

**BIOLOGICAL RESOURCE ANALYSIS
EVERGREEN MANAGEMENT GROUP
GOODYEAR ROAD
SOLANO COUNTY, CALIFORNIA**

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Prepared for

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REVISED Biological Resources Analysis
 Goodyear Road Property Subdivision
 Benicia, California

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ATTACHMENTS

(Behind Tab at Back of Report)

Attachment A. Tentative Parcel Map

Attachment B. Vesting Tentative Parcel Map

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1. INTRODUCTION

Monk & Associates, Inc. (M&A) has prepared this Biological Resource Analysis for the Goodyear Road Property located within the City of Benicia, Solano County, California (Figures 1 and 2). The Tentative Parcel Map (Attachment A) proposes to subdivide the property into two separate parcels; Parcel A (4.58 acres) and Parcel B (6.36 acres). Parcel A is proposed for development as illustrated on the Vesting Tentative Parcel Map (Attachment B), with a building envelope and potential parking areas. Parcel A is herein referred to as the project site. Parcel B is proposed to remain as a “Conservation Area.” The purpose of our analysis is to provide a description of existing biological resources on Parcel A and B, and to identify potentially significant and significant impacts that could occur to sensitive biological resources if the project site (i.e., Parcel A) was to be developed.

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and other resource organizations including the California Native Plant Society (CNPS). Biological resources also include waters of the United States and State, as regulated by the U.S. Army Corps of Engineers (Corps), California Regional Water Quality Control Board (RWQCB), and CDFW. It is important to note that our analysis includes an assessment of the potential for impacts to regulated waters but does not provide the level of detail required for a formal delineation of waters suitable for submittal to the Corps.

This biological resources analysis also provides general mitigation measures for “potentially significant” and “significant” impacts that could occur to biological resources if the project site were to be developed. These mitigation measures will need to be tailored to the proposed project by the CEQA Lead Agency (City of Benicia) at the time it is defined and going through an environmental review. When implemented, the mitigation measures would reduce impacts to a level considered less than significant pursuant to the California Environmental Quality Act (CEQA).

2. PROJECT SITE LOCATION AND SETTING

The 4.58-acre project site (Parcel A) is located within a commercial district in the City of Benicia, Solano County, California. This site is currently zoned as commercial. The project site is located immediately southeast of Highway 680 and Goodyear Road, immediately north of Lake Herman Road, and west of the Amtrak/Union Pacific Railroad. The 6.36 acre Conservation Area (Parcel B) is located immediately north of the project site. The property is located within the Vine Hill, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. Figures 2 and 3 provide an aerial photographic view of the property and surrounding land use.

Much of the immediate surrounding area supports commercial developments consisting primarily of warehouses and other commercial/industrial businesses. Commercial development occurs along the railroad tracks immediately to the east, immediately to the north of the project site, and just beyond Lake Herman Road to the south. There is open space to the west of the project site beyond Goodyear Road and Highway 680.

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The project site is located on an upland bench comprised of fill material that is considerably higher in elevation (~ 20 feet higher) than the Conservation Area located in the northern portion of the property, as shown on the Tentative Parcel Map. There are no structures on the property.

2.1 Site Topography

Topography of the project site is essentially level and was artificially created by the placement of fill material at some point in the past resulting in an elevated pad that is approximately 30 feet higher in elevation. The Conservation Area located in the northern portion of the property is essentially level, with extant seasonal wetlands.

2.2 Site Hydrology

The Amtrak/Union Pacific Railroad bed that runs north/south immediately east of Parcels A and B forms a land berm blocking natural topographic flows that prior to the construction of the railroad bed likely flowed due east to the Carquinez Straits. A box culvert is constructed under the railroad bed on the east side of Parcel B, but is partially blocked. A drainage swale (likely railbed borrow area) that parallels the railroad tracks is located immediately to the east of the project site boundary and likely facilitates water transport from Parcel B under the railroad. A depression feature that appears to have been graded in the past from a northwest to southeast direct across Parcel B also delivers storm water to the box culvert under the railroad tracks.

A Lake Herman Road drain inlet discharges via a small culvert onto the southern corner of the project site. Minor storm event run-off is discharged on the project site during storm events.

The Conservation Area receives stormwater run-off from Goodyear Road and Interstate 80 west of Goodyear Road. The Conservation Area also receives runoff from warehouses and associated parking lots located immediately north of the project site. At the northern boundary of the Conservation Area, there is a 24" diameter outfall that discharges water from the adjacent development into a ditch that parallels the northeastern boundary of the Conservation Area. Storm water flows in this ditch to the northeast corner where there is a sump pipe that drains the ditch water to an unknown location, but likely eastward under the railroad tracks. This drainage is approximately 3 feet wide at the bottom of the channel and 8 feet wide at the top of the channel. There is another man-made ditch that runs northwest to southeast diagonally across the Conservation Area and exits the Conservation Area at the middle of the eastern Conservation Area boundary into the drainage swale that parallels the railroad tracks. Water in this drainage swale flows offsite eastward via a concrete culvert under the raised railroad bed (Figure 3). There is considerable microtopography in the Conservation Area that prevents complete drainage. Topographic low areas apparently retain sufficient stormwater over long enough duration to support a wetland plant community. Consequently, wetlands remain in the Conservation Area.

3. PROPOSED PROJECT

The Tentative Parcel Map (Attachment A) proposes to subdivide the property into two separate parcels; Parcel A (4.58 acres) and Parcel B (6.36 acres). Parcel A is proposed for development as illustrated on the Vesting Tentative Parcel Map (Attachment B), with a building envelope and potential parking areas (herein referred to as the project site), whereas Parcel B is proposed as a "Conservation Area."

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4. ANALYSIS METHODS

M&A staff initially researched the most recent version of the CDFW's Natural Diversity Database, RareFind 3.1 application (CNDDDB 2012) for historic and recent records of special-status plant and animal species (that is, threatened, endangered, rare) known to occur in the region of the project site. M&A also searched the 2012 electronic version of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (CNPS 2001) for records of special-status plants known in the region of the project site. All special-status species records were compiled in tables. M&A examined all known record locations for special-status species to determine if special-status species could occur on the project site.

M&A biologists Mr. Geoff Monk and Ms. Christy Owens conducted a general survey of the property on August 14, 2012 to record biological resources and to assess the likelihood of agency regulated areas on the property. The survey involved searching all habitats on the property and recording all plant and wildlife species observed. M&A's evaluation included a cursory examination of the property to determine if there could be areas within the property that would be regulated as waters of the United States and/or State (the level of analyses was not sufficient for a preliminary wetlands investigation report suitable for submittal to the Corps). M&A also noted potential habitats on or adjacent to the property that could support special-status species.

5. RESULTS OF RESEARCH AND PROJECT SITE ANALYSES

Below we discuss the plant communities and associated habitats for wildlife found on the project site and the adjacent Conservation Area.

5.1 Plant Communities and Associated Wildlife Habitats

A complete list of plant species observed on the property is presented in Table 1. Nomenclature used for plant names follows *The Jepson Manual, Second Edition* (Baldwin et al. 2012). Table 2 is a list of wildlife species observed on the property. Nomenclature for wildlife follows CDFG's *Complete list of amphibian, reptile, bird, and mammal species in California* (2008) and any changes made to species nomenclature as published in scientific journals since the publication of CDFG's list.

The property supports two plant communities: an anthropogenic community (Project Site/Parcel A) and seasonal wetland/drainages (Conservation Area/Parcel B). These plant communities are discussed in detail below.

5.1.1 ANTHROPOGENIC COMMUNITY: UPLAND BENCH

The words "anthropogenic communities" can describe several types of human-influenced plant communities. Ruderal (weedy) communities are assemblages of plants that thrive in waste areas, roadsides and other sites that have been affected by human activity. A ruderal community best describes the type of anthropogenic community on the project site. The project site is dominated by a ruderal grassland with scattered coyote brush (*Baccharis pilularis* ssp. *pilularis*). Common non-native, ruderal forb (broad-leaved plants) species that occur within this community include Italian thistle (*Carduus pycnocephala* ssp. *pycnocephala*), wild mustard (*Brassica nigra*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Helminthotheca echioides*) and yellow star-thistle

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(*Centaurea solstitialis*). Common non-native grass species that occur within the ruderal community on the project site include soft chess (*Bromus hordeaceus*), slender oats (*Avena barbata*), ripgut brome (*Bromus diandrus*) and foxtail chess. Native species that dominate the upland bench include: poverty weed (*Iva axillaris*) and western ragweed (*Ambrosia psilostachya*).

Anthropogenic communities provide habitat for those animal species adapted to humans and human-disturbed areas. Non-secretive birds, in particular, can utilize both native and non-native trees for foraging, nesting and perching, while ruderal areas can provide foraging habitat. The wildlife species observed on the project site include American crow (*Corvus brachyrhynchos*), scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), and wild turkey (*Meleagris gallopavo*). It is also expected that urban-adapted mammals such as raccoons (*Procyon lotor*), opossums (*Didelphis virginiana*), Columbian black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), and striped skunk (*Mephitis mephitis*) would forage on this project site

5.1.2 SEASONAL WETLANDS AND DRAINAGES

Seasonal wetlands are habitats that may appear dry in the summer and fall months, but following the first winter rains become saturated or hold water for a period of several weeks to months at a time. Seasonal wetlands may remain inundated for a prolonged period of time typically due to the presence of impervious soils and/or confining topography such as topographic low areas.

The Conservation Area supports seasonal wetlands and two man-made ditches. The seasonal wetlands are dominated by non-native perennial pepperweed (*Lepidium latifolium*). Other non-native species that typify the seasonal wetlands include interspersed occurrences of Himalayan blackberry (*Rubus armeniacus*), Harding grass (*Phalaris aquatica*), bristly ox-tongue (*Helminthotheca echioides*), foxtail brome (*Bromus madritensis* ssp. *madritensis*), fennel (*Foeniculum vulgare*), rabbit's foot grass (*Polypogon monspeliensis*) and several species of dock (*Rumex crispus* and *Rumex conglomeratus*) as well as native species such as saltgrass (*Distichlis spicata*), alkali mallow (*Malvella leprosa*), creeping wildrye (*Elymus triticoides*) and fringed willowherb (*Epilobium ciliatum*). The man-made ditch that runs northwest to southeast diagonally across the Conservation Area is dominated by the same vegetation.

The man-made ditch that flows northwest to southeast along the northeastern edge of the Conservation Area is dominated by the same suite of seasonal wetland plant species with one large arroyo willow (*Salix lasiolepis*) near the middle of the northern boundary. This drainage flows southeast to a low point with a sump pump near the northeastern corner of the Conservation Area. This low point is dominated by native narrow-leaved cattail (*Typha angustifolia*) and non-native common reed (*Phragmites australis*).

A more mesic (wetter) sub-community within the seasonal wetlands in the Conservation Area occurs near the middle of the northwestern side of the Conservation Area at the toe of the slope to the upland bench. This sub-community is dominated by a dense mix of native emergent vegetation including Mexican rush (*Juncus mexicanus*), American bulrush (*Schoenoplectus americanus*), spikerush (*Eleocharis macrostachya*), iris-leaved rush (*Juncus xiphioides*), hedge nettle (*Stachys ajugoides*) and common cattail (*Typha latifolia*).

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A microhabitat of alkali grassland occurs just north of this emergent vegetation and is dominated by saltgrass, alkali heath (*Frankenia salina*), alkali mallow and alkali weed (*Cressa truxillensis*). Other native species that occur within this alkali habitat include bristly ox-tongue, rabbit's foot grass and meadow barley (*Hordeum brachyantherum*). A few mature, albeit decadent, red willow (*Salix laevigata*) occur on the western edge of the Conservation Area and likely will not survive too many more years. These willows may indicate that the Conservation Area was historically wetter than its current condition.

Seasonal wetlands provide wildlife with a seasonal water source that allows animals to drink and forage in the water during the winter and spring months. Birds that commonly occur around wetlands include killdeer (*Charadrius vociferus*) which was observed within the Conservation Area. Amphibians such as the Sierran treefrog (*Pseudacris sierra*) and the western toad (*Bufo boreas*) will lay their eggs in seasonal wetland habitats and complete their life cycle in the wetlands prior to the time they dry in the late-spring and early summer months.

6. WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors are generally described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human induced factors such as urbanization. The fragmentation of natural habitat creates isolated "islands" of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species and thus, adversely affecting both genetic and species diversity. Corridors often partially or largely eliminate the adverse effects of fragmentation by: 1) allowing animals to move between remaining habitats to replenish depleted populations and increase the gene pool available; 2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or species extinction; and 3) serving as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges (Beier and Loe 1992).

6.1 Applicability to the Proposed Project

There is no significant wildlife movement corridor on the project site. The project site is isolated from the open space to the west by Highway 680 and surrounded on all other sides by roads and commercial development. The project site may be visited by local, urban-adapted mammal species such as raccoons, opossums, striped skunks, which reside in the immediate area and have learned to navigate the local streets and driveways. M&A does not believe that there is a significant wildlife corridor on the project site that supports a significant or unique wildlife population such as a migratory deer corridor or significant fawning grounds. Accordingly, development of the project would be unlikely to result in significant adverse impacts to wildlife corridors.

The Conservation Area may serve as a stopover for birds, which can be accessed by flight, or to/from the marshes associated with the Carquinez Straights. Brackish marshes occur alongside the Carquinez Straights which are a few hundred yards south and east of the Conservation Area. The Conservation Area is completely isolated from these marshes due to surrounding

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commercial development and thus there is no wildlife corridor value associated with the Conservation Area as compared to the marsh environment along the Carquinez Straights.

7. SPECIAL-STATUS SPECIES DEFINITION

7.1 Definitions

For the purposes of this analysis, special-status species are plants and animals that are legally protected under the California and Federal Endangered Species Acts (CESA and FESA, respectively) or other regulations, and species that are considered rare by the scientific community (for example, the CNPS). Special-status species are defined as:

- plants and animals that are listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 *et seq.*; 14 CCR §670.1 *et seq.*) or the FESA (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; various notices in the Federal Register [FR] for proposed species);
- plants and animals that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- plants and animals that meet the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;
- Plants occurring on Lists 1A, 1B, 2, 3, and 4 of CNPS' *Electronic Inventory* (CNPS 2001). The California Department of Fish and Wildlife recognizes that Lists 1A, 1B, and 2 of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFW requests their inclusion in EIRs. Plants occurring on CNPS Lists 3 and 4 are "plants about which more information is necessary," and "plants of limited distribution," respectively (CNPS 2001). Such plants may be included as special-status species on a case by case basis due to local significance or recent biological information;
- migratory nongame birds of management concern listed by U.S. Fish and Wildlife Service (Migratory Nongame Birds of Management Concern in the United States: The list 1995; Office of Migratory Bird Management; Washington D.C.; Sept. 1995);
- animals that are designated as "species of special concern" by CDFG (2012);
- Animal species that are "fully protected" in California (Fish and Game Codes 3511, 4700, 5050, and 5515).

In the paragraphs below we provide further definitions of legal status as they pertain to the special-status species discussed in this report or in the attached tables.

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Federal Endangered or Threatened Species. A species listed as Endangered or Threatened under the FESA is protected from unauthorized “take” (that is, harass, harm, pursue, hunt, shoot, trap) of that species. If it is necessary to take a Federal listed Endangered or Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from the USFWS prior to initiating the take.

State Threatened Species. A species listed as Threatened under the state Endangered Species Act (§2050 of California Fish and Game Code) is protected from unauthorized “take” (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to “take” a state listed Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the “take.”

California Species of Special Concern. These are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation affords no legally mandated protection; however, pursuant to the CEQA Guidelines (14 CCR §15380), some species of special concern could be considered “rare.” Pursuant to its rarity status, any unmitigated impacts to rare species could be considered a “significant effect on the environment” (§15382). Thus, species of special concern must be considered in any project that will, or is currently, undergoing CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

CNPS List Species. The California Native Plant Society (CNPS) maintains an inventory of special status plant species. This inventory has four lists of plants with varying rarity. These lists are: List 1, List 2, List 3, and List 4. Although plants on these lists have no formal legal protection (unless they are also state or federal listed species), the California Department of Fish and Wildlife requests the inclusion of List 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. List 1 species have the highest priority: List 1A species are thought to be extinct, and List 1B species are known to still exist but are considered “rare, threatened, and endangered in California and elsewhere.” All of the plants constituting List 1B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the CDFW Code, and are eligible for state listing (CNPS 2001). List 2 species are rare in California, but more common elsewhere. Lists 3 and 4 contain species about which there is some concern, and are review and watch lists, respectively. Additionally, in 2006 CNPS updated their lists to include “threat code extensions” for each list. For example, List 1B species would now be categorized as List 1B.1, List 1B.2, or List 1B.3. These threat codes are defined as follows: .1 is considered “seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)”; .2 is “fairly endangered in California (20-80% of occurrences threatened)”; .3 is “not very endangered in California (less than 20% of occurrences threatened or no current threats known).”

