an approximation, based on the most current field information available, not a firm dividing line of presence versus absence. (Fig. 5).
- *Is there suitable breeding on the subject property?* No, the subject reaches of Zaca Creek and its tributary on the subject property are highly seasonal and do not contain suitable aquatic habitat for CTS.
- *Is there suitable upland habitat on the subject property?* Yes, the subject parcel contains annual grassland and scrub habitats that support burrowing rodent populations that create and maintain burrows used by CTS as underground refugia. However, aquatic breeding sites and upland habitat must be physically linked to be occupied by CTS. Upland habitat present on the subject property is not physically connected to any aquatic features. The nearest potential CTS breeding site (ZACR-10) is over 2.5 air miles northwest of the subject property and is separated by Highway 101, a presumed complete barrier to CTS dispersal (Fig. 5).
- *Are there known CTS breeding sites within a 1.5-mile radius of the subject property and is it possible for CTS leaving these breeding sites to access the subject property?* No, the nearest known CTS breeding site is a pond (SARO-1), which is located north of Highway 246, approximately 4 air miles west of the subject property (Fig. 5). Moreover, Highway 101 is a presumed complete barrier to CTS dispersing eastward from these sites.

Conclusion: The subject property has ***no potential*** to support CTS because the site does not contain suitable breeding habitat, lies at the eastern edge of the known geographic range of CTS, and is physically separated from known or potential breeding and upland habitat located several miles west of the subject property by barriers to dispersal, such as Highway 101.

8.2 California Red-legged Frog (CRLF) Habitat Evaluation. California red-legged frogs (CRLF) share some habitat and life history requirements with CTS and frequently breed in the same pondered aquatic habitats used by CTS. However, unlike CTS, CRLF breed in both pondered and slowly flowing water and these sites

must have a hydroperiod in excess of 4 months because of the prolonged larval development period of CRLF. Like CTS, juvenile and adult CRLF aestivate (over-summer) in burrows that are created and maintained by burrowing rodents in upland habitats around breeding sites. Juvenile and adult CRLF are capable of long-distance dispersal up to several miles.

In evaluating whether or not a property provides habitat for CRLF, the U.S. Fish and Wildlife Service and California Department of Fish and Game use the same protocol developed for CTS (USFWS, 2009):

- *Is the project area within the geographic range of CRLF?* Yes, the project area lies in the center of an extensive geographic region occupied by CRLF.
- *Is there suitable breeding habitat for CRLF on the subject property?* No, there is no ponded habitat on the subject property. Zaca Creek and its tributary on-site does not provide suitable breeding habitat (creek flows are 'flashy' and hydroperiod is too brief to allow larval development).
- *Is there suitable upland habitat for CRLF on the subject property?* Yes, the subject property and open space to the east and northeast support annual grassland, oak woodland, and open scrub habitat that is suitable foraging habitat for CRLF (Fig. 4). These habitats also support Botta's pocket gophers and California ground squirrels, and other burrowing rodents that create and maintain burrows used by CRLF as over-summering refugia.
- *Are there known CRLF breeding sites within a 3-mile radius of the subject property and can the subject property be reached by CRLF dispersing from these breeding sites?* Yes, CRLF adults and larvae have been found at two locations in Zaca Creek, about 1.5 air miles and 3-4 air miles north of the subject property and at the confluence of Zaca Creek and the Santa Ynez River, about 1.5 air miles SSW of the subject property (Table 2; Fig. 4). These sites are within the dispersal ability of CRLF, but the only continuous physical connection is Zaca Creek itself, which has been channelized along several intervening reaches. Dispersal from these sites to the subject property through upland habitats, a typical dispersal behavior for CRLF, is unlikely because of numerous barriers to dispersal, such as heavily-used surface roads and Highway 101.

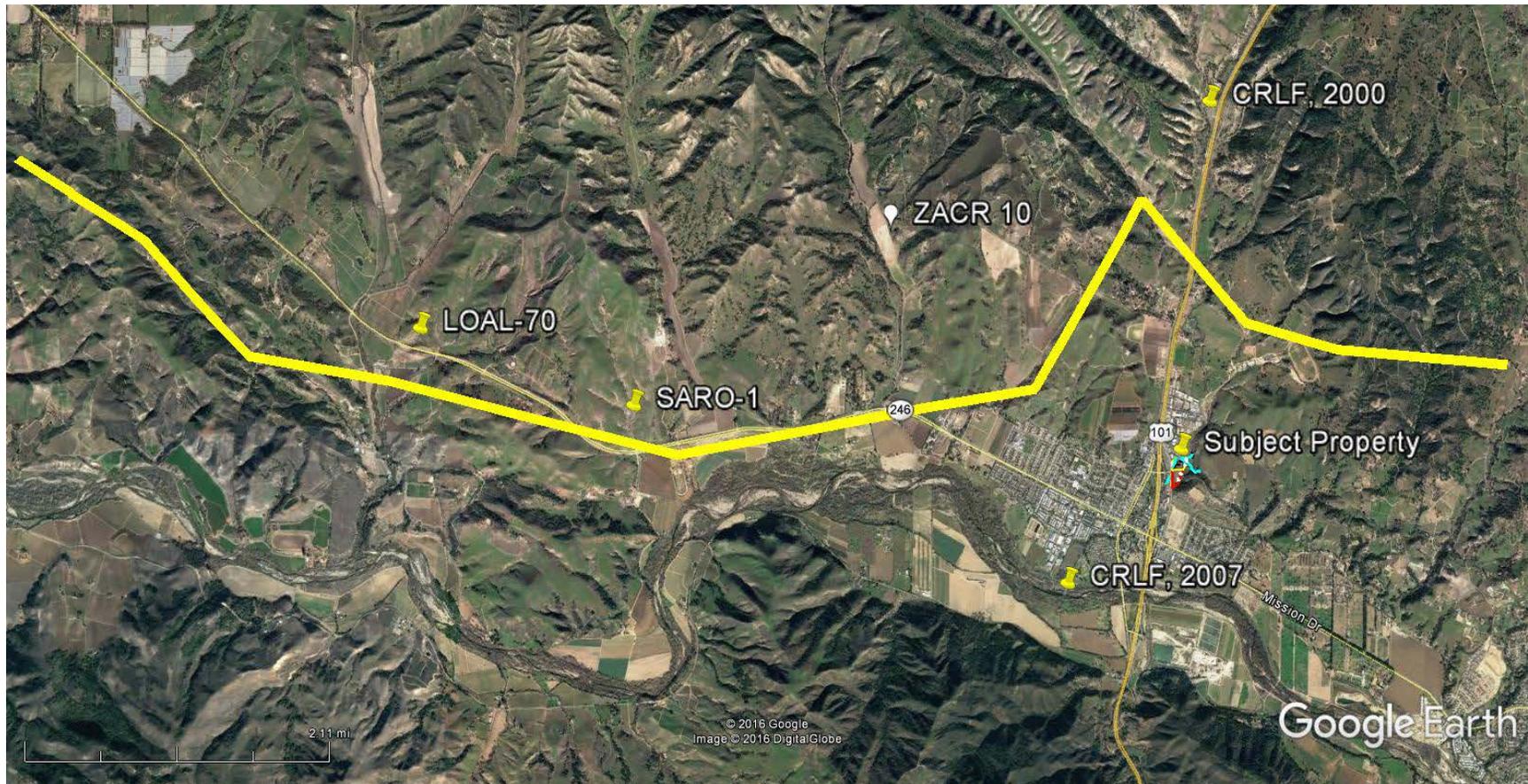


Figure 5. Potential CTS breeding sites within a five-mile radius of subject property (ZACR-10, SARO-1, and LOAL-70) and CRLF observations within a three-mile radius of the subject property (Zaca Creek, 2000 and 2007). The broad yellow line marks the presumed southern geographic range limit of CTS in Santa Barbara County (USFWS, 2013). The subject property lies about one air mile south of this line, but range limits for CTS are approximate and based on the latest available field information to date.