Under the CEQA review process only CNPS List 1 and 2 species are considered since these are the only CNPS species that meet CEQA’s definition of “rare” or “endangered.” Impacts to List 3 and 4 species are not regarded as significant pursuant to CEQA.

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Fully Protected Birds. Fully protected birds, such as the white-tailed kite and golden eagle, are protected under California Fish and Game Code (§3511). Fully protected birds may not be “taken” or possessed (i.e., kept in captivity) at any time.

7.2 Potential Special-Status Plants on the Project Site

An initial site assessment was conducted by M&A on August 14, 2012 that covered all vegetated habitats on the project site and the Conservation Area. However, full surveys for special-status plants have not yet been conducted. It should be noted that according to CDFW’s 2009 Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations, protocol surveys may require yearly surveys for annual and short-lived perennial plants in herbaceous plant communities to accurately document baseline conditions for the purposes of impact assessment. Since surveys in herbaceous plant communities are valid for only one year, M&A recommends that surveys should be conducted when a development plan is in place or until after a tentative map has been approved by the City of Benicia.

Figure 4 provides a graphical illustration of the closest known records for special-status species within 5 miles of the property and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. According to the CNPS’ *Inventory* and CDFW’s CNDDDB, a total of 54 special-status plant species are known to occur in the region of the project site (Table 3). Several of these plants occur in specialized habitats such as serpentinite soils, chaparral, coastal scrub or marshes. The Conservation Area’s seasonal wetlands, emergent vegetation and alkaline substrate provide suitable habitat for 10 of these 54 special-status plant species; however, none of the plants within the Conservation Area would be affected by the proposed development of the project site.

The project site is significantly disturbed and thus would be unlikely to support special-status plants. Regardless, as the fill was placed there many years ago, it now supports a ruderal grassland with scattered coyote brush and a native herbaceous species component. Thus rare plants cannot be ruled out without conducting appropriately timed rare plant surveys. The project site supports marginal habitat for three plant species. These plants are discussed below.

7.2.1 PAPPOSE TARPLANT

Pappose tarplant (*Centromadia parryi* ssp. *parryi*) is a CNPS List 1B.2 species. It has no state or federal status. This annual member of the sunflower family is found in chaparral, coastal prairie, meadows, seeps, marshes, and vernal mesic grassland, often in alkaline soils at 6 to 1377 feet elevation. Its mapped range extends from just south of Chico to San Mateo. Pappose tarplant flowers between May and November. The closest CNDDDB occurrence for this plant is 3.9 miles north of the project site (Occurrence No. 7); this CNDDDB occurrence is from 1998. This population is located west of Highway 680, just 1.5 miles northwest of Morrow Island and is believed to still be extant.

The project site provides marginal habitat for this plant. While M&A conducted a field reconnaissance of the project site in August 2012, this survey was general in nature and did not specifically focus on identifying every plant occurring onsite nor account for the density of wetland vegetation. Hence, the field reconnaissance would not meet CDFW’s criteria as

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stipulated in their 2009 survey guidelines as a formal special-status plant survey. Formal surveys on the project site throughout the growing season for pappose tarplant, and other special-status plant species, would be necessary within one year of proposed site development to conform to CDFW's survey guidelines. In the absence of such focused surveys, impacts to special-status plants are considered potentially significant. See the Impacts and Mitigation section for details.

7.2.2 HEARTSCALE

Heartscale (*Atriplex cordulata*) is a CNPS List 1B.2 species. It has no state or federal status. This annual herb is found in chenopod scrub, meadows and seeps, and grassland habitats with sandy, saline, or alkaline soils in the Central Valley from the Sacramento region southward. It flowers from April through October. According to the CNPS *Inventory*, this species is known to occur within the Vine Hill and other 9 surrounding U.S. Geological Survey Quadrangles although there are no CNDDDB records for this species within 5 mile of the project site.

The project site provides marginal habitat for heartscale. While one reconnaissance site survey was conducted in August during this plant's flowering period, it was not a rare plant survey. Thus, this plant cannot be dismissed without conducting formal surveys.

7.2.3 BRITTLESCALE

Brittlescale (*Atriplex depressa*) is a CNPS List 1B.2 species. It has no state or federal status. This annual chenopod is found in chenopod scrub, meadows, seeps, playas, valley and foothill grasslands and vernal pools with alkaline or clay soils. It flowers from April through October. According to the CNPS *Inventory*, this species is known to occur within the Vine Hill and other 9 surrounding U.S. Geological Survey Quadrangles although there are no CNDDDB records for this species within 5 mile of the project site.

While one reconnaissance site survey was conducted in August during this plant's flowering period, it was not a rare plant survey. Thus, this plant cannot be dismissed without conducting formal surveys..

7.3 Potential Special-Status Animals on the Project Site

Figure 4 provides a graphical illustration of the closest known records for special-status species within 5 miles of the property and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status animals have ever been mapped on or adjacent to the project site. M&A wildlife biologist, Mr. Geoff Monk, conducted a site evaluation on August 14, 2012. No special-status wildlife species were observed on the project site during this site evaluation. However, according to the CNDDDB, a total of 17 special-status animal species are known to occur within five miles of the project site (Table 4). Of these 17 special-status species, only 4 have any possibility of occurring on the project site and/or on the adjacent Conservation Area.

7.3.1 NORTHERN HARRIER

The northern harrier (*Circus cyaneus*) is California Species of Special Concern (CSC) and is protected under the Federal Migratory Bird Treaty Act (50 CFR 10.13). Its nest, eggs, and young

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are also protected under California Fish and Game Code (§3503, §3503.5, §3800, and §3513). The northern harrier is a slender bodied raptor, typically 17 to 19 inches long. Females are larger than males. It has an average wing span of 43 inches, and the wings are long and “m-shaped.” Northern harriers have long, narrow tails, and weights range from 13 to 17 ounces. A white rump-patch identifies the species, as does an owl-like facial disk. Males are gray above, females and juveniles brown. Juveniles are orange underneath, females are brown and white streaked. Unfeathered parts are yellow. The iris (eye) is also yellow.

Northern harrier is a raptor species that preys upon a variety of species, particularly on voles (*Microtus californicus*). They are almost exclusively diurnal. Northern harriers have an average life span of 1.5 years, and can be reproductively mature in their first year. These are generally monogamous breeders, but polygyny is known to occur; mating occurs in late winter. Three to five eggs are laid, usually in late April through early July. Thirty to 32 days of incubation is followed by a 33 day average nesting stage. Young fledge at highly variable rates, but 33 days is the average. Parents continue provide some care for young until approximately 56 days of age. Northern harriers typically nest on the ground in open (treeless) habitats of variable vegetation and hydrology. Even at dry nesting sites, however, nests are still built in proximity to water courses. Open habitats are also used outside of the nesting season.

The closest CNDDDB occurrence for this species is 4.4 miles west of the project site (Occurrence No. 30); this CNDDDB occurrence is from 2004. At this occurrence a nesting pair was sighted northwest of Benicia at the upper end of South Hampton Bay. During the site assessment on August 14, 2012, M&A observed one individual flying overhead. The seasonal wetland habitat on the adjacent Conservation Area provides suitable nesting and foraging habitat. Potential impacts to the northern harrier from the proposed project include disturbance to nesting birds on the adjacent Conservation Area parcel, and possibly abandonment and death of young. Hence, until nesting surveys are conducted that confirms or negates this species' presence, impacts to this species from the proposed project would likely be regarded as potentially significant pursuant to CEQA. See the Impacts and Mitigation that follow in the sections below for details.

7.3.2 TRICOLORED BLACKBIRD

Tricolored blackbird (*Agelaius tricolor*) is a state “species of special concern.” A gregarious species, the tricolored blackbird is typically found near freshwater, particularly near marsh habitat. Loss of wetland habitats is regarded as the principal factor responsible for this species population decline (Beedy, 1992). Nesting colonies are typically found in stands of cattail (*Typha* spp.) and bulrush (*Scirpus* spp.), although they are also known to utilize blackberry patches (*Rubus* sp.) and thistle clumps (*Cirsium* spp. and *Cynara* spp.) adjacent to water. Flooded lands, margins of ponds, and grassy fields in summer and winter provide typical foraging habitat for this species.

The closest CNDDDB occurrence for this species is 2.1 miles west of the project site (Occurrence No. 30); this CNDDDB occurrence is from 1987. At this occurrence, 6 males were observed 2 miles north of Benicia near the Lake Herman parking lot. The seasonal wetland habitat on the adjacent Conservation Area provides marginally suitable nesting and foraging habitat in its small patches of cattails and bulrushes although it lacks open water onsite. However, since this habitat

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would not be affected by the development of the project site, there would be no impacts to this species from the proposed development.

7.3.3 SUISUN SONG SPARROW

The Suisun song sparrow (*Melospiza melodia* ssp. *maxillaris*) is a California species of special concern and is protected under the Federal Migratory Bird Treaty Act (50 CFR 10.13). Its active nest, eggs, and young are protected under California Fish and Game Code Section 3503. This subspecies of the song sparrow is difficult to distinguish from other subspecies of song sparrow in the field. Identification is made using a combination of morphological characteristics and geographic location.

Typically, this sparrow frequents brackish water marshes surrounding Suisun Bay, especially where cattails (*Typha* sp.), tules (*Scirpus* sp.), and pickleweed are found. The subspecies is particularly sedentary and is rarely observed any distance from tidally influenced areas (J. Geupel, 1991).

The closest CNDDDB occurrence for this species is 0.4-mile east of the project site (Occurrence No. 30); this CNDDDB occurrence is from 2004. Seven to thirty individuals were sighted in the Goodyear Slough and this population is presumed extant. Marginally suitable habitat is provided for the Suisun song sparrow on the project site. Hence, until formal surveys are conducted that confirm this species' presence or absence, impacts to this species from the proposed project would likely be regarded as potentially significant pursuant to CEQA. See the Impacts and Mitigation section for details.

7.3.4 SALT MARSH HARVEST MOUSE

The salt marsh harvest mouse (*Reithrodontomys raviventris*) was federally listed as endangered in its entire range on October 13, 1970 (Federal Register 35: 16047). Critical habitat has not been designated for this species. This mouse is also state listed as endangered.

The salt marsh harvest mouse is a small, native rodent that is endemic to the tidal and diked marshes of San Francisco Bay, San Pablo Bay, and Suisun Bay of northern California. There are two subspecies of the salt marsh harvest mouse: the northern subspecies (*Reithrodontomys raviventris halicoetes*) and the southern subspecies (*Reithrodontomys raviventris raviventris*). The northern subspecies lives in the marshes of the San Pablo and Suisun bays, the southern subspecies lives in the marshes of Corte Madera, Richmond, and South San Francisco Bay (Goals Project 2000).

The habitat most commonly associated with this species of mouse is the mid-to-upper tidal salt marsh. Salt marsh harvest mice are critically dependent on dense vegetative cover and their preferred habitat is dominated by pickleweed (*Salicornia virginica*) (USFWS 1984). Studies have shown that salt marsh harvest mice are most commonly found in pickleweed communities with the following characteristics: one hundred percent cover, at a minimum 50 percent pickleweed cover; a cover depth of 30 to 50 centimeters at summer maximum; with habitat complexity in the form of fat hen (*Atriplex prostrata*) and alkali heath (*Frankenia salina*) or other halophytes (salt-tolerant plants) (USFWS 1984). In marshes with an upper zone of

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peripheral halophytes or adjoining grasslands, mice use this vegetation to escape the higher tides. However, recent trapping studies conducted by CDFW biologists have found that this mouse will seek refuge in three-square bulrush (*Schoenoplectus americanus*). Diet appears to consist mainly of salt marsh plant stems and leaves, with a low proportion of seeds and insects; in winter a high proportion of grasses are consumed. The northern subspecies of the salt marsh harvest mouse can drink sea water for extended periods but prefers freshwater. The southern subspecies cannot subsist on sea water but it actually prefers moderately salty water over freshwater. Although salt marsh harvest mice are mostly active at night, they are sometimes active during daylight hours. Breeding occurs from spring through autumn. Each female usually has one or two litters per year. Nests are quite minimal, often built of grass, sometimes may be in shrubs or taller vegetation.

There were several trapping studies for the salt marsh harvest mouse that occurred between 1984 and 1994 near the project site. The closest CNDDDB record is southeast of the project site, east of the railroad tracks (Occurrence No. 156) and is presumed extant. There are 14 additional records in the immediate area of the project site east of the railroad tracks (Shellhammer 2012). The closest trapping record to the project site in the San Francisco Estuary Institute EcoAtlas Salt Marsh Harvest Mouse Database is 450 feet south of the project site (Shellhammer op. cit.). Significant development has occurred in the immediate area of the proposed project site in the last 15 years and many of these record locations appear to be developed at this time.

Based on Monk & Associates' field survey, it is our determination that the upland habitats on the project site do not provide the necessary habitat components to support a salt marsh harvest mouse population. However, it is possible that the wetlands on the adjacent Conservation Area may occasionally provide refuge habitat for salt marsh harvest mice during high tide events. Figures 2 and 3 show the location of the project site, the adjacent wetland habitats, and the marshes adjacent to the Carquinez Straits. The culvert under the raised railway bed could provide a pathway for small mammal immigration to/from the marshes adjacent to the Carquinez Straits where populations of this endangered mouse likely still occur today.

Development of the project site would not impact any habitats likely used by the salt marsh harvest mouse. The project site elevation that is approximately 20 feet higher than the Conservation Area and the complete absence of wetlands on the project site would make it most unlikely that salt marsh harvest mouse would occur on the project site. Regardless, out of an abundance of caution, exclusion fencing should be installed at the project site boundary to prevent rodents from migrating upslope onto the project site from the adjacent Conservation Area. This measure would reduce a potentially significant adverse impact to the salt marsh harvest mouse to a level considered less than significant pursuant to CEQA. See the Impacts and Mitigation that follow in the sections below for details.

8. REGULATORY FRAMEWORK FOR NATIVE WILDLIFE, FISH, AND PLANTS

This section provides a discussion of those laws and regulations that are in place to protect native wildlife, fish, and plants. Under each law we discuss their pertinence to the proposed development.

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8.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) forms the basis for the federal protection of threatened or endangered plants, insects, fish and wildlife. FESA contains four main elements, they are as follows:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit through approval of a Habitat Conservation Plan.

In the case of salt water fish and other marine organisms, the requirements of FESA are enforced by the National Marine Fisheries Service (NMFS). The USFWS enforces all other cases. Below, Sections 9, 7, and 10 of FESA are discussed since they are the sections most relevant to the proposed project.

Section 9 of FESA as amended, prohibits the "take" of any fish or wildlife species listed under FESA as endangered. Under Federal regulation, "take" of fish or wildlife species listed as threatened is also prohibited unless otherwise specifically authorized by regulation. "Take," as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." "Harm" includes not only the direct taking of a species itself, but the destruction or modification of the species' habitat resulting in the potential injury of the species. As such, "harm" is further defined to mean "an act which actually kills or injures wildlife; such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeals (Arizona Cattle Growers' Association, Jeff Menges, vs. the U.S. Fish and Wildlife Service and Bureau of Land Management, and the Southwest Center for Biological Diversity) ruled that the USFWS must show that a threatened or endangered species is present on a project site and that it would be taken by the project activities. According to this ruling, the USFWS can no longer require mitigation based on the probability that the species could use the site. Rather they must show that it is actually present.

Section 9 applies to any person, corporation, federal agency, or any local or State agency. If "take" of a listed species is necessary to complete an otherwise lawful activity, this triggers the need to obtain an incidental take permit either through a Section 7 Consultation as discussed further below (for federal actions or private actions that are permitted or funded by a federal agency), or requires preparation of a Habitat Conservation Plan (HCP) pursuant to Section 10 of FESA (for state and local agencies, or individuals, and projects without a federal "nexus").

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Section 7(a)(2) of the Act requires that each federal agency consult with the USFWS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat for listed species. Critical habitat designations mean: (1) specific areas within a geographic region currently occupied by a listed species, on which are found those physical or biological features that are essential to the conservation of a listed species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a listed species that are determined essential for the conservation of the species.

The Section 7 consultation process applies only to actions taken by federal agencies, or actions by private parties that require federal agency permits, approval, or funding (for example, a private landowner applying to the Corps for a permit). Section 7's consultation process is triggered by a determination of the "action agency" — i.e., the federal agency that is carrying out, funding, or approving a project — that the project "may affect" a listed species or critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation with the USFWS is required. As part of the formal consultation, the USFWS prepares a Biological Opinion assessing whether the proposed action is likely to result in jeopardy to a listed species or adversely modify designated critical habitat. If the USFWS finds "no jeopardy" or adverse modification, it provides an incidental take permit which allows for the taking of a limited number of listed species or critical habitat.

Federal actions include permitting, funding, and entitlements for both federal projects, as well as private projects facilitated by federal actions (for example, a private landowner applying to the Corps for a permit). As an example, if a federally listed endangered species is present in "waters of the United States" on a project site, prior to authorizing impacts to "waters of the United States," the U.S. Army Corps of Engineers (who administers the Clean Water Act) would be required to initiate "formal consultation" with USFWS pursuant to Section 7 of FESA. As part of the formal consultation, the USFWS would then be required to prepare a Biological Opinion based on a review and analysis of the project applicant's avoidance and mitigation plan. The Biological Opinion will either state that the project will or will not result in "take" or threaten the continued existence of the species (not just that population). If an endangered species could be harmed by a proposed project, USFWS has to be in complete concurrence with the proposed avoidance and mitigation plan. If USFWS is not in complete concurrence with the mitigation plan, they will submit a Biological Opinion to the Corps containing a "jeopardy decision" and state that a Corps' permit should not be issued for the pending project. The applicant would then have an opportunity to submit a revised mitigation plan that provides greater protection for the species.

For non-federal entities, Section 10 provides the mechanism for obtaining take authorization. Under Section 10 of FESA, the applicant for an "incidental take permit" is required to submit a "conservation plan" to USFWS or NMFS that specifies, among other things, the impacts that are likely to result from the taking, and the measures the permit applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps. Conservation plans under FESA have come to be known as "habitat conservation plans" or "HCPs" for short. The terms incidental take permit, Section 10 permit, and Section 10(a)(1)(B)

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permit are used interchangeably by USFWS. Section 10(a)(2)(B) of FESA provides statutory criteria that must be satisfied before an incidental take permit can be issued.

8.1.1 RESPONSIBLE AGENCY

FESA gives regulatory authority over terrestrial species and non-anadromous fish to the USFWS. The NMFS has authority over marine mammals and anadromous fish.

8.1.2 APPLICABILITY TO THE PROPOSED PROJECT

The project site does not provide fisheries habitat; hence, there would be no impacts to federally listed fish species.

The project site does not provide suitable habitat conditions for federally listed plant or animal species; however, the Conservation Area may provide refugia for the state and federal listed salt marsh harvest mouse. Out of an abundance of caution, exclusion fencing should be installed at the project site boundary to prevent rodents from migrating onto the project site from the adjacent Conservation Area. This measure would avoid a potentially significant adverse impact to the salt marsh harvest mouse. .

8.2 Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703-712, July 3, 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989) makes it unlawful to “take” (kill, harm, harass, shoot, etc.) any migratory bird listed in Title 50 of the Code of Federal Regulations, Section 10.13, including their nests, eggs, or young. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, wading birds, seabirds, and passerine birds (such as warblers, flycatchers, swallows, etc.).

8.2.1 APPLICABILITY TO THE PROPOSED PROJECT

Suisun song sparrow could nest on the project site. This bird species is protected pursuant to the Migratory Bird Treaty Act. Also, most if not all of the common songbirds that occur on the site are also protected pursuant to this Act. As long as there is no direct mortality of species protected pursuant to the Migratory Bird Treaty Act caused by development of the site, there should be no constraints to development of the site. Since “take” is the issue (which means to kill or harm), it is expected that most birds will fly out of harm’s way. However, nests that have eggs or nestlings cannot maneuver out of harm’s way. Thus, the primary issue is that a proposed project can harm nesting birds. To comply with the Migratory Bird Treaty Act, all active nest sites would have to be avoided while such birds were nesting. Upon completion of nesting, the project could commence as otherwise planned. Please review specific requirements for avoidance of nest sites for potentially occurring species in the Impacts and Mitigation Section below.

8.3 State Endangered Species Act

8.3.1 SECTION 2081 OF THE STATE ENDANGERED SPECIES ACT

In 1984, the state legislated the California Endangered Species Act (CESA) (Fish and Game Code §2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats. State agencies will not approve private or public projects under their jurisdiction that

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would impact threatened or endangered species if reasonable and prudent alternatives are available. Because CESA does not have a provision for "harm" (see discussion of FESA, above), CDFW considerations pursuant to CESA are limited to those actions that would result in the direct take of a listed species.

If CDFW determines that a proposed project could impact a State listed threatened or endangered species, CDFW will provide recommendations for "reasonable and prudent" project alternatives. The CEQA lead agency can only approve a project if these alternatives are implemented, unless it finds that the project's benefits clearly outweigh the costs, reasonable mitigation measures are adopted, there has been no "irreversible or irretrievable" commitment of resources made in the interim, and the resulting project would not result in the extinction of the species. In addition, if there would be impacts to threatened or endangered species, the lead agency typically requires project applicants to demonstrate that they have acquired "incidental take" permits from CDFW and/or USFWS (if it is a Federal listed species) prior to allowing/permitting impacts to such species.

If proposed projects would result in impacts to a State listed species, an "incidental take" permit pursuant to §2081 of the Fish and Game Code would be necessary (versus a Federal incidental take permit for Federal listed species). CDFW will issue an incidental take permit only if:

- 1) The authorized take is incidental to an otherwise lawful activity;
- 2) the impacts of the authorized take are minimized and fully mitigated;
- 3) measures required to minimize and fully mitigate the impacts of the authorized take:
 - a) are roughly proportional in extent to the impact of the taking on the species;
 - b) maintain the project applicant's objectives to the greatest extent possible; and,
 - c) capable of successful implementation; and,
- 4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with, and the effectiveness of, the measures.

If an applicant is preparing a habitat conservation plan (HCP) as part of the federal 10(a) permit process, the HCP might be incorporated into the §2081 permit if it meets the substantive criteria of §2081(b). To ensure that an HCP meets the mitigation and monitoring standards in Section 2081(b), an applicant should involve CDFW staff in development of the HCP. If a final Biological Opinion (federal action) has been issued for the project pursuant to Section 7 of the federal Endangered Species Act, it might also be incorporated into the §2081 permit if it meets the standards of §2081(b).

No §2081 permit may authorize the take of a species for which the Legislature has imposed strict prohibitions on all forms of "take." These species are listed in several statutes that identify "fully protected" species and "specified birds." See Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517. If a project is planned in an area where a "fully protected" species or a "specified bird" occurs, an applicant must design the project to avoid all take.

In September 1997, Assembly Bill 21 (Fish and Game Code §2080.1) was passed. This bill allows an applicant who has obtained a "non-jeopardy" federal Biological Opinion pursuant to Section 7, or who has received a federal 10(a) permit (federal incidental take permit), to submit

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the federal opinion or permit to CDFW for a determination as to whether the federal document is “consistent” with CESA. If after 30 days CDFW determines that the federal incidental take permit is consistent with state law, and that all state listed species under consideration have been considered in the federal Biological Opinion, then no further permit or consultation is required under CESA for the project. However, if CDFW determines that the federal opinion or permit is not consistent with CESA, or that there are state listed species that were not considered in the federal Biological Opinion, then the applicant must apply for a state permit under Section 2081(b). The process provided in Fish and Game Code §2080.1 (Assembly Bill 21) may be of use when the incidental take would occur to species that are listed under both the federal and state endangered species acts. Assembly Bill 21 is of no use if an affected species is state-listed, but not federally listed.

State and federal incidental take permits are issued on a discretionary basis, and are typically only authorized if applicants are able to demonstrate that impacts to the listed species in question are unavoidable, and can be mitigated to an extent that the reviewing agency can conclude that the proposed impacts would not jeopardize the continued existence of the listed species under review. Typically, if there would be impacts to a listed species, mitigation that includes habitat avoidance, preservation, and creation of endangered species habitat is necessary to demonstrate that projects would not threaten the continued existence of a species. In addition, management endowment fees are usually collected as part of the agreement for the incidental take permit(s). The endowment is used to manage any lands set-aside to protect listed species, and for biological mitigation monitoring of these lands over (typically) a five-year period.

8.3.2 APPLICABILITY TO PROPOSED PROJECT

The project site does not provide fisheries habitat; hence, there would be no impacts to state listed fish species.

The project site does not provide suitable habitat conditions for state listed plant or animal species; however, the Conservation Area may provide refugia for the state listed salt marsh harvest mouse. Out of an abundance of caution, exclusion fencing should be installed at the project site boundary to prevent rodents from migrating onto the project site from the adjacent Conservation Area. This measure would avoid a potentially significant adverse impact to the salt marsh harvest mouse.

8.4 Applicable CEQA Regulations

Section 15380 of CEQA defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. “Rare” species are defined by CEQA as those who are in such low numbers that they could become endangered if their environment worsens; or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the FESA. The CEQA Guidelines also state that a project will normally have a significant effect on the environment if it will “substantially affect a rare or endangered species of animal or plant or the habitat of the species.” The significance of impacts to a species under

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CEQA, therefore, must be based on analyzing actual rarity and threat to that species despite its legal status or lack thereof.

8.4.1 APPLICABILITY TO PROPOSED PROJECT

This document addresses impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA. This document is suitable for use by the CEQA lead agency (in this case, the City of Benicia) for preparation of any CEQA review document prepared for the proposed project. This report has been prepared as a Biology Section that, once a project has been defined, with minor modifications, would be suitable for incorporation into an Initial Study or the biology section of an Environmental Impact Report.

8.5 California Fish and Game Code § 3503, 3503.5, 3511, and 3513

California Fish and Game Code §3503, 3503.5, 3511, and 3513 prohibit the “take, possession, or destruction of birds, their nests or eggs.” Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered “take.” Such a take would also violate federal law protecting migratory birds (Migratory Bird Treaty Act).

All raptors (that is, hawks, eagles, owls) their nests, eggs, and young are protected under California Fish and Game Code (§3503.5). Additionally, “fully protected” birds, such as the white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), are protected under California Fish and Game Code (§3511). “Fully protected” birds may not be taken or possessed (that is, kept in captivity) at any time.

8.5.1 APPLICABILITY TO THE PROPOSED PROJECT

The project site provides suitable nesting habitat for one special-status passerine (perching) bird species: Suisun song sparrow; it also provides suitable nesting habitat for many common passerine bird species. Thus, preconstruction surveys would have to be conducted to ensure that there is no direct take of these birds including their eggs or young. Any active nests that were found during preconstruction surveys would have to be avoided by the project. Suitable non-disturbance buffers would have to be established around nest sites until the nesting cycle is complete. More specifics on the size of buffers are provided in the “Impacts and Mitigation” section.

8.6 Protected Amphibians

Under Title 14 of the California Code of Regulations (CCR 14, Division 1, Subdivision 1, Chapter 5, §41. Protected Amphibians), protected amphibians, such as the California tiger salamander may only be taken under special permit from California Department of Fish and Wildlife issued pursuant to Sections 650 and 670.7 of these regulations.

8.6.1 APPLICABILITY TO THE PROJECT

No special-status or protected amphibians likely would be found on or adjacent to the project site. As such, no significant adverse impacts are expected to occur to special-status or protected amphibians from implementation of the proposed project.

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9. REGULATORY REQUIREMENTS PERTAINING TO WATERS OF THE UNITED STATES AND STATE

This section presents an overview of the criteria used by the U.S. Army Corps of Engineers, the California Regional Water Quality Control Board, the State Water Resources Control Board, and CDFW to determine those areas within a project area that would be subject to their regulation.

9.1 U.S. Army Corps of Engineers Jurisdiction and General Permitting

9.1.1 SECTION 404 OF THE CLEAN WATER ACT

Pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), the U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into "waters of the United States" (33 CFR Parts 328 through 330). This requires project applicants to obtain authorization from the Corps prior to discharging dredged or fill material into any water of the United States. In the Federal Register "waters of the United States" are defined as, "...all interstate waters including interstate wetlands...intrastate lakes, rivers, streams (including intermittent streams), wetlands, [and] natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce..." (33 CFR Section 328.3).

Limits of Corps' jurisdiction.

(a) Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)

(b) Tidal Waters of the United States. The landward limits of jurisdiction in tidal waters:

- (1) Extends to the high tide line, or
- (2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.

(c) Non-Tidal Waters of the United States. The limits of jurisdiction in non-tidal waters:

- (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
- (2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
- (3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Section 404 jurisdiction in "other waters" such as lakes, ponds, and streams, extends to the upward limit of the ordinary high water mark (OHWM) or the upward extent of any adjacent wetland. The OHWM on a non-tidal water is the "line on shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]). Wetlands are defined as "...those areas that are inundated or saturated by surface or ground water at a frequency and duration to support a prevalence of vegetation adapted for life in saturated soil conditions" (33 CFR Section 328.8 [b]). Wetlands

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usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded) to be regulated by the Corps pursuant to Section 404 of the Clean Water Act.

It should be noted that the extent of the Corps jurisdiction pursuant to Section 404 of the Clean Water Act was recently modified. In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, the U.S. Supreme Court [148 L. Ed. 2d 576 (2001) (SWANCC)] ruled that the Corps exceeded its authority under the Clean Water Act when it regulated discharges of fill material into "isolated" waters used as habitat by migratory birds. Accordingly, waters (including wetlands) that are not connected hydrologically to navigable waters are not subject to regulation by the Corps.

Another Supreme Court decision also significantly changes how the Corps defines waters of the United States. On June 19, 2006 the United States Supreme Court, in a "four-one-four" decision, addressed the extent of Clean Water Act jurisdiction over wetlands adjacent to tributaries of navigable waters. In two consolidated cases, *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers*, a five-Justice majority of the Court remanded the case to the Sixth circuit for further consideration. The Court was unable to produce a majority vote in favor of any one jurisdictional standard for the Sixth Circuit to apply (or for the regulated community to follow). Instead, Justice Scalia authored a plurality opinion that would significantly narrow the reach of federal wetlands jurisdiction, while Justice Kennedy, concurring in the judgment only, concluded that the appropriate test for jurisdiction over wetlands was the presence of a "significant nexus" between wetlands and "navigable waters" in the traditional sense. The remaining four Justices, in a dissenting opinion by Justice Stevens, would have upheld the Corps of Engineers' assertion of jurisdiction and would have affirmed the Sixth Circuit's decision. When no opinion garners at least five votes, lower courts follow the concurrence that reached the result on the narrowest grounds. Here, that is Justice Kennedy's opinion. Unfortunately, Justice Kennedy did not provide specific guidance about the extent of federal jurisdiction over wetlands that are adjacent to tributaries of navigable waters.

Justice Kennedy concluded that the Clean Water Act applies only to those wetlands with a "significant nexus" to "navigable waters in the traditional sense." A significant nexus exists when a wetland, "either alone or in combination with similarly situated lands in the region, significantly affect[s] the chemical, physical, and biological integrity" of factually navigable waters. Under Supreme Court precedent, wetlands adjacent to navigable waters meet this test. For wetlands located near tributaries of navigable waters, however, each wetland demands a case-by-case jurisdictional inquiry. We know that a "mere hydrological connection" is not enough in all cases, and that "speculative or insubstantial" effects on water quality will not suffice to satisfy the test. [Preceding text excerpted from a newsletter prepared by Briscoe, Ivester, and Bazel LLP]. The Corps of Engineers and the Environmental Protection Agency jointly prepared an Instructional Guidebook to aid Corps field staff in completing the new "Approved Jurisdictional Determination Form," and is intended to be used as the U.S. Army Corps of Engineers Regulatory National Standard Operating Procedures for conducting an approved jurisdictional determination.

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To remain in compliance with Section 404 of the Clean Water Act, project proponents and property owners (applicants) are required to acquire authorization from the Corps prior to discharging or otherwise impacting “waters of the United States”. In many cases, the Corps must visit a proposed project area to confirm the extent of area falling under their jurisdiction (to conduct a “jurisdictional determination”) prior to authorizing any permit for that project. Typically, at the time the jurisdictional determination is conducted, applicants (or their representative) will discuss the appropriate permit application that would be filed with the Corps for permitting the proposed impact(s) to “waters of the United States.”