Conclusion: Zaca Creek on the subject property does not contain suitable breeding habitat for CRLF and there is no other potential breeding habitat on-site. CRLF make extensive use of upland habitats for dispersal, foraging, and over-summering (in rodent burrows). Historically, when Zaca Creek was perennially wet, CRLF may have permanently occupied much of the drainage. However, decades-long groundwater pumping and upland development have isolated these wetted reaches, transformed lower Zaca Creek into a highly seasonal drainage, and significantly fragmented open space in adjacent uplands. There are known CRLF breeding sites in Zaca Creek several miles upstream and downstream of the subject property (Fig. 5), but dispersal from these sites to the subject property is unlikely because of barriers to dispersal, such as culverted reaches, extensive dry reaches, and Highway 101. Consequently, the subject property has a **low potential** to support CRLF.

8.3 Other Listed Species. Least Bell’s vireos (*Vireo bellii pusillus*) and southwestern willow flycatchers (*Empidonax traillii extimus*), both Federally and State-listed species, are known to breed in mule-fat woodland, willow woodland, and cottonwood-willow riparian woodland along the Santa Ynez River, west of Highway 101, including the lower reach of Zaca Creek near its confluence with the Santa Ynez River. These localities are approximately 1.5 air mi SSW of the subject property. Although patches of mule-fat woodland and willow woodland occur along the project area reach of Zaca Creek, these patches do not appear to be extensive enough to support breeding. It is possible that one or both species may occasionally forage along this reach of Zaca Creek from breeding sites in the Santa Ynez River or during migration, but their occurrence here would be transitory, at best.

9.0 Wetland Delineation. A wetland delineation conducted by KMA (2016) for this project identified potential Federal and State jurisdictional boundaries on the subject property and concluded that jurisdictional areas meeting the USACE definition of “non-wetland other waters” occur within the observable Ordinary High Water Mark (OHWM) in the subject reaches of Zaca Creek and its unnamed tributary (Fig. 6). The delineation did not identify any wetland habitat or potential “Waters of the U.S.” on-site. CDFW and RWQCB jurisdictional areas are present and include the areas covered by USACE jurisdiction as well as the areas encompassed within the top-of-bank area, or edge of riparian canopy vegetation, whichever is greater. The results of this delineation are listed in Tables 3 and 4 (KMA, 2016).

Conclusions: The wetland delineation determined that permit authorization for this project is required under Sections 404 and 401 of the Clean Water Act (as administered by the U.S. Army Corps of Engineers), and under Section 1602 of the California Department of Fish and Game Code (as administered by the CA Department of Fish and Wildlife) for impacts to jurisdictional areas identified and mapped on Figure 6.

Table 3. Summary of Jurisdictional Waters of the U.S. (KMA, 2016).

Waters of the U.S.	Total Area (sq. ft./acres)	Total Linear Feet
Other Waters		
Zaca Creek – Riverine Intermittent Streambed within OHWM	3,170/0.07	317
Unnamed Tributary – Riverine Intermittent Streambed within OHWM	1,375/0.03	275
Total CDFW/RWQCB Jurisdictional Area	4,545/0.10	592

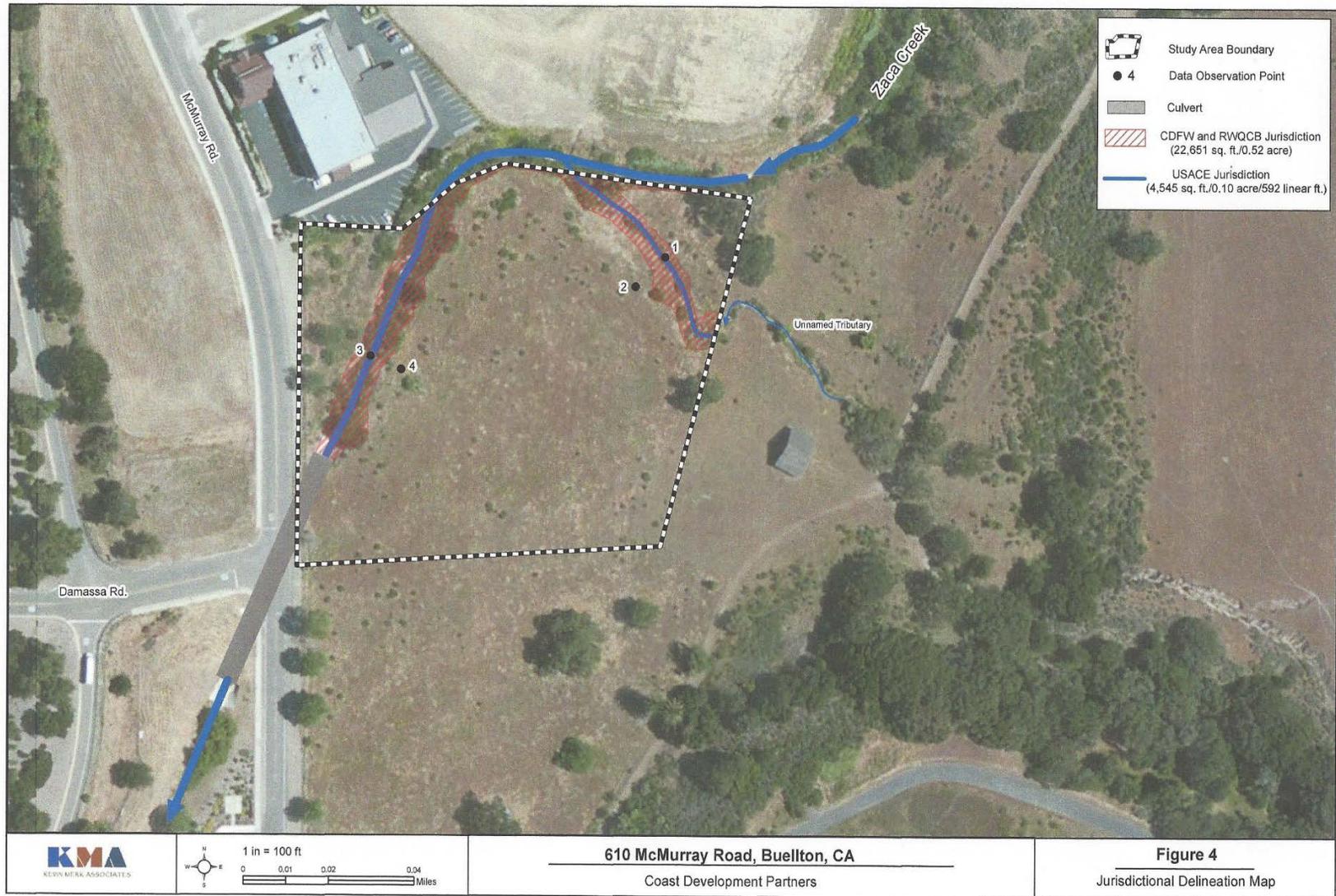


Figure 6. Results of Wetland Delineation (KMA, 2016).

Table 4. Summary of CDFW and RWQCB Jurisdictional Areas (KMA, 2016).

Jurisdictional Area*	Total Area (sq. ft./acres)	Total Linear Feet
Other Waters		
Zaca Creek	13,939/0.32	317
Unnamed Tributary	8,712/0.20	275
Total CDFW/RWQCB Jurisdictional Area	22,651/0.52	592

* Channel width at top of bank or extent of associated riparian vegetation.

10.0 Regulatory Setting. The following sections summarize the regulatory environment under which this project would be permitted. Regulatory authority over biological resources is shared by Federal, State, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, as contained in the General Plan Land Use Element Update for the City of Buellton (City of Buellton, 2015).