Pursuant to Section 404 of the Clean Water Act, the Corps normally provides two alternatives for permitting impacts to “waters of the United States.” The first alternative would be to use Nationwide Permit(s). The second alternative is to apply to the Corps for an Individual Permit (33 CFR Section 235.5(2)(b)). The application process for Individual Permits is extensive and includes a public review (i.e., public notice and receipt of public comments) and must contain an “alternatives analysis” that is prepared pursuant to Section 404(b) of the Clean Water Act (33 U.S.C. 1344(b)). The alternatives analysis is also typically reviewed by the federal Environmental Protection Agency (EPA), and thus brings another resource agency into the permitting framework. Both the Corps and EPA take the initial viewpoint that there are practical alternatives to any proposed project there would not result in impacts to waters of the U.S., if the proposed permitted action is not a water dependent project (e.g. a pier or a dredging project). Alternative analyses therefore must provide convincing reasons that the proposed impacts are unavoidable.

Nationwide Permit(s) (NWP) are a type of general permit administered by the Corps and issued on a nationwide basis that authorize minor activities that affect Corps regulated waters. Under the NWP program, if certain conditions are met, the specified activities can take place without the need for an individual or regional permit from the Corps (33 CFR, Section 235.5[c][2]). In order to use NWP(s), a project must meet 27 general nationwide permit conditions, and all specific conditions pertaining to the NWP being used (as presented at 33 CFR Section 330). It is also important to note that pursuant to 33 CFR Section 330.4(e), there may be special regional conditions or modifications to NWPs that could have relevance to individual proposed projects. Finally, pursuant to 33 CFR Section 330.6(a), Nationwide permittees may, and in some cases, request from the Corps confirmation that an activity complies with the terms and conditions of the NWP intended for use (*i.e.*, must receive “verification” from the Corps).

Prior to finalizing design plans, the applicant needs to be aware that the Corps maintains a policy of “no net loss” of wetlands (waters of the United States). Therefore, it is incumbent upon applicants that propose to impact Corps regulated areas to submit a mitigation plan that demonstrates that impacted regulated areas would be recreated (*i.e.*, impacts would be mitigated). Typically, the Corps requires mitigation to be “in-kind” (*i.e.*, if a stream channel would be filled, mitigation would include replacing it with a new stream channel), and at a minimum of a 1:1 replacement ratio (*i.e.*, one acre or fraction thereof recreated for each acre or fraction thereof lost). Often a 2:1 replacement ratio is required. Usually the 2:1 ratio is met by recreation or enhancement of an equivalent amount of wetland that is impacted, in addition to preserving an equivalent amount of wetland. In some cases, the Corps allows “out-of-kind” mitigation if the compensation/mitigation has greater value than the impacted area. Finally, there

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are many Corps approved wetland mitigation banks where wetland mitigation credits can be purchased by applicants to meet their mitigation requirements. Mitigation banks have limited distribution and the Corps typically only allows their use when projects have limited impacts. If a project meets conditions of Nationwide Permits, and an Individual Permit is not required by the Corps, then typically the Corps allows use of wetland mitigation banks (if available) to meet its no net loss requirement and to otherwise mitigate the impacts to waters of the United States resulting from the proposed project.

9.1.2 APPLICABILITY TO THE PROPOSED PROJECT

The project site does not support any areas that would likely meet the Corps criteria as “waters of the U.S.” Hence, the proposed development of the project site would not result in impacts to waters of the U.S. If the proposed project requires an outfall structure into the drainage ditch along the railroad tracks or the potential wetland habitats on the Conservation Area, authorization from the Corps for any outfall structure would likely be necessary pursuant to Section 404 of the Clean Water Act. If impacts to any confirmed Corps tributary are less than 300 linear feet and total impacts to Corps regulated jurisdictional areas remains less than 0.50-acre, use of Nationwide Permit would likely be possible, provided the project met all conditions of Nationwide Permit and all other general and regional permit conditions. See the Impacts and Mitigation section below for further detail.

It is likely that most of the Conservation Area parcel would be regulated as seasonal wetland pursuant to the Clean Water Act. At the time of the August 14, 2012 survey, M&A identified seasonal wetlands and two man-made drainages/ditches on the Conservation Area parcel. The man-made drainage ditch at the northern boundary flows southeast to a sump area at the northeastern corner of the Conservation Area parcel. Stormwater draining from adjacent developed surfaces may or may not have been pumped offsite in the past. The seasonal wetlands on the Conservation Area parcel likely retain water or persist as saturated areas for many months each fall/winter/spring. Ultimately most high flows drain offsite via the concrete culvert that runs under the railroad tracks on the eastern side of the Conservation Area parcel. This culvert sits approximately one foot below the Conservation Area parcel elevation. The drainage and the seasonal wetlands on the Conservation Area parcel would likely meet the Corps criteria as “waters of the U.S.” State Water Resources Control Board (SWRCB) / California Regional Water Quality Control Board (RWQCB).

9.1.3 SECTION 401 OF THE CLEAN WATER ACT

The SWRCB and RWQCB regulate activities in "waters of the State" (which includes wetlands) through Section 401 of the Clean Water Act. While the Corps administers a permitting program that authorizes impacts to waters of the United States, including wetlands and other waters, any Corps permit authorized for a proposed project would be inoperative unless it is a NWP that has been certified for use in California by the SWRCB, or if the RWQCB has issued a project specific certification or waiver of water quality. Certification of NWPs requires a finding by the SWRCB that the activities permitted by the NWP will not violate water quality standards individually or cumulatively over the term of the permit (the term is typically for five years). Certification must be consistent with the requirements of the federal Clean Water Act, the California Environmental Quality Act, the California Endangered Species Act, and the SWRCB's mandate to protect

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beneficial uses of waters of the State. Any denied (i.e., not certified) NWP, and all Individual Corps permits, would require a project specific RWQCB certification of water quality.

Additionally, if a proposed project would impact waters of the State, including wetlands, the project applicant must demonstrate that the project is unable to avoid these adverse impacts, or water quality certification will most likely be denied. Section 401 Certification may also be denied based on significant adverse impacts to waters of the United States/State, including wetlands. The RWQCB has also adopted the Corps' policy that there shall be "no net loss" of wetlands. Thus, prior to certifying water quality, the RWQCB will impose avoidance mitigation requirements on project proponents that impact waters of the State.

9.1.4 APPLICABILITY TO THE PROPOSED PROJECT

The proposed development of the project site would not result in impacts to waters of the state. Hence, development of the project site would not require a certification of water quality from the RWQCB. If the proposed project requires an outfall structure into the drainage ditch along the railroad tracks or the potential wetland habitats in the Conservation Area, a certification of water quality from the RWQCB would likely be necessary pursuant to Section 401 of the Clean Water Act. See the Impacts and Mitigation section below for further detail.

9.1.5 PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that "any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to file a report of discharge" with the RWQCB through an application for waste discharge (Water Code Section 13260(a)(1)). The term "waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code § 13050(e)). It should be noted that pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB also regulates "isolated wetlands," or those wetlands considered to be outside of the Corps' jurisdiction pursuant to the SWANCC decision (see Corps Section above).

The RWQCB generally considers filling in waters of the State to constitute "pollution." Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (Water Code §13050(1)). The RWQCB litmus test for determining if a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act is if the action could result in any "threat" to water quality.

The RWQCB requires complete pre- and post-development Best Management Practices Plan (BMPs) of any portion of the project site that is developed. This means that a water quality treatment plan for the pre- and post-developed project site must be prepared and implemented. Preconstruction requirements must be consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES). That is, a *Stormwater Pollution Prevention Plan* (SWPPP) must be developed prior to the time that a site is graded (see NPDES section below). In addition, a post construction BMPs plan, or a Stormwater Management Plan (SWMP) must be developed and incorporated into any site development plan.

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9.1.6 APPLICABILITY TO PROPOSED PROJECT

Although there is currently no defined proposed project, it is likely that any grading and construction on the project site will require a pre- and post-development Best Management Practices Plan (BMPs) to protect the adjacent seasonal wetlands and drainages on the Conservation Area parcel. BMPs would ensure the capture and/or treatment of pollutants so that they do not enter off site waterways. At the time a project is proposed, the project engineer would be required to develop a SWPPP that will discuss other measures to control site runoff and “pollution” into offsite waters. This SWPPP would be completed prior to the time a grading permit is issued for the project.

9.1.7 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

In 1972 the Clean Water Act was amended to state that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the Clean Water Act added Section 402(p) which establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program.

While federal regulations allow two permitting options for stormwater discharges (individual permits and General Permits), the SWRCB has elected to adopt only one statewide General Permit at this time that will apply to all stormwater discharges associated with construction activity, except from those on Tribal Lands, in the Lake Tahoe Hydrologic Unit, and those performed by the California Department of Transportation (CalTrans). The General Permit requires all dischargers where construction activity disturbs greater than one acre of land or those sites less than one acre that are part of a common plan of development or sale that disturbs more than one acre of land surface to:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters.
2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
3. Perform inspections of all BMPs.

This General Permit is implemented and enforced by the nine California Regional Water Quality Control Boards (RWQCBs).

Types of Construction Activity Covered by the General Permit

Construction activity subject to this General Permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre or more of total land area. Construction activity that results in soil disturbances to a smaller area would still be subject to this General Permit if the construction activity is part of a larger common plan of development that encompasses greater than one acre of soil disturbance, or if

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there is significant water quality impairment resulting from the activity. Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility, nor does it include emergency construction activities required to protect public health and safety. Project proponents (landowners) should confirm with the local RWQCB whether or not a particular routine maintenance activity is subject to this General Permit.

9.1.8 2009 CHANGES TO THE NPDES PROGRAM AND USE OF THE GENERAL PERMIT

[This section excerpted in part from Morrison Foerster Legal Updates and News September 2009, by Robert L. Falk and Corinne Fratini]. The California State Water Resources Control Board (“State Water Board”) has adopted a new National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (“Construction General Permit”). The new Construction General Permit which was issued pursuant to the federal Clean Water Act and is enforceable through citizens’ suits, represents a dramatic shift in the State Water Board’s approach to regulating new and redevelopment sites, imposing new affirmative duties and fixed standards on builders and developers. Changes to use of the General Permit became effective on July 1, 2010.

The new Construction General Permit does not completely carry forward the former qualitative and self-selected compliance approach based on preparation of a SWPPP. Instead, developers and construction contractors must implement specific BMPs, achieve quantitatively-defined (i.e., numeric) pollutant-specific discharge standards, and conduct much more rigorous monitoring based on the project’s projected risk level.

The State Water Board’s new quantitative standards take a two-tiered approach, depending on the risk level associated with the site in question. Exceedance of a benchmark Numeric Action Level (“NAL”) measured in terms of pH and turbidity (a measure related to both the amount of sediment in and the velocity of site runoff) triggers an additional obligation to implement additional BMPs and corrective action to improve SWPPP performance. For medium- and high-risk sites, failure to meet more stringent numeric standards for pH and turbidity, known as Numeric Effluent Limitations (“NELs”), will also automatically result in a permit violation and be directly enforceable in administrative or, in the case of a citizens’ group taking up the cause, judicial forums. New minimum BMPs include Active Treatment Systems, which may be necessary where traditional erosion and sediment controls do not effectively control accelerated erosion; where site constraints inhibit the ability to construct a correctly-sized sediment basin; where clay and/or highly erosive soils are present; or where the site has very steep or long slope lengths.

In addition, the new Construction General Permit includes several “post-construction” requirements. These requirements entail that site designs provide no net increase in overall site runoff and match pre-project hydrology by maintaining runoff volume and drainage concentrations. To achieve the required results where impervious surfaces such as roofs and paved surfaces are being increased, developers must implement non-structural off-setting BMPs, such as landform grading, site design BMPs, and distributed structural BMPs (bioretention cells, rain gardens, and rain cisterns). This “runoff reduction” approach is essentially a State Water Board-imposed regulatory requirement to implement Low Impact Development (“LID”) design

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features. Volume that cannot be addressed using non-structural BMPs must be captured in structural BMPs that are approved by the Regional Water Board.

Finally, the new Construction General Permit requires electronic filing of all Permit Registration Documents, NOIs, SWPPPs, annual reports, Notices of Termination, and NAL/NEL Exceedance Reports. This information will be readily available to the Water Boards and citizen enforcers who can then determine whether to initiate enforcement actions—actions which can result in significant penalties and legal fees.

9.1.9 APPLICABILITY TO THE PROPOSED PROJECT

On September 2, 2009, the State Water Resources Control Board adopted Order No. 2009-0009-DWQ, which reissued the Construction General Permit (CGP) for projects disturbing one or more acres of land surface, or those sites less than one acre that are part of a common plan of development or sale that disturbs more than one acre of land surface. Effective July 1, 2010, the requirements of this order replaced and superseded State Water Board Orders No. 99-08-DWQ.

It is the responsibility of the applicant to obtain coverage under the General Permit prior to commencement of construction activities that disturb greater than one acre of area. As the process of receiving coverage under the General Permit became considerably more involved in July 2010, the project engineer should start this permitting loop with the RWQCB at least 6 months in advance of the commencement of construction of the proposed project.

9.2 RWQCB Municipal Storm Water Permitting Program

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases. Under Phase I, which started in 1990, the RWQCBs have adopted NPDES storm water permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. These permits are reissued as the permits expire.

As part of Phase II, the SWRCB adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including non-traditional Small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes.

The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, though small municipalities are not.

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9.2.1 RWQCB PHASE II PROGRAM REQUIREMENTS

The Federal Clean Water Act (CWA) provides that National Pollutant Discharge Elimination System (NPDES) permits for Municipal Separate Storm Sewer Systems (MS4) must require municipalities to reduce pollutants in their storm water discharges to the “maximum extent practicable” (CWA §402(p)(3)(B).) MS4 permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods.” Under the Phase II Requirements implemented by the RWQCB, permittees that operate an MS4 that serves 50,000 people or more, or that serve an area of high growth (which is defined as more than 25% over 10 years), must comply with the Supplemental Provisions contained in Attachment 4 of the Small MS4 General Permit.

The General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems WQO No. 2003-0005-DWQ (Small MS4 General Permit) requires that dischargers develop and implement a Storm Water Management Program (SWMP) that describes the best management practices (BMPs), measurable goals, and time schedules of implementation as well as assigns responsibility of each task. Also, as required by the Small MS4 General Permit, the SWMP must be available for public review and must be approved by the appropriate RWQCB, or its Executive Officer (EO), prior to permit coverage commencing. This information is provided to facilitate the process of an MS4 obtaining Small MS4 General Permit coverage.

The General Permit requires all Permittees to develop and implement a SWMP designed to reduce the discharge of pollutants through their MS4s to the maximum extent practicable. The General Permit requires the SWMP to be fully implemented by the end of the permit term (or five years after designation for those designated subsequent to General Permit adoption).

Permittees must have a Post Construction SWMP for new developments and redevelopment projects. The maximum extent practicable standard involves applying BMPs that are effective in reducing the discharge of pollutants in storm water runoff. In discussing the maximum extent practicable standard, the State Board has said the following: "There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that the maximum extent practicable has not been met. On the other hand, if a permittee employs all applicable BMPs, except those that are demonstrated to be not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard.

The MS4 municipality is required to develop and implement a program that provides local oversight of construction projects within the municipality to ensure that pollutants being discharged from construction sites into the MS4 are reduced. The program must include adopting an ordinance requiring storm water quality controls at construction sites, reviewing site plans, receiving comments from the public regarding the discharge of pollutants from construction sites, inspecting construction sites to ensure that pollutants are not being discharged in storm water runoff, and taking enforcement when necessary. In contrast, the General Construction Permit requires projects to have a site specific SWPPP and to implement BMPs specific to

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activities at the construction site. The General Construction Permit directly regulates landowners engaged in construction involving land disturbance of one acre or more.

9.2.2 APPLICABILITY TO THE PROPOSED PROJECT

The City of Benicia is likely an MS4 permittee (provided its population is over 50,000) and thus is supposed to enforce development of a project specific SWMP that incorporates pre and post construction BMPs. As an MS4 permittee, the City of Benicia would be required to enforce development of a SWMP containing pre and post construction BMPs.

9.3 California Department of Fish and Wildlife Protections

9.3.1 SECTION 1602 OF CALIFORNIA FISH AND GAME CODE

Pursuant to Section 1602 of the California Fish and Game Code, California Department of Fish and Wildlife (CDFW) regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream which CDFW typically considers to include its riparian vegetation. Any proposed activity in a natural stream channel that would substantially adversely affect an existing fish and/or wildlife resource, would require entering into a Streambed Alteration Agreement (SBAA) with CDFW prior to commencing with work in the stream. However, prior to authorizing such permits, CDFW typically reviews an analysis of the expected biological impacts, any proposed mitigation plans that would be implemented to offset biological impacts and engineering and erosion control plans.

9.3.2 APPLICABILITY TO PROPOSED PROJECT

There are no stream channels that would be impacted by development of the project A SBAA with CDFW would not be necessary for any proposed development of the project site.

9.4 City of Benicia General Plan

Below we provide language from the portions of the City's General Plan that pertain to Biotic Resources and Water Resources.

9.4.1 GOAL 3.19: PRESERVE AND ENHANCE HABITAT FOR SPECIAL-STATUS PLANTS AND ANIMALS.

POLICY 3.19.1: PROTECT ESSENTIAL HABITAT OF SPECIAL-STATUS PLANT AND ANIMAL SPECIES.

Program 3.19.A: Require biological assessments in sensitive habitat areas as part of environmental review of proposed development.

Program 3.19.B: Require retention of essential habitat for special status species. If infeasible, require adequate mitigation for loss of special status species and/or habitat in compliance with State and federal regulations.

9.4.2 APPLICABILITY TO THE PROPOSED PROJECT

This Biological Resources Analysis includes a discussion of all special-status species with potential to occur on the project site. Prior to disturbance of any habitat that could support special-status species, formal surveys of the area of affect will be conducted or presence will be

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assumed. Mitigation for any potential impacts to special-status species is discussed further in the Impacts and Mitigation section below.

9.4.3 GOAL 3.20: PROTECT AND ENHANCE NATIVE VEGETATION AND HABITATS.

POLICY 3.20.1: PROTECT NATIVE GRASSLANDS, OAK WOODLANDS, AND RIPARIAN HABITAT.

POLICY 3.20.2: RESTORE NATIVE VEGETATION, SUCH AS BUNCH GRASSES AND OAKS, WHEREVER POSSIBLE FOR OPEN SPACES OF EXISTING DEVELOPED AREAS.

Program 3.20.A: Encourage community groups to carry out native plant restoration efforts.

Program 3.20.B: Limit the loss of native vegetation or require mitigation, or both.

Program 3.20.C: Require native and compatible non-native plant species, especially drought-resistant species, to the extent possible in landscaping new development and public areas.

9.4.4 APPLICABILITY TO THE PROPOSED PROJECT

There are no native grasslands, oak woodlands or riparian habitat on the project site. There are seasonal wetland habitats adjacent to the project site; however, these wetland habitats will be avoided by the proposed project. If avoidance of waters of the U.S./State is considered infeasible for the proposed project, mitigation as required by the U.S. Army Corps of Engineers and the Regional Water Quality Control Board will be implemented.

Additionally, if the proposed project requires any landscaping of the site, native and drought-tolerant species will be incorporated into the planting plan. See the Impacts and Mitigation section below for further detail.

9.4.5 GOAL 3.20: PROTECT AND ENHANCE NATIVE VEGETATION AND HABITATS.

POLICY 3.20.3: ENCOURAGE PRESERVATION OF EXISTING TREES. ESPECIALLY PRESERVE AND PROTECT MATURE, HEALTHY TREES WHENEVER PRACTICABLE, PARTICULARLY WHERE SUCH TREES ARE OF SIGNIFICANT SIZE OR ARE OF SIGNIFICANT AESTHETIC VALUE TO THE IMMEDIATE VICINITY OR TO THE COMMUNITY AS A WHOLE.

Program 3.20.D: Strive to incorporate existing mature, healthy trees into proposed developments.

9.4.6 APPLICABILITY TO THE PROPOSED PROJECT

There are no trees on the project site. There are landscaping trees such as eucalyptus (*Eucalyptus* sp.) and Australian pine (*Casuarina equisetifolia*) growing along Goodyear Road with driplines that extend to the project site. It should be possible to preserve many or most of these trees.

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POLICY 3.20.4: REQUIRE PROTECTION OF MOVEMENT CORRIDORS.

Program 3.20.E: Require preservation of open space corridors between Lake Herman, Sulphur Springs Mountain, the Northern Area, the northeast hills, the Benicia State Recreation Area, and the marshlands east of I-680.

9.4.7 APPLICABILITY TO THE PROPOSED PROJECT

The project site is currently undeveloped but is surrounded by development and roads, and thus it has no value as a regional wildlife corridor and even as a local wild corridor, is considerably compromised by surrounding development to the north, west, and south, a busy railway to the west, and Highway 680 to the east. The project site is effectively isolated as a corridor to the marshlands to the east found alongside the Carquinez Straights, and by Highway 680 to the immediate west that constitutes a significant barrier to wildlife movement from the project site to the northeast hills, the Benicia Recreation Area, Lake Herman and Sulphur Springs Mountain. The project site is effectively isolated from all but the most local terrestrial wildlife movements. The overall wildlife corridor functions would not be changed significantly with the addition of a proposed development; thus no significant impact to a regional movement corridor or open space corridor are expected from a proposed project on this project site.

9.4.8 GOAL 3.21: PERMANENTLY PROTECT AND ENHANCE WETLANDS SO THAT THERE IS NO NET LOSS OF WETLANDS WITHIN THE BENICIA PLANNING AREA.

POLICY 3.21.1: ENCOURAGE AVOIDANCE AND ENHANCEMENT OF SENSITIVE WETLANDS AS PART OF FUTURE DEVELOPMENT.

Program 3.21.A: Continue to require wetland delineation and mitigation as part of environmental review of proposed development.

9.4.9 APPLICABILITY TO THE PROPOSED PROJECT

The project site does not support any waters of the U.S.

POLICY 3.21.2: REQUIRE REPLACEMENT FOR WETLANDS ELIMINATED AS A RESULT OF DEVELOPMENT AT A HIGHER WETLANDS VALUE AND ACREAGE THAN THE AREA ELIMINATED. REPLACEMENT RATIOS ARE INITIALLY DETERMINED BY STATE AND FEDERAL AGENCIES. THE CITY DESIRES TO TAKE AN AGGRESSIVE APPROACH IN PROMOTING WETLAND ENHANCEMENT. IF THE CITY DESIRES A HIGHER RATIO, A NEXUS MUST BE ESTABLISHED BETWEEN THE LOSS AND THE DESIRED REPLACEMENT RATIO.

Program 3.21.B: Continue to coordinate with the California Department of Fish and Game, United States Fish and Wildlife Service, and the United States Army Corps of Engineers in reviewing proposed wetland modifications.

9.4.10 APPLICABILITY TO THE PROPOSED PROJECT

Mitigation would likely be required by the Corps and the Regional Water Quality Control Board (RWQCB) for impacts to waters of the U.S. and State (respectively). Typically, the Corps and RWQCB now promote use of established wetland mitigation banks to meet mitigation

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obligations and objectives. When mitigation banks are not available, the Corps and RWQCB may allow mitigation compensation to be implemented that is preferably “in-kind” (i.e., if a stream channel would be filled, mitigation would include replacing it with a new stream channel), and at a minimum of a 2:1 replacement ratio (i.e., two acres or fraction thereof recreated for each acre or fraction thereof lost). The 100 percent increase in created wetlands is, in part to account for the temporal loss of functions and services provided by the impacted wetland while mitigation wetlands are developing associated plant and animal communities. The 100 percent increase in created wetland acreage is also required to account for the “uncertainty” in any proposed wetland mitigation project. Sometimes the Corps and RWQCB may also allow preservation as a component of the proposed wetlands compensation mitigation program. If any waters of the U.S. and State will be impacted by the proposed project, the applicant will need to coordinate with the City of Benicia as well as the Corps and the Regional Water Quality Control Board in developing a mitigation compensation program for any impacts to jurisdictional waters of the U.S. and State.

9.5 City of Benicia Tree Ordinance

Chapter 12.24 of the City of Benicia Tree Ordinance provides for the protection and preservation of certain trees in the City of Benicia, and requires a permit under sections 12.24.080 through 12.24.120 to remove or destroy a protected tree. The parts of the ordinance relevant to the proposed project are outlined below. Taxonomy in the City’s Tree Ordinance is treated according to The Jepson Manual (Hickman 1993).

A “protected tree” is defined as a tree meeting one or more of the following standards (12.24.030 A):

1. All city property trees over 8 inches in diameter (as measured 48 inches above soil level).
2. Street trees over 8 inches in diameter.
3. All heritage trees (as designated by the city council due to special qualities or significance and meeting the requirements set forth in this chapter).
4. All designated protected trees (as designated by the city council).
5. All other trees over 12 inches in diameter.
6. California native trees – The following native species, which have a trunk diameter of 8 inches (25 inch circumference) are protected:
 - a. Blue oak (*Quercus douglasii*)
 - b. Live oak (*Quercus agrifolia*)
 - c. Valley/white oak (*Quercus lobata*)
 - d. Willow (*Salix* sp.)
 - e. Buckeye (*Aesculus californica*)
 - f. Box elder (*Acer negundo*)
 - g. California bay (*Umbellularia californica*)
 - h. Black walnut (*Juglans hindsii*)

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12.24.030 B – Prohibited actions to protected trees.

It is a violation of this code for any person to prune, cut, girdle, poison or any other action causing or aiding the death or disfigurement of a protected tree as defined in this chapter without a tree removal or pruning permit.

12.24.080-Property development.

- A. Any application for a proposed project or other action requiring city planning commission, historic preservation review commission, or council review shall be accompanied by a statement signed by the property owner or authorized agent that discloses whether any protected trees exist on the property, and describing each such tree, its species, size (diameter, canopy, drip line area, height) and location, or including such information on plans submitted in connection with a development application.
- B. The community development director may require submittal of supplemental information including photographs.
- C. A site sketch shall be submitted with the development application. The sketch shall show the location, diameter at 48” above natural grade, species (if known) and canopy extent of all trees on the subject property where the canopy or drip line is within 20 feet of the area to be occupied, utilized, or disturbed by the project.
- D. Disclosure of information pursuant to this section shall not be required when the development for which the approval or permit is sought does not involve any change in building footprint nor any grading, trenching or paving.
- E. The community development director may require, based on the significance of any protected tree(s) and potential impact on them, which a supplemental tree survey be prepared by a certified or registered consulting arborist.
- F. A city arborist, shall determine in writing (a) all trees that could potentially be affected by the project (directly or indirectly – immediately or in the long term), such as from upslope grading or compaction outside of the drip line; and (b) which trees are required to be preserved. This determination shall be made part of the staff report to the city reviewing body upon its consideration of the application for development, consistent with section 12.24.130.
- G. Tree preservation report. If construction is proposed within the drip line of any protected tree, the community development director may require the applicant to provide a tree preservation report prepared by a certified or registered consulting arborist. The report, based on the tree survey and other relevant information shall include specific precautions necessary for preservation of those trees during all phases of development (demolition, grading, during construction, landscaping). The tree preservation report shall stipulate a required tree protection zone (TPZ) for trees to be retained, including street trees, protected trees and trees whose canopies are hanging over the project site from adjacent properties. The TPZ shall be fenced as specified in section 12.24.90. The final approved tree preservation report shall be included in the building permit set of development plans and referenced on all relevant documentation (civil, demolition, utility, landscape, irrigation) where tree impacts from improvements may occur.

12.24.90-Protection of trees on property during construction.

- A. Protective fencing shall be provided for all protected trees in conjunction with property development and construction projects, at the perimeter of the drip line, or as otherwise specified in the tree preservation report, arborist report, or as determined by the community development director.
- B. Protective tree fencing shall meet the following specifications:
 - 1. Size and materials: Based on the recommendation of the city arborist, one of three types of protective fencing may be specified:
 - a. Orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with 2-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.
 - b. Four foot high orange plastic fencing mounted on steel T posts spaced at intervals of no more than 10 feet.
 - c. Five or six foot high chain link fencing, mounted on two inch diameter galvanized steel posts driven into the ground to a depth of a least 2 feet at no more than 10 feet spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.
 - 2. Duration of fencing. Fencing shall be erected before demolition, grading or construction begins and remain in place until final landscaping is installed. Contractor shall obtain the city arborist approval prior to removing a tree protection fence.
- C. All development requiring city commission or council review shall comply with the following precautions:
 - 1. Prior to the commencement of construction, install the fence at the drip line, or TPZ when specified by the city arborist, around any tree to be retained that could be affected by the construction, and prohibit any storage of construction materials or other materials or vehicles inside the fence. The drip line shall not be altered in any way so as to increase the encroachment of the construction.
 - 2. Submit for city arborist review verification that all preconstruction conditions have been met (tree fencing, erosion control, pruning, etc.) and are in place. An initial inspection of protective fencing and written verification must be submitted to the city arborist prior to demolition, grading or building permit issuance.
 - 3. Prohibit excavation, grading, drainage and leveling within the drip line of the tree unless approved by the director.
 - 4. Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the decline of or in drainage channels, swathes or areas that may lead to the drip line of a protected tree.
 - 5. Prohibit the attachment of wires, signs, or ropes to any protected tree.
 - 6. Design utility services and irrigation lines to be located outside of the drip line when feasible (unless the irrigation line is specifically required for the tree)
 - 7. Retain the services of the certified or registered consulting arborist for periodic monitoring of the project site and the health of those trees to be preserved. The certified

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or consulting arborist shall be present whenever activities occur that pose a potential threat to the health of the trees to be preserved.

8. A city arborist shall be notified if any damage occurs to a protected tree during construction so that proper treatment may be administered.
9. A performance bond guaranteeing the health of any protected tree during construction of the project shall be required as a condition of approval.

12.24.100 Tree Pruning.

- A. Applicability. Pruning any branch, root or limb of a diameter greater than three (3) inches of any of the following listed protected trees requires a permit pursuant to this chapter:
 1. Street tree;
 2. Heritage tree; or
 3. Designated protected tree
- B. Standards. All pruning of street trees and designated protected trees, including by utility companies, shall be:
 1. Performed only when it enhances a tree's structural strength, health or form, for safety reasons or for utility service.
 2. Consistent with the current edition of Best Management Practices Tree Pruning established by the International Society of Arboriculture (ISA), and any special conditions as determined by the parks and community services director.
- C. Heritage trees. All pruning of Heritage trees shall be supervised by a certified arborist or registered consulting arborist.
- D. New development. All protected trees to be retained as part of a new development project shall be cleared of dead wood of a diameter greater than one inch and treated for insects or diseases. For any development that requires a tree preservation report, a certified or registered consulting arborist shall oversee pruning, cabling, fertilizing, and/or any other activities to protect trees onsite.
- E. Topping, as defined in section 12.24.020 of any protected tree is prohibited.

12.24.110 Permitting process.

- A. City department responsibilities. The parks and community services director shall have overall responsibility for the implementation of this chapter. The parks and community services director, city arborist, or their designee shall review and issue tree removal and pruning permits. The community development director or designee shall review all tree protection conditions related to actions requiring city planning commission, historic preservation review commission or council approval, in consultation with a city arborist, and make recommendations to the decision-making bodies.

12.24.120-Application Requirements.

- A. Basic information. Application for a permit to remove or prune a protected tree shall be obtained from the parks and community services department, except when such activity

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is proposed in conjunction with an action requiring historic preservation review commission or planning commission review, in which case the proposed removal or pruning shall be combined with the associated development application to the community development department. The application shall:

1. Identify the property by street address and assessor's parcel number on which the tree is located.
2. Inventory and locate all protected trees on the subject property.
3. Describe the location of the tree with reasonable accuracy to facilitate easy identification.
4. State the species of the tree, the approximate height of the tree, and the diameter of the trunk measured at 48 inches above the natural grade.
5. Furnish a statement of the reason for the request.
6. Include the signature of property owner granting permission.

B. Additional information that may be required by a city arborist includes:

1. A perimeter outline of any existing or proposed buildings on the property, and trees on the property.
2. A report by a certified or registered consulting arborist stating: (1) Any reasons for alteration or removal related to the health of a tree; and/or (2) If grading, trenching or filling is proposed under the drip line of an existing tree; and/or (3) If the action involves multiple trees.