10.1 California Department of Fish and Wildlife. The CDFW is a trustee agency for biological resources throughout the State under CEQA and also has direct jurisdiction under the California Fish and Game Code (CFGF). Under the State and Federal Endangered Species Acts, the CFGF and the USFWS also have direct regulatory authority over species formally listed as Threatened or Endangered. Section 3503 of the CFGF prohibits the take, possession, or needless destruction of birds, their nests, or eggs. Additionally, Section 3503.5 of the CFGF protects birds of prey, their nests and eggs against take, possession, or destruction. Potential nesting and roosting sites for birds-of-prey and other migratory birds are also protected by the Migratory Bird Treaty Act (MBTA). Abiding by the CFGF code and the MBTA usually means avoiding removal of trees or other vegetation that contain active nests or disturbance of the nests until such time as the adults and young are no longer reliant on the nest site. The provision also includes any disturbance that causes a nest to fail and/or a loss of reproductive effort.

The proposed project will disturb areas within the top-of-bank area of Zaca Creek and a tributary drainage and is subject to the permitting authority of the CDFW for a Streambed Alteration Agreement and other proscriptions to avoid impacts to nesting birds.

10.2 USFWS Permitting Process. Pursuant to the Federal Endangered Species Act (FESA), a permit from USFWS is required for 'take' of a Federally-listed species through either the FESA Section 7 or Section 10 process. The subject property does not support California tiger salamanders (*Ambystoma californiense*) or California red-legged frogs (*Rana draytonii*), two federally-listed species known from the project region, so USFWS permitting from a 'take' perspective does not apply to this project. Two federally-listed birds known to nest in the region, least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*), and have a low potential to occur as a transient in mule-fat and willow woodland in the subject reach of Zaca Creek (Table 2).

10.3 Clean Water Act. Wetlands are protected on a Federal, State, and local level. Wetland and riparian communities may be subject to Corps jurisdiction as 'Waters of the U.S.', pursuant to Section 404 of the Federal Clean Water Act (CWA). Protection for wetlands and riparian habitat is also afforded through the California Fish and Game Code and the State Clean Water Act (Porter-Cologne Act), the latter administered by the RWQCB. The City of Buellton has specific protections for wetland and riparian

habitats (Rincon Consultants, 2015). Any activity that would remove or otherwise alter wetland and riparian habitat types is closely scrutinized by these regulatory agencies through the CEQA review process by the City and later through the CDFW and Corps permitting processes.

The proposed project will disturb ‘Waters of the U.S.’ (KMA, 2016), and is subject to the permitting jurisdiction of the USACE for a Section 404 permit and the RWQCB for a Section 401 permit.

11.0 Impact Evaluation and Mitigation Recommendations.

11.1 Methodology, Significance Thresholds, and Formulation of Mitigation Measures. Analysis of potential project-related impacts to biological resources by the proposed project is based on two field site visits, review of aerial photographs, review of California Natural Diversity Data Base (CNDDDB) records for special-status species, and review of other biological studies conducted in the area (e.g., Hunt & Associates Biological Consulting Services, 2014a,b, 2015), City of Buellton General Plan (Rincon Consultants, Inc., 2015), the wetland delineation performed for this project (KMA, 2016), and other references listed in Section 13.0).

The following analysis determines the potential effects of the proposed project on biological resources on and adjacent to the subject property. The California Environmental Quality Act (CEQA), Chapter 1, Section 21001 (c) states that it is the policy of the state of California to: “Prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Impacts to biological resources may be assessed using impact significance criteria encompassing CEQA statement (Section 21083) and guidelines (Section 15065, Appendix G), and Federal, State and local plans, regulations, and ordinances. The State CEQA Guidelines define the term “significant effect on the environment” as “...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.”

Impacts are classified as significant or less than significant, depending on the size, type, and timing of the impact and the biological resources involved. Disturbance to habitats and/or species are considered significant if they affect the resources in the following ways:

- Substantially reduces or eliminates species diversity or abundance;
- Substantially reduces or eliminates quantity or quality of bird nesting areas;
- Substantially limits reproductive capacity through loss of individuals or habitat;
- Substantially fragments, eliminates, or otherwise disrupts foraging areas and/or access to food sources;
- Substantially limits or fragments the geographic range or dispersal routes of species, or;
- Substantially interferes with natural processes, such as fire or flooding, upon which the habitat depends.

Mitigation measures are actions designed to alleviate or avoid the adverse environmental effects of proposed plans and projects. If there is a potential for significant impacts, efforts should be made to identify and incorporate mitigation measures, either into the project design prior to completion of the Initial Study, or staff in consultation with the applicant shall incorporate appropriate mitigation measures into the project approval. If identified potentially-significant impacts can be mitigated to a less than significant level, a Mitigated Negative Declaration can be used. Impacts must be reduced to a less than

significant level or an EIR is required. Mitigation measures, as established in CEQA Guidelines Section 15370, fall into one of five categories:

- *Avoid* the impact all together by not taking a certain action, or parts of an action or redesigning the project;
- *Minimize* impacts by limiting the degree or magnitude of the action and its implementation;
- *Repair, rehabilitate, or restore* an impacted environment;
- *Reduce or eliminate* the impact over time by preservation and maintenance operations during the life of the action;
- *Compensate* for the impact by replacing or providing substitute resources or environments.

11.2 Impact Analysis. The following analysis identifies project-related direct and indirect impacts to biological resources and specifies appropriate avoidance and minimization measures to reduce potential impacts to less than significant levels.

Impact BIO-1 (Loss of Federal and State Jurisdictional Areas): KMA (2016) delineated Federal and State jurisdictional wetlands within Zaca Creek and the unnamed tributary on the subject property. The project proposes to place 275 linear feet of the unnamed tributary of Zaca Creek in the northeastern corner of the property into a culvert and create a parking lot and landscaped areas over this area. This will result in the loss of 8,712 s.f. (0.20 acres) of CDFW and RWQCB jurisdictional wetlands, including 1,375 s.f. (0.03 acres) of USACE jurisdictional wetlands and (Tables 3 and 4; Fig. 6). ***This is a Class II impact that can be mitigated to less than significant levels.***

Mitigation Measures BIO-1a: CDFW and RWQCB are expected to require a 3:1 mitigation ratio for loss of jurisdictional areas on this project. The proposed project would eliminate 8,712 s.f. (0.20 acres) of Federal and State jurisdictional areas associated with the tributary drainage in the northeastern portion of the subject property (Tables 3 and 4; Fig. 6), which would require compensatory restoration of 26,136 s.f. (0.60 acres) of jurisdictional habitat at a 3:1 ratio. The applicant has agreed to restore the reach of Zaca Creek within the subject property, including a 10-foot wide top-of-bank buffer. This area encompasses approximately 32,831 s.f. (0.75 acres) (Fig. 7). The proposed restoration area is about 6,685 s.f. (0.15 acres) larger than that needed to achieve a 3:1 ratio, to account for the unknown acreage of native vegetation already present in Zaca Creek. This level of restoration, amounting to a 3.8:1 mitigation ratio, will fully mitigate potential impacts to Federal and State Jurisdictional areas to less than significant levels.

Mitigation Measure BIO-1b: A qualified biologist/habitat restoration specialist shall prepare a Habitat Restoration and Monitoring Plan (HRMP) that details species, methods, and materials for eradication and controlling non-native vegetation, protecting existing native vegetation, installing native, locally-occurring plant species within the bed, banks, and top of bank buffer area of Zaca Creek on the subject property. The Plan shall identify success criteria that will be monitored to ensure that the restoration effort meets or exceeds Plan goals and will include a maintenance and monitoring component that extends for five (5) years post-planting to monitor and remediate (if necessary) conditions in the restoration area to ensure that specific performance criteria identified in the Plan are met or exceeded. Annual reports detailing field conditions and plant status, problems, and remedies shall be submitted to the City of Buellton Planning Department and the California Department of Fish and Wildlife by 1 June of each year.

Residual Impacts. Full implementation of the proposed mitigation measures, as approved and/or modified by the reviewing agencies, will mitigate this impact to less than significant levels.

Impact BIO-2 (Zaca Creek Top-of-Bank Setback): The applicant proposes to extend parking spaces and driveways to within 10 feet of the top-of-bank (TOB) of Zaca Creek. Although this setback may be approved by the City of Buellton because all buildings are situated at least 50 feet back from the top-of-bank, impacts to riparian habitats and wildlife could include: noise, increased human presence, disruption of nesting and or breeding activities, disruption of dispersal pathways or dispersal behavior, night lighting and glare from vehicle headlamps, bank erosion due to storm drain outfalls, and degradation of water and habitat quality due to polluted runoff. These impacts are associated with occupancy of the project and could extend for the life of the project.

Construction has the potential to degrade plant communities in the Zaca Creek riparian corridor because the top-of-bank setback is proposed to be 10 feet. Impacts could arise from erosion of soils disturbed during construction, disturbance of creek banks for construction of storm drain outfalls, dust generation, grading equipment and other construction vehicles going off-site, noise, and increased human presence during construction. During occupancy, site drainage, if directed towards Zaca Creek, could adversely affect coast live oaks, valley oaks, red willow copses, and other native vegetation by polluted runoff from the parking areas. These effects would be exacerbated in the northwestern corner of the subject property where development is proposed for both sides of Zaca Creek. ***This is a Class II impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-2a: The edge of the TOB buffer shall be surveyed and delineated in the field prior to any grading or construction activities. Orange construction fence with a 3-foot high band of silt fence dug into the base shall be installed along the surveyed line separating the TOB buffer from the construction area and this fencing shall be maintained for the duration of construction and landscaping. A qualified biologist shall supervise installation of this fencing. See also ***Mitigation Measure 4b.***

Mitigation Measure BIO-2b: Permeable paving shall be used for all parking areas abutting the 10-foot top-of-bank setback, as well as parking spaces abutting the valley oak tree buffers in the northeastern portion of the project site. The paving shall be designed to capture oils and other automobile products and reduce the presence of these hydrocarbons and oils in surface runoff.

Mitigation Measure BIO 2c: Site drainage shall be designed to use existing storm drains and curb/gutter structures along McMurray Road to the maximum extent possible. Other storm drain outfalls within the project area, if necessary, shall be designed to flow into vegetated swales

located in the TOB setback. Surface runoff directed towards the top-of-bank of Zaca Creek shall be designed to avoid bank erosion through the use of vegetated rock rip-rap or other measures.

Mitigation Measure BIO-2d: Landscaping within the development envelope shall emphasize native, drought-tolerant species capable of surviving with little or no summer water once established. Watering of this landscaping shall be done only with drip irrigation, not overhead spraying.

Mitigation Measure BIO-2e: No fertilizers, herbicides, or pesticides shall be used in the creek setbacks areas (TOB buffer) for the life of the project. Only organic methods, such as composting, mulching, and hand-pulling of weeds shall be used to control weeds in this buffer.

Mitigation Measure 2f: Landscape maintenance crews shall be instructed as to the sensitivity of adjacent open space on the subject property.

Mitigation Measure BIO-2g: Grading for this project should be timed to occur between 1 April and 31 October (outside the rainy season). If this is not feasible, in addition to the required Storm Water Pollution Prevention Plan (SWPPP) for the project, all applicable Best Management Practices (BMPs) shall be used to prevent soil or sediment-laden water from entering the LLCNHP. These BMPs include, but are not restricted to the following measures:

- Install silt fence and other perimeter controls along the northern edge of the development envelope prior to site grading.
- Construction vehicles and personnel vehicles shall be parked only within the project site boundaries or offsite in designated public parking areas.
- Soil stockpiles shall be tarped and surrounded with sandbags if rain is forecast within 24 hours and stockpiles shall be located no closer than six (6) feet from the property boundaries.
- Disturbed soils that will be exposed for more than two weeks (14 calendar days) shall be sprayed with hydromulch to minimize dust generation or soil erosion.
- A water truck or other water delivery method shall be on-site continually to minimize dust generation.
- A qualified biological monitor shall be retained by the City to monitor compliance with these mitigation measures during construction.

Mitigation Measure BIO-2h: The outer edge of the top-of-bank buffer shall be permanently delimited from adjacent parking spaces by planting and maintaining a minimum 3-foot high, dense hedge composed of a native, locally-occurring species, such as lemonade berry (*Rhus integrifolia*). The plants shall be installed as 5-gallon container stock, and allowed to grow to a minimum height of 3 feet, then, pruned to maintain a dense structure. The hedge will serve to block glare from vehicle headlights into the Zaca Creek riparian corridor and reduce human intrusion into the riparian corridor. A qualified biologist shall supervise installation of this hedge as part of the Habitat Restoration and Monitoring Plan (HRMP).

Residual Impacts: No residual impacts are expected if the proposed mitigation measures are fully implemented.

Impact BIO-3 (Special-Status Plants and Plant Communities): Although the project site overall has a low potential to support special-status plant species, field surveys for the present document were conducted in summer and thus would not detect annual plant species. Grading for project development could remove special-status annual plants from the site, if present. Sedimentation into Zaca Creek from soil disturbance on-site could also impact rare plants, if present. ***This is a Class II impact that can be mitigated to less than significant levels.***

Salix laevigata (red willow) Woodland Alliance, ***a State-listed special-status plant community***, occurs around the existing concrete culvert intake of Zaca Creek in the southwestern corner of the subject property. Approximately 225 s.f. of this vegetation would be permanently removed by proposed construction of parking spaces in this area. ***This is considered a Class II, significant impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-3a: A qualified biologist shall conduct a rare plant survey in late winter and/or spring throughout the project site, including the affected reaches of Zaca Creek. The biologist shall develop a plan to compensate for impacts to such species, if present on-site, including avoidance and minimization measures, as well as compensation measures incorporated into the Habitat Restoration Plan for this site, as necessary. The plan shall include measures to ensure an approved biologist will flag and fence avoidance locations before construction activities start to avoid impacts, and oversee any salvage and restoration planting efforts. If avoidance of special-status plant species is not feasible, compensatory mitigation shall provide for no-net-loss of each special-status plant species impacted, with a minimum 2:1 ratio (area restored/created/enhanced: area impacted) for CRPR list 1B species.

Mitigation Measure BIO 3b: During implementation of Mitigation Measure BIO-2a (installation of orange construction fence to delimit the restoration area from construction area), a qualified biologist shall supervise pruning of red willow vegetation in this area to ensure that only a minimum amount is removed to accommodate construction.

Residual Impacts. Proper implementation of these mitigation measures will reduce impacts from this source to less than significant levels.

Impact BIO-4 (Special-Status Wildlife): California red-legged frogs have a low potential of occurring on-site or in the project reach of Zaca Creek because this reach and the reaches for some distance upstream and downstream are dry for most of the year and/or channelized. However, there are CRLF records from this drainage two or more miles upstream and downstream of the project site and the project reach, so the project reach of Zaca Creek has a low potential to be used as a dispersal corridor for CRLF. The seasonal window for most dispersal is mid- to late spring when water is still present in Zaca Creek and again in late fall, when larvae metamorphose. However, during fall, the project reach of Zaca Creek is dry. CRLF, if present in the project reach could be impacted by grading associated with channelization of the unnamed tributary. ***This is considered a Class II, significant impact that can be mitigated to less than significant levels.***

Several special-status species of bats may occur in the project area, including one or more special-status species and roosts could be disrupted by construction activities and construction noise. ***This is a significant impact that can be mitigated to less than significant levels (Class II).***

Mitigation Measure BIO-4a: A qualified biologist shall conduct USFWS protocol-level surveys (daytime and nighttime) surveys of the project reach of Zaca Creek and the unnamed tributary

during late winter/early spring when water is present in this reach of the creek to assess habitat suitability for CRLF. The surveys shall be completed no more than two weeks prior to the start of construction. If CRLF are detected in the project reach of Zaca Creek during these surveys, the biologist shall discuss appropriate avoidance and minimization measures with the U.S. Fish and Wildlife Service staff.

Mitigation Measure BIO-4b: No work shall be conducted in jurisdictional areas during periods of rainfall or within 24 hours thereafter.

Mitigation Measure BIO-4c: Appropriate erosion control and site stabilization measures to minimize potential for downstream water quality impacts.