C. Additional information that may be required by a city arborist includes:

Public Notice. Within 24 hours following application for a tree removal permit for a protected city property tree or a street tree, the applicant shall place, in the most visible location at each tree to be removed, a public notice sign to be provided by the city stating the following: "This tree is proposed to be removed. Removal may occur seven (7) days from (date of posting). Contact City of Benicia at 7464285 for more information."

The notice sign shall be no smaller than 11" by 17" with the largest feasible type, and shall be laminated for weather resistance. The sign shall remain posted for seven days from date of posting. Persons who call to comment shall be informed of their right to appeal pursuant to section 12.24.150.

D. Responsibility for costs. The cost of providing reports and information shall be the responsibility of the applicant.

12.24.130 Standards of application review tree removal.

- A. When considering an application to remove a tree or trees which are protected by this chapter, the parks and community services director will consider various criteria designed to preserve trees. Such criteria include:
1. The proximity and number of other trees in the vicinity.
 2. General Plan open space or other city open space plans and policies.
 3. The arborist report of the tree's health and structure.
 4. Topography, soil conditions and erosion potential.
 5. Potential or actual damage to public utilities or streets and sidewalks.
 6. If the tree is in danger of falling or is determined to be a fire hazard.

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7. Potential or actual damage to private improvements such as building foundation, walls, patios, decks, roofs, retaining walls, etc.
 8. The impact on reasonable development of the property or the ability to reasonably accommodate development on another area of the lot.
 9. The impact of tree removal on the ability of other protected trees in the vicinity to survive.
 10. The value of the tree to the neighborhood in terms of visual effect, wind screening, privacy and/or support of neighboring vegetation.
 11. The availability of reasonable measures to correct the condition(s) of the tree, giving rise to the permit application.
- B. Trees on the private property of single family residences, that are not heritage trees or street trees, shall be per se authorized for removal, provided that a completed permit application with fee is received by the parks and community services department. In all instances, city staff will advise applicants on alternatives to tree removal.
- C. An applicant may appeal the decision of the city arborist, as set forth in chapter 1.44. The appellant body shall use the same standard of review as the city arborist.

12.24.140 Standards of application review – tree pruning.

- A. A city certified arborist shall perform the application review. A tree pruning permit shall be approved, so long as the pruning meets the standards identified in section 12.24.100.
- B. An applicant may appeal the decision of the city arborist, as discussed in section 12.24.150. The appellant body shall use the same standard of review as the city arborist.

12.24.160-Fees.

Fees for permit applications and tree removal replacement or mitigation shall be set by resolution of the city council. The rate for such fees shall be that which is in effect at the time of the tree removal application.

In addition to an administrative processing fee, a tree replacement and/or mitigation fee shall be charged if a tree is permitted to be removed.

12.24.170-Tree replacement and mitigation.

Any tree removed under a permit shall be required to be replaced or mitigated in conformance with the following standards:

- A. Any applicant whose tree has been authorized for removal shall be required to pay the applicable fee as a condition to final approval for tree removal. Fees collected for tree replacement and/or mitigation shall be placed in the tree fund.
- B. In some situations, in accordance with section 12.24.130, the city arborists may condition the removal of a tree with replacement of a new tree.
- C. In case of a tree removal permit pursuant to property development as addressed in 12.24.080 of this chapter, the tree replacement requirement shall be the replacement value of the mature tree, as defined in 12.24.020 of this chapter.

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- D. The parks and community services director has discretion to reduce replacement or mitigation requirements.

12.24.180-Penalties.

- A. Violation of this chapter shall be subject to chapter 1.08 of the Benicia Municipal Code.
B. A violator shall be liable for all costs associated with the investigation and enforcement of this chapter by the city. In addition, a violator may be required to pay a fee equaling the value of the tree removed or damaged, as evaluated by the formula developed by the International Society of Arboriculture. The remedies set forth in this Section shall be considered alternative, and shall be deemed in addition to any other remedies available to the city in law or equity.

9.5.1 APPLICABILITY TO THE PROPOSED PROJECT

There are no trees on the project site. There are landscaping trees such as eucalyptus (*Eucalyptus* sp.) and Australian pine (*Casuarina equisetifolia*) growing along Goodyear Road with driplines that extend to the project site. If some of these trees need to be removed, a tree permit should be acquired from the City of Benicia.

10. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REGULATIONS

A CEQA lead agency must determine if a proposed activity constitutes a project requiring further review pursuant to the CEQA. Pursuant to CEQA, a lead agency would have to determine if there could be significant adverse impacts to the environment from a proposed project. Typically, if within the city limits, the city would be the CEQA lead agency. If a discretionary permit (i.e., conditional use permit) would be required for a project (e.g. an occupancy permit must be issued), the lead agency typically must determine if there could be significant environmental impacts. This is usually accomplished by an “Initial Study.” If there could be significant environmental impacts, the lead agency must determine an appropriate level of environmental review prior to approving and/or otherwise permitting the impacts. In some cases, there are “Categorical Exemptions” that apply to the proposed activity; thus the activity is exempt from CEQA. The Categorical Exemptions are provided in CEQA. There are also Statutory Exemptions in CEQA that must be investigated for any proposed project. If the project is not exempt from CEQA, the lowest level of review typically reserved for projects with no significant effects on the environment would be for the lead agency to prepare a “Negative Declaration.” If a proposed project would have only minimal impacts that can be mitigated to a level of no significance pursuant to the CEQA, then a “Mitigated Negative Declaration” is typically prepared by the lead agency. Finally those projects that may have significant effects on the environment, or that have impacts that can’t be mitigated to a level considered less than significant pursuant to the CEQA, typically must be reviewed via an Environmental Impact Report (EIR). All CEQA review documents are subject to public circulation, and comment periods.

Section 15380 of CEQA defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. “Rare” species are

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defined by CEQA as those who are in such low numbers that they could become endangered if their environment worsens; or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in FESA. The CEQA Guidelines also state that a project will normally have a significant effect on the environment if it will “substantially affect a rare or endangered species of animal or plant or the habitat of the species.” The significance of impacts to a species under CEQA, therefore, must be based on analyzing actual rarity and threat of extinction to that species despite its legal status or lack thereof.

10.1.1 APPLICABILITY TO THE PROPOSED PROJECT

This report has been prepared as a Biology Section that is suitable for incorporation into the biology section of a CEQA review document such as a Mitigated Negative Declaration or EIR. This document addresses potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA. This document is suitable for use by the CEQA lead agency (in this case the City of Benicia) for preparation of any CEQA review document prepared for the proposed project.

11. IMPACTS ANALYSIS

In this section we discuss potential impacts to sensitive biological resources including special-status animal species and trees. We follow each impact with a mitigation prescription that when implemented would reduce impacts to the greatest extent possible. This impact analysis is general and will be expanded upon at such time that a proposed project plan is put forth.

11.1 Significance Criteria

A significant impact is determined using CEQA and CEQA Guidelines. Pursuant to CEQA §21068, a significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment. Pursuant to CEQA Guideline §15382, a significant effect on the environment is further defined 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 historical or aesthetic significance. Other Federal, State, and local agencies’ considerations and regulations are also used in the evaluation of significance of proposed actions.

Direct and indirect adverse impacts to biological resources are classified as “significant,” “potentially significant,” or “less than significant.” Biological resources are broken down into four categories: vegetation, wildlife, threatened and endangered species, and regulated “waters of the United States” and/or stream channels.

11.1.1 THRESHOLDS OF SIGNIFICANCE

11.1.1.1 Plants, Wildlife, Waters

In accordance with Appendix G (Environmental Checklist Form) of the CEQA Guidelines, implementing the project would have a significant biological impact if it would:

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- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- 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 California Department of Fish and Wildlife or US Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected “wetlands” as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

11.1.1.2 Waters of the United States and State.

Pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), the U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill material into waters of the United States, which includes wetlands, as discussed in the bulleted item above, and also includes “other waters” (stream channels, rivers) (33 CFR Parts 328 through 330). Substantial impacts to Corps regulated areas on a project site would be considered a significant adverse impact. Similarly, pursuant to Section 401 of the Clean Water Act, and to the Porter-Cologne Water Quality Control Act, the RWQCB regulates impacts to waters of the state. Thus, substantial impacts to RWQCB regulated areas on a project site would also be considered a significant adverse impact.

11.1.1.3 Stream Channels

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream which CDFW typically considers to include riparian vegetation. Any proposed activity that would result in substantial modifications to a natural stream channel would be considered a significant adverse impact.

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12. IMPACT ASSESSMENT AND PROPOSED MITIGATION

At the time of this analysis, the project applicant has not defined a proposed project for this project site. Hence, in the absence of a defined project, the impact and mitigation measures discussed below are general in nature.

12.1 Impact 1. Development of the Project Site May Have a Potentially Significant Adverse Impact on Special-Status Plants (PS).

The following special-status plants have a low potential to occur on the project site: pappose tarplant, heartscale, and brittlescale. Full floristic surveys of the project site will need to be conducted to confirm presence or absence of these special-status plants. If special-status plants are identified onsite and impacts to special-status species cannot be avoided, mitigation would be necessary. Hence, impacts to special-status plants from an undefined proposed project on this project site are considered potentially significant pursuant to CEQA. This impact could be mitigated to a less than significant level.

12.2 Mitigation Measure 1. For Impacts to Special-Status Plants

Prior to City approval of any specific development plan of the project site, special-status plant surveys shall be conducted on the project site during the appropriate period in which the species are most identifiable. These surveys shall be in compliance with all CDFG (2009), USFWS (2000), and CNPS (2001) published survey guidelines. Please note that according to CDFG's 2009 guidelines, surveys in habitats "such as grasslands.....that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment." Project construction shall not be initiated until all special-status plant surveys are completed and subsequent mitigation, if necessary, is implemented.

If special-status plant species are found during surveys, those individuals or populations shall be avoided to the maximum degree possible. If avoidance is not possible while otherwise obtaining the project's objectives, then other suitable measures and mitigation shall be developed in consultation with the agencies that are responsible for protection of that plant species based on its protection status [i.e., City (protected by CEQA), CDFW (protected by California law/regulation), or USFWS (protected by federal law/regulation)]. Appropriate mitigation prescriptions for impacts on special-status plants shall be included as conditions of project approval as detailed below.

Special-status plant surveys shall be completed as described above prior to breaking ground on the project site. A special-status plant survey report that includes the methods used, survey participants, and findings shall then be prepared and submitted to the City of Benicia demonstrating absence of special-status plants at least 30 days prior to breaking ground. The special-status plant report shall be reviewed by a City planner or biologist. If the report documents that there are no special-status plants on the project site, then there would be no further mitigation and the project may proceed, provided all other applicable permits and authorizations are obtained for the project. However, if a special-status plant is found on the project site, the following mitigation measures shall also be implemented as a condition of project approval.

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A mitigation compliance report shall be submitted to the City planning staff or staff biologist at least 30 days prior to breaking ground. The compliance report shall detail the avoidance and other mitigation measures that have been implemented by the project. The City may approve grading/site disturbance in a quicker timeframe than 30 days if compliance with the mitigation measures can be verified by the City sooner than 30 days.

The following measures shall be implemented if special-status plants are found on the project site:

Initially the feasibility of avoidance shall be evaluated as noted above. If avoidance is not feasible, a mitigation plan shall be developed in consultation with CDFW personnel if it is a state listed (i.e., protected pursuant to the CESA) or a CNPS List 1B or List 2 plant. If the plant is state listed, an incidental take permit (i.e., a 2081 Agreement) shall be acquired for the project from CDFW prior to any grading within the project area. A copy of this permit shall be provided to the appropriate department within the City prior to any grading within the project area. Any conditions for the project established by CDFW in the 2081 Agreement shall become conditions of the project also enforceable by the City.

If the plant is federally listed (i.e., protected pursuant to the Federal Endangered Species Act), the project sponsor shall formally notify the USFWS within five days of the finding and this agency's permitting instructions shall be incorporated into the project conditions of approval. As required in-practice by the USFWS, an "incidental take" permit may be necessary from the USFWS for any proposed impacts on any federally listed plants found within the project site. A copy of this permit or a letter from the USFWS that otherwise states this agency is satisfied with the avoidance and/or mitigation measures shall also be provided to the appropriate department at the City prior to the time the project site can be graded.

If a state listed plant species (that is, a plant protected pursuant to the California Endangered Species Act) is identified, the mitigation must be developed in consultation with CDFW personnel. If the plant is state listed, an incidental take permit (i.e., a 2081 Agreement) shall be acquired for the project from CDFW prior to any work within the project area. A copy of this permit shall be provided to the City prior to any earth-moving work within the project area. Any conditions for the project established by CDFW in the 2081 Agreement shall become conditions of the project also enforceable by the County.

If a plant is found on the project site that is a CNPS List 1B or 2 species, and the species is not otherwise protected pursuant to state or federal regulations, prior to construction within the project area, a qualified botanist shall collect the seeds, propagules, and top soils, or other part of the plant that would ensure successful replanting of the population elsewhere. The seeds, propagules, or other plantable portion of all plants shall be collected at the appropriate time of the year. Half of the seeds and top soils collected shall be appropriately stored in long-term storage at a botanic garden or museum (for example, Rancho Santa Ana Botanic Garden). The other half of the seeds, propagules, or other plantable portion of all plants shall be planted at the appropriate time of year (late-fall months) in an area of the subject property (such as the Conservation Area) or another off-site location that will not be impacted by the project. This off-site mitigation area shall be fenced with permanent fencing (for example, chain link fencing) to

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ensure protection of the species. The applicant shall hire a qualified biologist to conduct annual monitoring surveys of the transplanted plant population for a five year period and shall prepare annual monitoring reports reporting the success or failure of the transplanting effort. These reports shall be submitted to the City and appropriate resource agency (CDFW and/or USFWS) no later than December 1st each monitoring year.

These steps shall be implemented prior to site disturbance. If the seeding/transplanting effort fails, the stored seeds and top soils can be taken out of long-term storage and sown in another location (either onsite or offsite) deemed suitable by CDFW. This seeding effort shall then be monitored for an additional three year period to ensure survivorship of the new population. Annual monitoring reports shall be submitted to the City for the three year period.

A CNDDDB form shall be filled out and submitted to CDFW for any special-status plant species identified within the project site. Any mitigation plan developed in consultation with CDFW shall be implemented prior to the initiation of grading or issuance of a development permit.

In lieu of the above prescribed mitigation, as allowed in writing by the City (for CEQA protected species only) and/or CDFW (for CEQA and/or state listed species), mitigation requirements may be satisfied via the purchase of qualified mitigation credits or the preservation of offsite habitat. If the species in question is federally listed, then USFWS would also have to agree in writing typically through issuance of a Biological Opinion that the purchase of qualified mitigation credits or the preservation of offsite habitat would constitute satisfactory mitigation compensation.

This mitigation measure would reduce the project's impact to special-status plants to a less than significant impact.

12.3 Impact 2. Development of the Project May Have a Potentially Significant Adverse Impact on Trees (PS).

According to the City of Benicia's Tree Ordinance a "protected tree" is: "a city property tree or a California native tree (as defined in section 12.24.020) with a diameter of eight-inches or any tree with a diameter greater than twelve inches. There are no trees on the project site. There are landscaping trees such as eucalyptus (*Eucalyptus* sp.) and Australian pine (*Casuarina equisetifolia*) growing along Goodyear Road with driplines that extend to the project site. Some of these trees may be impacted as necessary to provide access to the project site. Removal, damage or pruning of a protected tree without a tree removal or pruning permit from the City of Benicia is a significant adverse impact pursuant to CEQA. This impact could be reduced to a less than significant level by incorporating mitigation.

12.4 Mitigation Measure 2 – For Impacts to Trees

After the proposed project is defined and if any trees will be impacted, the appropriate permits will be applied for and the mitigation will be determined. If a tree removal permit or tree pruning permit is required, an application would need to be submitted to City of Benicia for approval by the city arborist including the information detailed in the property development, application requirements and standards for application review sections (sections 12.24.080, 12.24.110 and

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12.24.120). This can include an arborist's report if requested by the City of Benicia. For any tree removed under a tree removal permit, the applicant is required to pay the applicable replacement fee and/or if required by the city arborist, plant a replacement tree. In the case of tree removal pursuant to development, the tree replacement requirement shall be the replacement value of the mature tree (as defined in section 12.24.020).