Mitigation Measure BIO-4d: Before any activities begin within the project site, an approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the CRLF and its habitat. Brochures, books, and briefings may be used in the training session, provided that a qualified person is available to answer any questions.

Mitigation Measure BIO-4e: Silt fence shall be installed along the lower portion of the orange construction fence to be installed along the top-of-bank buffer of Zaca Creek under the supervision of a qualified biologist (also see **Mitigation Measure BIO-2a**). This silt fencing shall remain intact for the duration of construction and landscaping.

Mitigation Measure BIO-4f: The oak trees on and around the subject property may provide temporary (seasonal) roosts for bats, although surveys conducted for this document failed to find evidence of prolonged or repeated use of these specific trees for such uses. Prior to the start of grading or any construction activities, a qualified biologist shall conduct an acoustic survey to assess bat activity on-site. If bats are found roosting in oak trees on-site, the biologist shall confer with CDFW staff to determine how to proceed. At a minimum, the buffer established around oak trees (Mitigation Measure 4b) shall benefit roosting bats.

Residual Impacts. Proper implementation of these mitigation measures will reduce impacts from this source to less than significant levels.

Impact BIO-5 (Loss of or Damage to Oak Trees): The proposed plan would eliminate an 18-inch dbh and a 24-inch dbh valley oak (*Quercus lobata*) in the southwestern corner of the subject property. A certified arborist has proposed to protect a 48-inch dbh and a 54-inch dbh valley oak in the northeastern corner of the subject property by establishing a 25-foot radius open space buffer extending outward from the trunk of each tree, and by installing a retaining wall 10 feet out from the trunk of a 48-inch dbh valley oak along the eastern property boundary to separate it from adjacent development (Fig. 1). These buffers are approximately at the dripline of these oak trees. Encroachment into the dripline of these trees could weaken or kill them. Oak trees in the city limits that are greater than 8 inches dbh are protected by the City of Buellton Native Tree Protection Ordinance. ***This is a significant impact that can be mitigated to less than significant levels (Class II).***

Mitigation Measure BIO-5a: Loss of valley oaks shall be mitigated at a 3:1 ratio, consistent with City of Buellton policy, and this ratio shall be maintained for the duration of the five-year habitat restoration monitoring period, so that at least six valley oaks survive and are at least six feet tall in the restoration area after five years post-planting. Valley oaks also shall be included in the planting palettes for the landscaped portion of the site. Valley oaks planted as mitigation in the habitat restoration area shall be derived from acorns taken from on-site trees to preserve genetic

integrity. The acorns shall be grown at a local native plant nursery and planted when they are a 5-gallon minimum size, then planted in the restoration area. Valley oaks used in landscaped areas can be purchased, but shall be no larger than 15-gallon trees and must be derived from local source stock.

Mitigation Measure BIO-5b: Orange construction fencing shall be placed at the 25-foot and 10-foot radii of the two valley oaks in the northeastern corner of the site and the one valley oak on the eastern property boundary, respectively. The fencing shall be installed at the same time as the TOB buffer fencing (**Mitigation Measure BIO-2a**), and shall be maintained for the duration of the construction phase of the project. A qualified biologist shall verify proper installation of this fencing. Vehicle parking, construction equipment, and all construction personnel shall be prohibited from entering the fenced areas.

Mitigation Measure BIO-5c: The project footprint in the northeastern corner of the subject property and along the eastern edge of the property should be modified to avoid the dripline of the three large valley oaks found there because loss of these very large, old trees cannot be mitigated.

Mitigation Measure BIO-5d: A certified arborist shall monitor grading of driveways adjacent to the oak trees in the northeastern corner of the project site and installation of the retaining wall in the eastern portion of the site to avoid or minimize impacts to the roots of these valley oaks. Any exposed roots greater than 1-inch in diameter shall be cut by the arborist.

Residual Impacts: Proper implementation of these mitigation measures will reduce impacts from this source to less than significant levels.

Impact BIO-6 (Use of Rodenticides): Zaca Creek and adjacent grasslands, scrublands, and woodlands east and northeast of the subject property support large populations of California ground squirrels, pocket gophers, mice, and kangaroo rats and also provide foraging, nesting, roosting, and cover for a wide variety of raptors and carnivores that depend on these rodent populations for food. These predators include white-tailed kites, Cooper's hawks, American badgers, bobcats, coyotes, mountain lions, and other species. The use of rodenticides on the project site during construction or building occupancy could reduce rodent populations that are critical food resources for special-status raptors and carnivores and poison these predators. ***This is a Class II impact that can be mitigated to less than significant levels.***

Mitigation Measure 6a: Because of the small size of the project site and its location adjacent to regionally important wildlife habitat, rodenticides shall be banned from use anywhere on-site during construction and building occupancy, i.e., for the life of the project. Only mechanical traps (snap-traps) shall be used, if necessary.

Residual Impacts: Implementation of these mitigation measures will fully mitigate potential impacts to raptors and their prey as long as rodenticides are banned.

Impact BIO-7 (Loss of Non-Regulated Wildlife): The proposed project has the potential to destroy the nests of non-regulated species of ground-nesting birds that may use the subject property (e.g., sparrows; killdeer, western meadowlarks, etc.), and disrupt nesting behavior of tree-nesting species that may nest in oaks and/or in the riparian corridor of Zaca Creek. Although the unnamed tributary and the upland habitats on-site are significantly disturbed, they nonetheless provide foraging space and cover for a number of common, generalist terrestrial species, such as western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), gopher snake

(*Pituophis melanoleucus*), common kingsnake (*Lampropeltis getulus*), western rattlesnake (*Crotalus oreganus*), and other small vertebrates. These species will likely be killed or injured during rough grading of the site. ***This is a Class III (adverse) impact that can be mitigated to minimize impacts to unregulated wildlife populations.***

Mitigation Measure BIO-7a: Vegetation removal and/or construction shall be timed to avoid the nesting season for raptors and other birds, generally 1 February-15 September. If this is not feasible, a qualified biologist shall conduct a series of surveys for nesting birds starting no more than four weeks and no less than one week prior to construction. Measures to protect active nest shall be evaluated by a qualified biologist on a case-by-case basis, but could include maintaining a minimum 50-foot buffer around active non-raptor nests and 300-foot buffer around raptor nests. All active nests shall be monitored weekly until the young have fledged.

Mitigation Measure BIO-7b: A qualified biologist shall direct the initial site clearing to include having a bulldozer or grader make several passes to first remove vegetation (grasses and shrubs) from development envelope, then the upper six inches of soil in two lifts of three inches/lift in order to capture and relocate any lizards, snakes, and/or small mammals that are in good condition to Zaca Creek or adjacent open space. Individuals that are killed during grading and are in good condition shall be collected for accession into the zoology collections of the Santa Barbara Museum of Natural History and/or the University of California-Santa Barbara.

Mitigation Measure BIO-7c: A City-approved biologist shall conduct a pre-construction meeting on-site for all construction personnel prior to commencing any grading or construction activities. The purpose of the meeting will be to discuss biological sensitivities associated with the project, permit conditions, BMPs to avoid or minimize environmental impacts, and other topics. The biological monitor shall conduct “tailgate” sessions to review these issues, as-needed. The biologist shall also perform regular site inspections to ensure permit compliance, subject to City requirements.

Residual Impacts: Implementation of this mitigation measure will fully mitigate potential impacts to wildlife.

Impact BIO-8 (Night-Lighting): Because of the small size and location of the project site, lighting in the parking areas and Assembly Building, including the residence, could disturb raptor nesting, roosting, and foraging behavior and nocturnal wildlife behavior in Zaca Creek and in open space areas east and northeast of the subject property. ***Interference with movement patterns, nesting, foraging, and/or roosting behavior of non-regulated and protected wildlife is a Class II impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-8a: Night-lighting throughout the site shall use the lowest wattage and least number of lights consistent with safety. All lighting shall be shielded and directed downward and away from Zaca Creek, as well as open space east of the subject property, in order to minimize light pollution of adjacent areas.