Additionally, the following construction policies and guidelines for tree preservation and protection put forth by the City of Benicia shall also be followed during project implementation for any trees within the area of affect:

- A. Protective fencing shall be provided for all protected trees in conjunction with property development and construction projects, at the perimeter of the drip line, or as otherwise specified in the tree preservation report, arborist report, or as determined by the community development director.
- B. Protective tree fencing shall meet the specifications put forth in section 12.24.90 which details the protection of trees on the property during construction.
- C. All development requiring city commission or council review shall comply with the following precautions:
 1. Prior to the commencement of construction, install the fence at the drip line, or tree protection zone (TPZ) when specified by the city arborist, around any tree to be retained that could be affected by the construction, and prohibit any storage of construction materials or other materials or vehicles inside the fence. The drip line shall not be altered in any way so as to increase the encroachment of the construction.
 2. Submit for city arborist review verification that all preconstruction conditions have been met (tree fencing, erosion control, pruning, etc.) and are in place. An initial inspection of protective fencing and written verification must be submitted to the city arborist prior to demolition, grading or building permit issuance.
 3. Prohibit excavation, grading, drainage and leveling within the drip line of the tree unless approved by the director.
 4. Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the decline of or in drainage channels, swathes or areas that may lead to the drip line of a protected tree.
 5. Prohibit the attachment of wires, signs, or ropes to any protected tree.
 6. Design utility services and irrigation lines to be located outside of the drip line when feasible (unless the irrigation line is specifically required for the tree)
 7. Retain the services of the certified or registered consulting arborist for periodic monitoring of the project site and the health of those trees to be preserved. The certified or consulting arborist shall be present whenever activities occur that pose a potential threat to the health of the trees to be preserved.
 8. A city arborist shall be notified if any damage occurs to a protected tree during construction so that proper treatment may be administered.
 9. A performance bond guaranteeing the health of any protected tree during construction of the project shall be required as a condition of approval.

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If any pruning of a branch greater than 3 inches diameter of protected tree is deemed necessary by the proposed project plans, a tree pruning permit will be required and tree pruning standards as put forth in section 12.24.100 will be followed.

These mitigation measures would reduce impacts to trees to a level considered less than significant.

12.5 Impact 3. Waters of the United States/State/Stream Channels. Development of the Project Site May Have a Potentially Significant Impact on Waters of U.S./State (PS).

If the proposed project requires an outfall structure into the drainage ditch along the railroad tracks or the potential wetland habitats on the Conservation Area, it is likely that a permit would be required from the Corps pursuant to Section 404 of the Clean Water Act and from the RWQCB pursuant to Section 401 of the Clean Water Act. The City of Benicia's General Plan, Goal 3.21 is to permanently protect and enhance wetlands so that there is no net loss of wetlands within the Benicia Planning Area. The City of Benicia's "no net loss" policy is consistent with the Corps, CDFW, and RWQCB policies. Therefore, in accordance with the regulations and policies stated above, impacting waters of the U.S. and State without a permit from the Corps and the RWQCB would be a significant impact. This impact could be mitigated to a less than significant level.

12.6 Mitigation Measure 3. For Impacts to Waters of the United States/State

If it becomes necessary to impact Corps/RWQCB and/or CDFW jurisdictional areas, permits/authorizations shall be obtained from the appropriate agencies prior to commencing with any of this work. Mitigation for any impacts to waters will be determined when the proposed project is defined. Any mitigation measures prescribed in permits/authorizations issued by the appropriate permitting agencies for impacts to the Corps/RWQCB/CDFW jurisdictional areas would become conditions of project approval. The City of Benicia may even request an increase in mitigation as per Goal 3.21 in the City of Benicia General Plan.

This mitigation measure would reduce the project's impact to waters of the U.S./State to a less than significant level.

12.7 Impact 4. Development of the Project Site May Have a Potentially Significant Adverse Impact on Salt Marsh Harvest Mouse (PS).

The salt marsh harvest mouse is a federal and state listed endangered species. It is found in salt marsh habitats that are dominated by pickleweed. Based on Monk & Associates' field survey, it is our determination that the upland habitats on the project site do not provide the necessary habitat components to support a salt marsh harvest mouse population. Therefore, development of the project site would not impact any habitats likely used by this species.

However, it is possible that the wetlands on the adjacent Conservation Area may occasionally provide refuge habitat for mice during high tide events. Although owing to the distance from the Carquinez straights wetlands, and the complete absence of pickleweed stands in the Conservation Area, M&A believes the likelihood that salt marsh harvest mouse is present is very

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low. Conceivably the culvert under the raised railway bed may provide a pathway for small mammal immigration to/from the marshes adjacent to the Carquinez Straits where populations of this endangered mouse likely still occur today. There is a small potential that salt marsh harvest mice could occur in the Conservation Area. There is even a smaller likelihood that salt marsh harvest mice would traverse the steep upland slope from the Conservation Area to access the project site which is approximately 20 feet higher in elevation than the Conservation Area. Regardless of this low likelihood impacts to the salt marsh harvest mouse are regarded as a potentially significant adverse impact. In addition, if any outfall is installed into the Conservation Area, it could also potentially impact salt marsh harvest mice. These impacts could be mitigated to a less than significant level pursuant to CEQA.

12.8 Mitigation Measure 4. For Impacts to Salt marsh Harvest Mouse

Out of an abundance of caution, a mouse-proof exclusion fence should be installed at the project site boundary to prevent rodents from migrating onto the project site from the adjacent Conservation Area.

Installed fencing has to be climb-proof (for example, smooth plastic, not silt fencing) and installed in such a manner so that the salt marsh harvest mouse cannot dig under the fence. The salt marsh harvest mouse is known to be an agile climber, often climbing vegetation to escape rising tidal waters, but rarely digs extensively. Regardless, fencing material must account for both behaviors. The optimal salt marsh harvest mouse fence should be constructed using 8-millimeter plastic sheeting that is sandwiched between wooden stakes and buried in a minimum 6-inch deep trench. The stakes are screwed together firmly sandwiching the plastic in place. It is mandatory to sandwich the plastic between stakes if the fence is to last through even moderate winds. The finished installed fence should be 3 feet above the ground. Plastic sheeting is smooth and non-climbable, and by burying the sheeting and/or stapling it to the ground at 3 inch intervals, it prevents rodents from going underneath the fence. However, the integrity of plastic fencing only lasts for a couple of months, or perhaps three months at the longest. Accordingly, the timeframe for completing the project must be within a 3-month window or the fencing must be replaced unless the fence is inspected by a qualified biologist and confirmed to be in good condition.

Prior to installing the salt marsh harvest mouse fence, all vegetation must be hand-cleared from alongside the fence line route. Once the vegetation has been removed and the exclusion fencing installed, an "As-built" report, complete with photographs, shall be prepared by a qualified biologist and submitted to the City of Benicia Planning Department. These measures would reduce a potentially significant adverse impact to the salt marsh harvest mouse on the project site to a level considered less than significant pursuant to CEQA.

If the proposed project requires impacting the Conservation Area wetland community in any way (for example construction of an outfall), or within 25 feet of the wetland edge, the potential presence of the salt marsh harvest mouse must be addressed. A federal and state permitted salt marsh harvest mouse biologist shall conduct a "Habitat Assessment" to receive approval/authorization from CDFW and USFWS for a presence/absence trapping study to address potential impacts to this mouse species. These two agencies administer the California

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Endangered Species Act and the Federal Endangered Species Act (respectively) and oversee the protection of this species. If a trapping study is allowed by CDFW and USFWS, and demonstrates that the Conservation Area does not support the salt marsh harvest mouse, then no further mitigation and/or avoidance measures as presented below are warranted for this species. If the salt marsh harvest mouse is found in the Conservation Area during a presence/absence trapping study, permits from the USFWS and CDFW must be obtained prior to impacting the Conservation Area. In addition, and as allowed by the CDFW and USFWS, the impact area shall be excluded from mouse access via fencing per the specification for exclusion fence above. Upon the installation of fencing, as approved by the USFWS and CDFW, all mice would be live-trapped and removed from the fenced, excluded proposed impact area prior to initiation of the outfall construction.

Finally, if salt marsh harvest mice are present in the Conservation Area, permanent protection of the salt marsh harvest mouse habitat shall be implemented through permanent deed restriction or recordation of a conservation easement as approved by the CDFW and USFWS. Any other conditions of permits issued by the CDFW and USFWS shall also become conditions of project approval.

The above mitigation measures would reduce impacts to the salt marsh harvest mouse to a level considered less than significant pursuant to CEQA.

12.9 Impact 5. Nesting Northern Harrier – Development of the Project Site May Have a Potentially Significant Impact on Nesting Northern Harriers (PS).

Suitable nesting habitat for northern harrier occurs on the Conservation Area. The northern harrier is protected under the Federal Migratory Bird Treaty Act (50 CFR 10.13) and its nest, eggs, and young are protected under California Fish and Game Code Sections 3503, 3503.5, 3800, and 3513. Any project-related impacts to the northern harrier or its nest would be considered a significant adverse impact pursuant to CEQA.

Potential impacts to the northern harrier from the proposed project include disturbance to nesting birds on the adjacent Conservation Area parcel, and possibly death of young. In the absence of survey results, it must be concluded that impacts to nesting northern harriers from the proposed project would be potentially significant. This impact could be mitigated to a less than significant level.

12.10 Mitigation Measure 5. For Impacts to Northern Harrier

In order to avoid impacts to nesting northern harriers, a nesting survey shall be conducted on the Conservation Area 30 days prior to commencing with construction work on the project site, if this work would commence between February 1st and August 31st.

If nesting northern harriers are identified nesting on the adjacent parcel, a 300-foot radius around the nest site must be staked with bright orange lath or other suitable staking. If the nesting location is adjacent to the project site, then the buffer shall be demarcated per above where the buffer occurs on the project site. The size of the buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting harriers are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer

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that allows sufficient room to prevent undue disturbance/ harassment to the nesting harriers. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1st. This date may be earlier than August 1, or later, and would have to be determined by a qualified raptor biologist.

Implementation of this mitigation measure would reduce impacts to nesting raptors to a level considered less than significant.

12.11 Impact 6. Nesting Passerine Birds –Development of the Project Site May Have a Potentially Significant Impact on Nesting Birds (PS).

The project site provides suitable habitat for nesting passerine (perching) bird species such as the special-status Suisun song sparrow and common passerine bird species. All nesting birds, their eggs, and young, are protected under California Fish and Game Code (§3503, 3503.5). The Federal Migratory Bird Treaty Act also protects these birds. Site development (grading, construction) during the nesting season (March 1 through September 1) could impact nesting birds. Impacts to nesting birds, their eggs, and/or young caused by implementation of the proposed project would be regarded as potentially significant. Mitigation is prescribed below that would minimize this potential impact to a level considered less than significant pursuant to CEQA.

12.12 Mitigation Measure 6. For Impacts to Nesting Passerine Birds

If tree removal or site disturbance that includes vegetation removal would occur between February 1 and August 31, a nesting survey shall be conducted on the project site by a qualified biologist prior to the disturbance. The nesting surveys should be completed no more than two weeks prior to commencing with the work. If nesting passerine birds are identified nesting on or near the project site (special-status or common species), a 75-foot radius around the nest must be staked with bright orange spray painted lath or construction fencing. If an active nest is found offsite, the portion of the buffer that is onsite must be staked. No construction or earth-moving activity shall occur within this 75-foot staked buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. In some instances, a smaller buffer may be allowed as prescribed by a qualified biologist. This could occur when nesting birds are acclimated to disturbance or are shielded from disturbance by heavy cover and or geographical features.

Typically, most birds in the region of the project site are expected to complete nesting by August 1st. However, in the region many species can complete nesting by mid-June to mid-July. Regardless, nesting buffers should be maintained until August 1st unless a qualified biologist determines that young have fledged and are independent of their nests at an earlier date. If buffers are removed prior to August 1st, the qualified biologist conducting the nesting surveys shall prepare a report that provides details about the nesting outcome and the removal of buffers. This report shall be submitted to the City of Benicia Planning Department prior to the time that buffers are removed if the date is before August 1st. This mitigation measure would reduce impacts to special-status and common nesting passerine bird species to a level considered less than significant.

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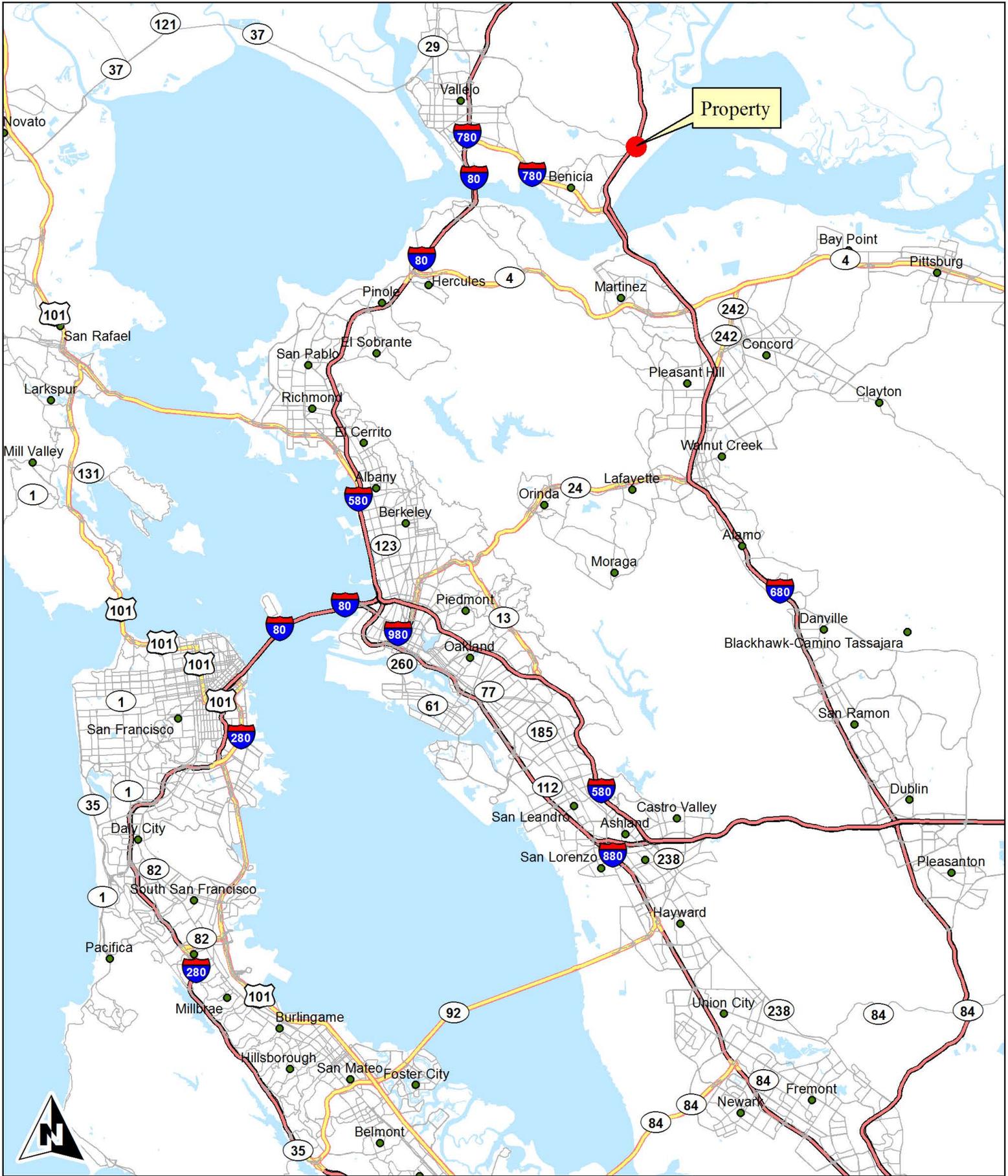
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Figure 1. Goodyear Road
Property Regional Map
Benicia, California