Residual Impacts: Implementation of this mitigation measure will mitigate potential impacts to wildlife from night-lighting to less than significant levels.

Impact BIO-9 (Trash): Trash generated during construction and project occupancy could be an attractive nuisance for wildlife. ***Trash accumulation is a significant Class II impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-9a: Trash receptacles shall be provided and maintained for the duration of construction. A qualified biologist shall function as construction monitor and shall hold a pre-construction training session for all construction personnel to discuss trash disposal (and other environmental permit conditions). Site clean-up shall be a routine component of maintenance and trash receptacles shall be emptied immediately following any social functions during project occupancy.

Residual Impacts: Implementation of this mitigation measures will mitigate potential impacts to wildlife from trash to less than significant levels.

Impact BIO-10 (Building Architecture): Project design elements, such as overhanging eaves, could attract cliff swallows, house finches, and other birds to opportunistically nest on buildings. Removing or otherwise disturbing active bird nests of any species is a violation of the State Fish and Game Code and the Federal Migratory Bird Treaty Act. It also diminishes the reproductive effort of these species in the vicinity of the project area. ***This is a Class II impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-10a: Impacts can be reduced or avoided by designing structures to make them less attractive to nesting birds, or by installing bird netting beneath eaves before nests have been constructed. The project shall be designed to incorporate structural components that do not promote nesting by swallows, finches, or other birds (no eaves on buildings, etc.).

Residual Impacts: Implementation of this mitigation measure will fully mitigate potential impacts to swallows, house finches, and other species of birds.

Impact BIO-11 (Non-Native Landscape Plantings): Landscaping for the project has the potential of degrading plant and wildlife communities if invasive species that were planted as landscaping were to escape cultivation and disperse to Zaca Creek. ***This is a significant (Class II) impact that can be mitigated to less than significant levels.***

Mitigation Measure BIO-11a: The landscape architect for the project shall design a planting plan that emphasizes native, locally-occurring species to create landscaping that has both aesthetic value and value to wildlife and will not pose a hazard to vegetation in open space areas. A qualified biologist shall review and approve planting plans prior to implementation. Native plants shall be used for landscaping for the life of the project.

Mitigation Measure BIO-11b: Fertilizers, herbicides, and/or pesticides shall not be used on any landscaping of the project site. Only organic methods, such as composting, mulching, and hand-pulling of weeds shall be used for the life of the project.

Residual Impacts: Implementation of these mitigation measures will mitigate potential impacts to wildlife and habitats from this impact to less than significant levels.

Impact BIO-12 (Interference with Wildlife Movements): The project is being built on a vacant site adjacent to larger parcels of open space that provide valuable habitat for wildlife. The downstream end of Zaca Creek in the southwestern corner of the subject property enters a culvert. As such, the project area reach of the drainage may be a dispersal corridor for only the most urbanized wildlife, such as raccoons, striped skunks, and opossums. Construction and use of the property is expected to have less than significant impacts to wildlife movement in general. ***This is considered to be a Class III impact: adverse, but less than significant.***

12.0 Cumulative Impacts. Construction of the project will permanently eliminate approximately 4.25 acres of open space that provides foraging habitat for raptors and carnivores is used by generalist species of lizards, snakes, and small mammals as foraging and cover habitat. The project site abuts more extensive open space areas to the east and northeast that also provides habitat for these species. Permanent loss of the subject property due to development is an adverse, but less than significant contribution to cumulative loss of wildlife habitat in the region.

Development of the subject property, when viewed in light of recent and future incremental development of adjacent parcels, e.g., Walker-Firestone Brewery north of subject property, Hampton Inn south of subject property, development NE of the intersection of McMurray Road x Highway 246, etc., will incrementally add to the cumulative degradation of the biological value of an approximately 0.5 mile developed reach of Zaca Creek.

Development of the proposed project will eliminate two mature valley oaks, which will be replaced at a 3:1 ratio, consistent with City policy. Mitigation measures have been incorporated into the proposed project to protect the three remaining mature valley oaks on-site. These measures should be sufficient to not add to the net regional loss of this important tree species, as documented in Brown and Davis (1991).

As development within the City of Buellton proceeds, the remaining open space parcels within the City limits become progressively more important for raptors and other wildlife and potential areas to preserve and enhance urban oak woodlands.

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**Appendix 1. Existing Conditions
(all photos taken 1 July 2015).**



Southeast corner of subject property and northeast corner of parcel to the south (now developed), looking northeast. Very large valley oak (72 inches dbh) is south of subject property, but is typical of valley oaks on subject property. Canary Island palms in background indicate site of former residence or other outbuildings on adjacent parcel and may provide nesting/roosting sites for raptors and other birds, and bats.



General aspect of subject property, looking north across Zaca Creek and commercial development north of the property. Dominant vegetation on parcel is non-native annual grassland.



General aspect of Zaca Creek along northern portion of subject property. Vegetation here includes coyote bush, mule-fat, coast live oak, red willow, coffeeberry, Southern California black walnut, and elderberry.



General aspect of Zaca Creek, looking downstream from northern portion of subject property. Note dense growth of coyote bush. Other vegetation visible here include mule-fat, elderberry, coast live oak, coffeeberry, red willow, and arroyo willow.

**Appendix 2. California Native Plant Society
Query Results for Rare Plants of Santa Barbara County**

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank	CESA	FESA
<i>Abronia maritima</i>	red sand-verbena	Nyctaginaceae	perennial herb	4.2	S3S4	G4	None	None
<i>Acanthomintha obovata</i> ssp. <i>cordata</i>	heart-leaved thorn-mint	Lamiaceae	annual herb	4.2	S3	G4T3	None	None
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	Abrams' oxytheca	Polygonaceae	annual herb	1B.2	S1S2	G4?T1T2	None	None
<i>Agrostis hooveri</i>	Hoover's bent grass	Poaceae	perennial herb	1B.2	S2	G2	None	None
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	1B.3	S2	G4T2	None	None
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	Boraginaceae	annual herb	4.2	S3	G3	None	None
<i>Ancistrocarphus keilii</i>	Santa Ynez groundstar	Asteraceae	annual herb	1B.1	S1	G1	None	None
<i>Anomobryum julaceum</i>	slender silver moss	Bryaceae	moss	4.2	S2	G5?	None	None
<i>Antirrhinum ovatum</i>	oval-leaved snapdragon	Plantaginaceae	annual herb	4.2	S3	G3	None	None
<i>Aphanisma blitoides</i>	aphanisma	Chenopodiaceae	annual herb	1B.2	S2	G3G4	None	None
<i>Arctostaphylos crustacea</i> ssp. <i>eastwoodiana</i>	Eastwood's brittle-leaf manzanita	Ericaceae	perennial evergreen shrub	1B.1	S2	G4T2	None	None
<i>Arctostaphylos crustacea</i> ssp. <i>subcordata</i>	Santa Cruz Island manzanita	Ericaceae	perennial evergreen shrub	4.2	S3	G4T3	None	None
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	San Gabriel manzanita	Ericaceae	perennial evergreen shrub	1B.2	S3	G5T3	None	None
<i>Arctostaphylos pechoensis</i>	Pecho manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G2	None	None
<i>Arctostaphylos purissima</i>	La Purisima manzanita	Ericaceae	perennial evergreen shrub	1B.1	S2	G2	None	None
<i>Arctostaphylos refugioensis</i>	Refugio manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G2	None	None
<i>Arctostaphylos rudis</i>	sand mesa manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G2	None	None
<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	Miles' milk-vetch	Fabaceae	annual herb	1B.2	S2	G5T2	None	None
<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	Fabaceae	perennial herb	4.2	S4	G4T4	None	None
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Ventura marsh milk-vetch	Fabaceae	perennial herb	1B.1	S1	G2T1	CE	FE
<i>Atriplex coulteri</i>	Coulter's saltbush	Chenopodiaceae	perennial herb	1B.2	S1S2	G3	None	None

Atriplex pacifica	South Coast saltscale	Chenopodiaceae	annual herb	1B.2	S2	G4	None	None
Atriplex serenana var. davidsonii	Davidson's saltscale	Chenopodiaceae	annual herb	1B.2	S1	G5T1	None	None
Baccharis plummerae ssp. plummerae	Plummer's baccharis	Asteraceae	perennial deciduous shrub	4.3	S3	G3T3	None	None
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	4.2	S4	G4	None	None
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?	None	None
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	S4	G4	None	None
Calochortus clavatus var. clavatus	club-haired mariposa lily	Liliaceae	perennial bulbiferous herb	4.3	S3	G4T3	None	None
Calochortus fimbriatus	late-flowered mariposa lily	Liliaceae	perennial bulbiferous herb	1B.3	S3	G3	None	None
Calochortus palmeri var. palmeri	Palmer's mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S3?	G3T3?	None	None
Calochortus simulans	La Panza mariposa lily	Liliaceae	perennial bulbiferous herb	1B.3	S2	G2	None	None
Calycadenia villosa	dwarf calycadenia	Asteraceae	annual herb	1B.1	S3	G3	None	None
Calystegia collina ssp. venusta	South Coast Range morning-glory	Convolvulaceae	perennial rhizomatous herb	4.3	S4	G4T4	None	None
Calystegia sepium ssp. binghamiae	Santa Barbara morning-glory	Convolvulaceae	perennial rhizomatous herb	1A	SX	G5TXQ	None	None
Calystegia subacaulis ssp. episcopalis	Cambria morning- glory	Convolvulaceae	perennial rhizomatous herb	4.2	S2	G3T2	None	None
Camissonia kernensis ssp. kernensis	Kern County evening-primrose	Onagraceae	annual herb	4.3	S3	G4T3	None	None
Caulanthus amplexicaulis var. barbara	Santa Barbara jewelflower	Brassicaceae	annual herb	1B.1	S2	G4T2	None	None
Caulanthus californicus	California jewelflower	Brassicaceae	annual herb	1B.1	S1	G1	CE	FE
Caulanthus lemmonii	Lemmon's jewelflower	Brassicaceae	annual herb	1B.2	S3	G3	None	None
Ceanothus cuneatus var. fascicularis	Lompoc ceanothus	Rhamnaceae	perennial evergreen shrub	4.2	S4	G5T4	None	None
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	1B.1	S2	G3T2	None	None
Chenopodium littoreum	coastal goosefoot	Chenopodiaceae	annual herb	1B.2	S2	G2	None	None

Chloropyron maritimum ssp. maritimum	salt marsh bird's- beak	Orobanchaceae	annual herb (hemiparasitic)	1B.2	S1	G4?T1	CE	FE
Chorizanthe blakleyi	Blakley's spineflower	Polygonaceae	annual herb	1B.3	S2S3	G2G3	None	None
Chorizanthe palmeri	Palmer's spineflower	Polygonaceae	annual herb	4.2	S4	G4?	None	None
Chorizanthe polygonoides var. longispina	long-spined spineflower	Polygonaceae	annual herb	1B.2	S3	G5T3	None	None
Chorizanthe rectispina	straight-awned spineflower	Polygonaceae	annual herb	1B.3	S1	G1	None	None
Cicuta maculata var. bolanderi	Bolander's water- hemlock	Apiaceae	perennial herb	2B.1	S2	G5T4	None	None
Cirsium occidentale var. compactum	compact cobwebby thistle	Asteraceae	perennial herb	1B.2	S1	G3G4T1	None	None
Cirsium rhotophilum	Surf thistle	Asteraceae	perennial herb	1B.2	S1	G1	CT	None
Cirsium scariosum var. loncholepis	La Graciosa thistle	Asteraceae	perennial herb	1B.1	S1	G5T1	CT	FE
Cistanthe maritima	seaside cistanthe	Montiaceae	annual herb perennial rhizomatous herb	4.2	S3	G3G4	None	None
Cladium californicum	California sawgrass monkey-flower	Cyperaceae	herb	2B.2	S2	G4	None	None
Clinopodium mimuloides	savory	Lamiaceae	perennial herb	4.2	S3	G3	None	None
Comarostaphylis diversifolia ssp. diversifolia	summer holly small-flowered	Ericaceae	evergreen shrub	1B.2	S2	G3T2	None	None
Convolvulus simulans	morning-glory	Convolvulaceae	annual herb	4.2	S4	G4	None	None
Cordylanthus rigidus ssp. littoralis	seaside bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S2	G5T2	CE	None
Deinandra increscens ssp. villosa	Gaviota tarplant	Asteraceae	annual herb	1B.1	S2	G4G5T2	CE	FE
Deinandra paniculata	paniculate tarplant	Asteraceae	annual herb	4.2	S4	G4	None	None
Delphinium parryi ssp. blochmaniae	dune larkspur	Ranunculaceae	perennial herb	1B.2	S2	G4T2	None	None
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	4.3	S4	G4T4	None	None
Delphinium umbraculorum	umbrella larkspur	Ranunculaceae	perennial herb perennial rhizomatous herb	1B.3	S3	G3	None	None
Dichondra occidentalis	western dichondra Vandenberg	Convolvulaceae	herb	4.2	S3S4	G3G4	None	None
Diplacus vandenbergensis	monkeyflower	Phrymaceae	annual herb perennial rhizomatous herb	1B.1	S1	G1	None	FE
Dithyrea maritima	beach spectaclepod	Brassicaceae	herb	1B.1	S1	G1	CT	None
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	Crassulaceae	perennial herb	1B.1	S2	G3T2	None	None

Eremalche parryi ssp. kernensis	Kern mallow	Malvaceae	annual herb	1B.2	S2S3	G3G4T2T3Q	None	FE
Eriastrum hooveri	Hoover's eriastrum	Polemoniaceae	annual herb	4.2	S3	G3	None	None
Erigeron blochmaniae	Blochman's leafy daisy	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2	None	None
Erigeron sanctarum	saints' daisy	Asteraceae	perennial rhizomatous herb	4.2	S3	G3	None	None
Eriodictyon capitatum	Lompoc yerba santa	Namaceae	evergreen shrub	1B.2	S2	G2	CR	FE
Eriogonum elegans	elegant wild buckwheat	Polygonaceae	annual herb	4.3	S3S4	G3G4	None	None
Eriophyllum lanatum var. hallii	Fort Tejon woolly sunflower	Asteraceae	perennial herb	1B.1	S1	G5T1	None	None
Erysimum ammophilum	sand-loving wallflower	Brassicaceae	perennial herb	1B.2	S2	G2	None	None
Erysimum capitatum var. lompocense	San Luis Obispo wallflower	Brassicaceae	perennial herb	4.2	S3	G5T3	None	None
Erysimum suffrutescens	suffrutescent wallflower	Brassicaceae	perennial herb	4.2	S3	G3	None	None
Euphorbia misera	cliff spurge	Euphorbiaceae	perennial shrub	2B.2	S2	G5	None	None
Frasera neglecta	pine green-gentian	Gentianaceae	perennial herb	4.3	S4	G4	None	None
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	4.2	S3	G3	None	None
Fritillaria ojaiensis	Ojai fritillary	Liliaceae	perennial bulbiferous herb	1B.2	S2?	G2?	None	None
Galium cliftonsmithii	Santa Barbara bedstraw	Rubiaceae	perennial herb	4.3	S4	G4	None	None
Gilia latiflora ssp. cuyamensis	Cuyama gilia	Polemoniaceae	annual herb	4.3	S4	G5?T4	None	None
Gilia leptantha ssp. pinetorum	pine gilia	Polemoniaceae	annual herb	4.3	S4	G4T4	None	None
Heterotheca sessiliflora ssp. sessiliflora	beach goldenaster	Asteraceae	perennial herb	1B.1	S1	G4T2T3	None	None
Hordeum intercedens	vernal barley	Poaceae	annual herb	3.2	S3S4	G3G4	None	None
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	S1	G4T1	None	None
Horkelia cuneata var. sericea	Kellogg's horkelia	Rosaceae	perennial herb	1B.1	S1?	G4T1?	None	None
Horkelia yadonii	Santa Lucia horkelia	Rosaceae	perennial rhizomatous herb	4.2	S3	G3	None	None
Hypogymnia schizidiata	island rock lichen	Parmeliaceae	foliose lichen (null)	1B.3	S1	G1	None	None

<i>Juglans californica</i>	Southern California black walnut	Juglandaceae	perennial deciduous tree	4.2	S3	G3	None	None
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	Juncaceae	perennial rhizomatous herb	4.2	S4	G5T5	None	None
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	Juncaceae	annual herb	1B.2	S3	G3	None	None
<i>Lasthenia conjugens</i>	Contra Costa goldfields	Asteraceae	annual herb	1B.1	S1	G1	None	FE
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	Asteraceae	annual herb	1B.1	S2	G4T2	None	None
<i>Layia carnosa</i>	beach layia	Asteraceae	annual herb	1B.1	S2	G2	CE	FE
<i>Layia heterotricha</i>	pale-yellow layia	Asteraceae	annual herb	1B.1	S2	G2	None	None
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	Brassicaceae	annual herb	4.3	S3	G5T3	None	None
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	Polemoniaceae	annual herb	4.2	S3	G3	None	None
<i>Lessingia tenuis</i>	spring lessingia	Asteraceae	annual herb	4.3	S4	G4	None	None
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	4.2	S3	G4T3	None	None
<i>Linanthus californicus</i> ssp. <i>tomentosus</i>	fuzzy prickly-phlox	Polemoniaceae	perennial deciduous shrub	4.2	S3	G5T3	None	None
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	Caprifoliaceae	perennial evergreen shrub	1B.2	S2?	G5T2?	None	None
<i>Lycium californicum</i>	California box-thorn	Solanaceae	perennial shrub	4.2	S4	G4	None	None
<i>Madia radiata</i>	showy golden madia	Asteraceae	annual herb	1B.1	S2	G2	None	None
<i>Malacothamnus davidsonii</i>	Davidson's bush-mallow	Malvaceae	perennial deciduous shrub	1B.2	S2	G2	None	None
<i>Malacothamnus gracilis</i>	slender bush-mallow	Malvaceae	perennial deciduous shrub	1B.1	S1	G1Q	None	None
<i>Malacothamnus jonesii</i>	Jones' bush-mallow	Malvaceae	perennial deciduous shrub	4.3	S4	G4	None	None
<i>Malacothrix incana</i>	dunedelion	Asteraceae	perennial herb	4.3	S4	G4	None	None
<i>Malacothrix phaeocarpa</i>	dusky-fruited malacothrix	Asteraceae	annual herb	4.3	S4	G4	None	None
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	Asteraceae	perennial rhizomatous herb	1B.2	S2	G5T2	None	None

Malacothrix saxatilis var. saxatilis	cliff malacothrix	Asteraceae	perennial rhizomatous herb	4.2	S4	G5T4	None	None
Malacothrix similis	Mexican malacothrix Mt. Diablo	Asteraceae	annual herb	2A	SH	G2G3	None	None
Micropus amphibolus	cottonweed	Asteraceae	annual herb	3.2	S3S4	G3G4	None	None
Monardella hypoleuca ssp. hypoleuca	white-veined monardella	Lamiaceae	perennial herb	1B.3	S2S3	G4T2T3	None	None
Monardella sinuata ssp. sinuata	southern curly-leaved monardella	Lamiaceae	annual herb	1B.2	S2	G3T2	None	None
Monardella undulata ssp. arguelloensis	Point Arguello monardella	Lamiaceae	perennial shrub	1B.1	S1	G3T1	None	None
Monardella undulata ssp. crispa	crisp monardella	Lamiaceae	perennial rhizomatous herb	1B.2	S2	G3T2	None	None
Monardella undulata ssp. undulata	San Luis Obispo monardella	Lamiaceae	perennial rhizomatous herb	1B.2	S2	G2	None	None
Monolopia congdonii	San Joaquin woollythreads	Asteraceae	annual herb	1B.2	S2	G2	None	FE
Mucronea californica	California spineflower	Polygonaceae	annual herb	4.2	S3	G3	None	None
Nasturtium gambelii	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	1B.1	S1	G1	CT	FE
Navarretia peninsularis	Baja navarretia	Polemoniaceae	annual herb	1B.2	S2	G3	None	None
Nemacladus secundiflorus var. robbinsii	Robbins' nemacladus	Campanulaceae	annual herb	1B.2	S2	G3T2	None	None
Orobanche parishii ssp. brachyloba	short-lobed broomrape	Orobanchaceae	perennial herb (parasitic)	4.2	S3	G4?T4	None	None
Pentachaeta fragilis	fragile pentachaeta	Asteraceae	annual herb	4.3	S3	G3	None	None
Perideridia pringlei	adobe yampah	Apiaceae	perennial herb	4.3	S4	G4	None	None
Phacelia hubbyi	Hubby's phacelia	Hydrophyllaceae	annual herb	4.2	S4	G4	None	None
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	Hydrophyllaceae	perennial herb	3.2	S3	G5?T3	None	None
Pinus torreyana ssp. torreyana	Torrey pine	Pinaceae	perennial evergreen tree	1B.2	S1	G1T1	None	None
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	4.2	S3	G3	None	None
Pleuridium mexicanum	Mexican earthmoss	Ditrichaceae	moss	2B.1	S1	G5	None	None
Polygala cornuta var. fishiae	Fish's milkwort	Polygalaceae	perennial deciduous shrub	4.3	S4	G5T4	None	None
Prunus fasciculata var. punctata	sand almond	Rosaceae	perennial deciduous shrub	4.3	S4	G5T4	None	None

Quercus dumosa	Nuttall's scrub oak	Fagaceae	perennial evergreen shrub	1B.1	S3	G3	None	None
Quercus parvula var. parvula	Santa Cruz Island oak	Fagaceae	perennial evergreen shrub	4.2	S3	G4T3	None	None
Ribes amarum var. hoffmannii	Hoffmann's bitter gooseberry	Grossulariaceae	perennial deciduous shrub	3	S3	G4?T3	None	None
Sanicula hoffmannii	Hoffmann's sanicle black-flowered	Apiaceae	perennial herb	4.3	S3	G3	None	None
Scrophularia atrata	figwort	Scrophulariaceae	perennial herb	1B.2	S2?	G2?	None	None
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	2B.2	S2	G3	None	None
Senecio astephanus	San Gabriel ragwort	Asteraceae	perennial herb	4.3	S3	G3	None	None
Senecio blochmaniae	Blochman's ragwort	Asteraceae	perennial herb	4.2	S3	G3	None	None
Sidalcea hickmanii ssp. parishii	Parish's checkerbloom	Malvaceae	perennial herb	1B.2	S1	G3T1	CR	None
Stipa diegoensis	San Diego County needle grass southern	Poaceae	perennial herb	4.2	S4	G4	None	None
Streptanthus campestris	jewelflower	Brassicaceae	perennial herb	1B.3	S3	G3	None	None
Suaeda esteroa	estuary seablite	Chenopodiaceae	perennial herb	1B.2	S2	G3	None	None
Suaeda taxifolia	woolly seablite	Chenopodiaceae	perennial evergreen shrub	4.2	S4	G	None	None
Texosporium sancti-jacobi	woven-spored lichen	Caliciaceae	crustose lichen (terricolous)	3	S1	G3	None	None
Thelypteris puberula var. sonorensis	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	2B.2	S2	G5T3	None	None
Thermopsis californica var. argentata	silvery false lupine	Fabaceae	perennial rhizomatous herb	4.3	S4	G4T4	None	None
Thermopsis macrophylla	Santa Ynez false lupine	Fabaceae	perennial rhizomatous herb	1B.3	S1	G1	CR	None
Tortula californica	California screw-moss	Pottiaceae	moss	1B.2	S2S3	G2G3	None	None