County: Solano
Map Preparation Date: January 28, 2013



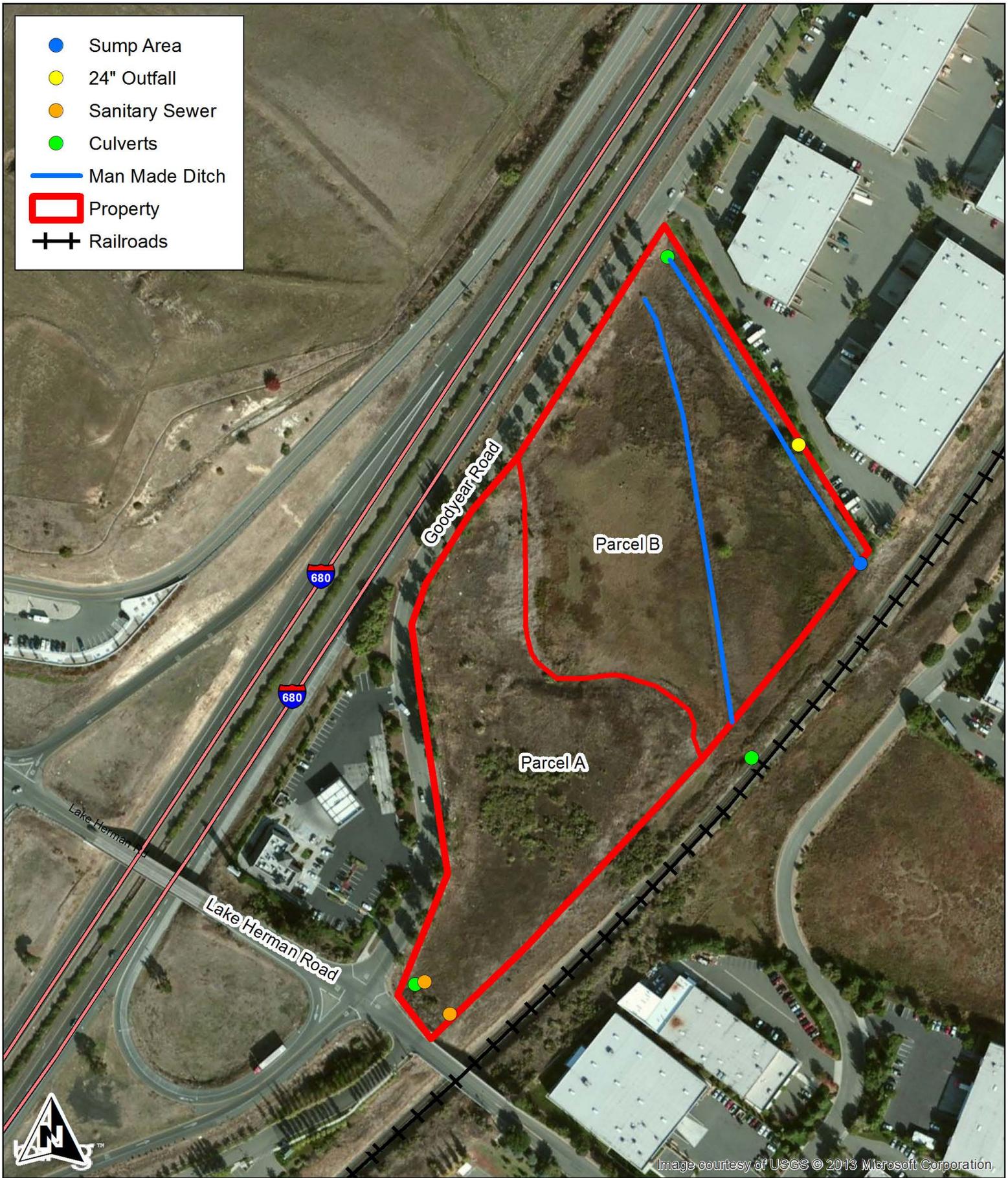
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Figure 2. Goodyear Road
Property Location Map
Benicia, California

Image courtesy of USGS © 2013 Microsoft Corporation

Aerial Photograph Source: Bing Maps
7.5-Minute Vine Hill quadrangle
Map Preparation Date: January 28, 2013



- Sump Area
- 24" Outfall
- Sanitary Sewer
- Culverts
- Man Made Ditch
- Property
- +— Railroads



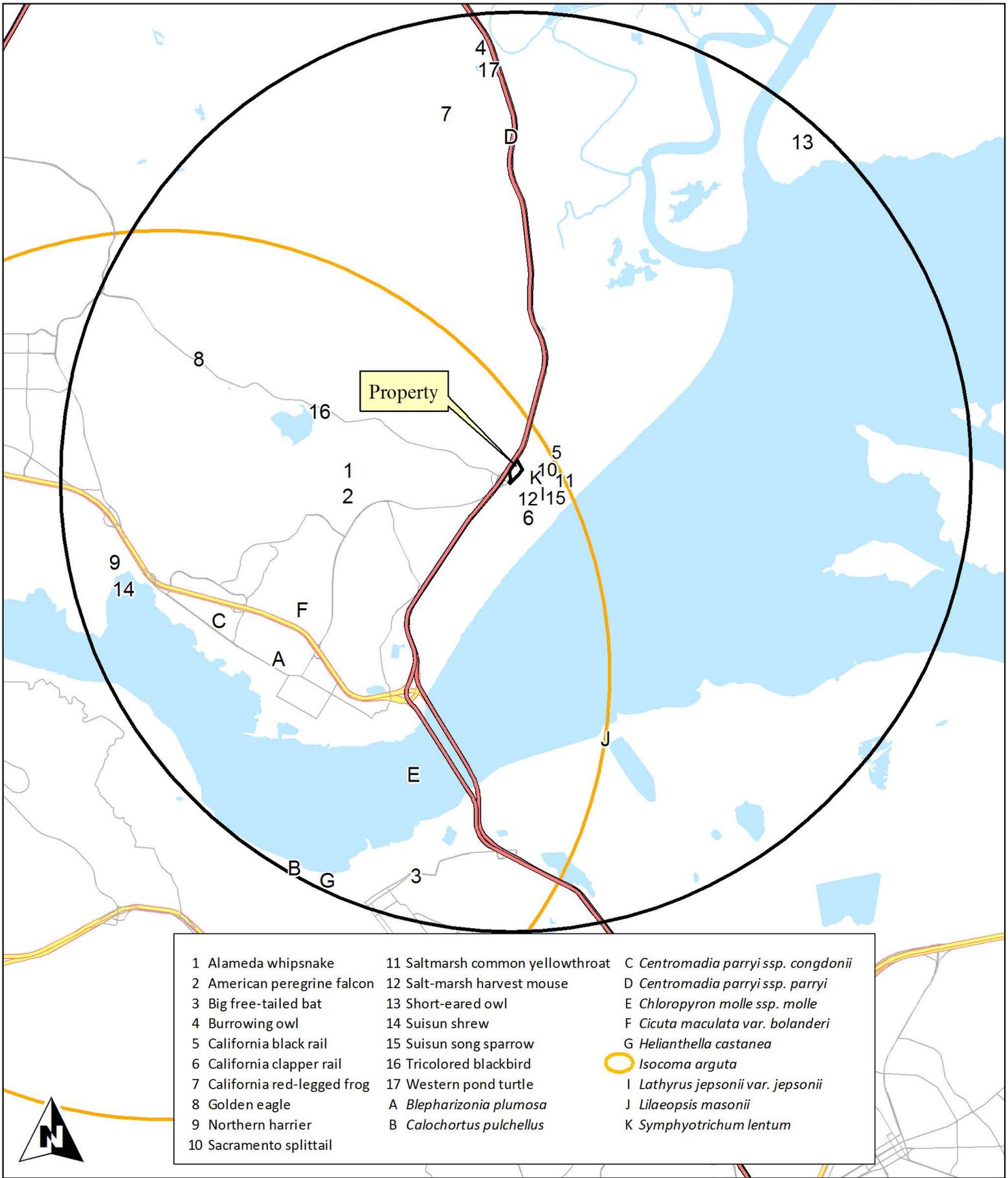
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0 50 100 200 300 400 500 Feet

Figure 3. Aerial Photograph of the
Goodyear Road Property
Benicia, California

Aerial Photograph Source: Bing Maps
Map Preparation Date: January 28, 2013

Image courtesy of USGS © 2013 Microsoft Corporation.



- | | | |
|------------------------------|----------------------------------|---|
| 1 Alameda whipsnake | 11 Saltmarsh common yellowthroat | C <i>Centromadia parryi</i> ssp. <i>congdonii</i> |
| 2 American peregrine falcon | 12 Salt-marsh harvest mouse | D <i>Centromadia parryi</i> ssp. <i>parryi</i> |
| 3 Big free-tailed bat | 13 Short-eared owl | E <i>Chloropyron molle</i> ssp. <i>molle</i> |
| 4 Burrowing owl | 14 Suisun shrew | F <i>Cicuta maculata</i> var. <i>bolanderi</i> |
| 5 California black rail | 15 Suisun song sparrow | G <i>Helianthella castanea</i> |
| 6 California clapper rail | 16 Tricolored blackbird |  <i>Isocoma arguta</i> |
| 7 California red-legged frog | 17 Western pond turtle | I <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> |
| 8 Golden eagle | A <i>Blepharizonia plumosa</i> | J <i>Lilaeopsis masonii</i> |
| 9 Northern harrier | B <i>Calochortus pulchellus</i> | K <i>Symphotrichum lentum</i> |
| 10 Sacramento splittail | | |

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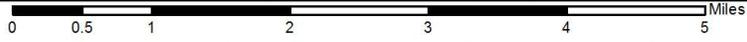


Figure 4. Closest Known Special-Status Species within 5 Miles of the Goodyear Road Property

Map Preparation Date: January 23, 2013
 Source: CDFG, California Natural Diversity Data Base, 2013

Table 1
Plant Species Observed on the Goodyear Road Property

Angiosperms - Dicots

Apiaceae

**Foeniculum vulgare* Sweet fennel

Asteraceae

Ambrosia psilostachya Western ragweed
Baccharis glutinosa Marsh baccharis
Baccharis pilularis subsp. pilularis Baccharis
**Carduus pycnocephalus subsp. pycnocephalus* Italian thistle
**Centaurea solstitialis* Yellow starthistle
**Cirsium vulgare* Bull thistle
**Cynara cardunculus subsp. cardunculus* Artichoke
**Dittrichia graveolens* Stinkwort
Erigeron canadensis Horseweed
**Helminthotheca echioides* Bristly ox-tongue
Iva axillaris Poverty weed
**Lactuca serriola* Prickly lettuce
**Silybum marianum* Milk thistle
Xanthium strumarium Cocklebur

Brassicaceae

**Brassica nigra* Black mustard
**Hirschfeldia incana* Short-podded mustard
**Lepidium latifolium* Broadleaf pepperweed

Convolvulaceae

**Convolvulus arvensis* Bindweed
Cressa truxillensis Alkali weed

Euphorbiaceae

**Triadica sebifera* Chinese tallowtree

Fabaceae

Lupinus microcarpus Lupine
**Melilotus indicus* Annual yellow sweetclover
**Vicia sativa* Common vetch

Frankeniaceae

Frankenia salina Alkali heath

Lamiaceae

Stachys ajugoides Bugle hedge-nettle

Malvaceae

Malvella leprosa Alkali mallow

Myrtaceae

**Eucalyptus sp.* Eucalyptus

Onagraceae

Epilobium brachycarpum Summer cottonweed
Epilobium ciliatum subsp. ciliatum Hairy willow-herb

* Indicates a non-native species

Table 1
Plant Species Observed on the Goodyear Road Property

Polygonaceae	
* <i>Rumex conglomeratus</i>	Green dock
* <i>Rumex crispus</i>	Curly dock
Rosaceae	
<i>Heteromeles arbutifolia</i>	Toyon
* <i>Rubus armeniacus</i>	Himalayan blackberry
Salicaceae	
<i>Salix laevigata</i>	Red willow
<i>Salix lasiolepis</i>	Arroyo willow
Angiosperms -Monocots	
Cyperaceae	
<i>Cyperus eragrostis</i>	Tall flatsedge
<i>Eleocharis macrostachya</i>	Creeping spikerush
<i>Schoenoplectus americanus</i>	Olney's bulrush
Juncaceae	
<i>Juncus mexicanus</i>	Mexican rush
<i>Juncus xiphioides</i>	Iris-leaved rush
Poaceae	
* <i>Avena barbata</i>	Slender wild oat
* <i>Bromus diandrus</i>	Ripgut grass
* <i>Bromus hordeaceus</i>	Soft chess
* <i>Bromus madritensis subsp. madritensis</i>	Foxtail chess
<i>Distichlis spicata</i>	Saltgrass
<i>Elymus triticoides subsp. triticoides</i>	Creeping wildrye
<i>Hordeum brachyantherum</i>	Meadow barley
* <i>Phalaris aquatica</i>	Harding grass
<i>Phragmites australis</i>	Common reed
* <i>Polypogon monspeliensis</i>	Annual beard grass
Typhaceae	
<i>Typha angustifolia</i>	Narrow-leaved cattail
<i>Typha latifolia</i>	Broad-leaved cattail

Table 2
Wildlife Species Observed on the Goodyear Road Property

Reptiles

Western fence lizard	<i>Sceloporus occidentalis</i>
----------------------	--------------------------------

Birds

Northern harrier	<i>Circus cyaneus</i>
Killdeer	<i>Charadrius vociferus</i>
Mourning dove	<i>Zenaida macroura</i>
American crow	<i>Corvus brachyrhynchos</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Bushtit	<i>Psaltriparus minimus</i>
European starling	<i>Sturnus vulgaris</i>
House finch	<i>Carpodacus mexicanus</i>

Mammals

Botta's pocket gopher	<i>Thomomys bottae</i>
Striped skunk	<i>Mephitis mephitis</i>

Table 3

Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Adoxaceae					
<i>Viburnum ellipticum</i> Western viburnum	Fed: - State: - CNPS: Rank 2.3	May-July	Chaparral; cismontane woodland; lower montane coniferous forest.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Apiaceae					
<i>Cicuta maculata bolanderi</i> Bolander's waterhemlock	Fed: - State: - CNPS: Rank 2.1	July-September	Marshes and swamps (coastal, fresh, or brackish). 0 to 200 meters.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	Fed: - State: CR CNPS: Rank 1B.1	April-October	Marshes and swamps (brackish or freshwater); riparian scrub.	Closest record for this species is located 2.9 miles south of the project site (Occurrence No. 102)	None. No suitable habitat occurs onsite.
<i>Sanicula saxatilis</i> Rock sanicle	Fed: - State: CR CNPS: Rank 1B.2	April-May	Broad-leaf upland forest; chaparral; valley and foothill grassland; [rocky].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Asteraceae					
<i>Blepharizonia plumosa</i> Big tarplant	Fed: - State: - CNPS: Rank 1B.1	July-October	Valley and foothill grassland.	Closest record for this species is located 2.4 miles southwest of the project site (Occurrence No. 40)	None. No suitable habitat occurs onsite. Not observed during appropriately timed survey.
<i>Centromadia parryi congdonii</i> Congdon's tarplant	Fed: - State: - CNPS: Rank 1B.2	May-November	Valley and foothill grassland (alkaline).	Closest record for this species is located 4.1 miles south of the project site (Occurrence No. 73)	None. No suitable habitat occurs onsite.

Table 3**Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Centromadia parryi parryi</i> Pappose tarplant	Fed: - State: - CNPS: Rank 1B.2	May-November	Coastal prairie; meadows and seeps; marshes and swamps; vernal wet grassland (sometimes alkaline).	Closest record for this species is located 3.9 miles north of the project site (Occurrence No. 7)	Low. Suitable habitat occurs onsite. Not observed during appropriately timed survey. Additional surveys required.
<i>Cirsium andrewsii</i> Franciscan thistle	Fed: - State: - CNPS: Rank 1B.2	June-July	Broadleafed upland forest; coastal bluff scrub; [sometimes serpentinite].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Cirsium hydrophilum hydrophilum</i> Suisun thistle	Fed: FE State: - CNPS: Rank 1B.1	July-September	Marshes and swamps (salt).	On CNPS nine quad search	None. No suitable salt marsh habitat occurs onsite.
<i>Helianthella castanaea</i> Diablo helianthella	Fed: - State: - CNPS: Rank 1B.2	April-June	Broadleafed upland forest; chaparral; cismontane woodland; coastal scrub; riparian woodland; valley and foothill grassland.	Closest record for this species is located 4.9 miles southwest of the project site (Occurrence No. 56)	None. No suitable habitat occurs onsite.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	Fed: FT State: CE CNPS: Rank 1B.1	June-October	Coastal prairie; valley and foothill grassland; [often clay].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Isocoma arguta</i> Carquinez goldenbush	Fed: - State: - CNPS: Rank 1B.1	August-December	Valley and foothill grassland (alkaline).	Closest record for this species is located on the project site (Occurrence No. 14)	None. No remnant valley and foothill grassland occurs onsite only ruderal grassland. No species of <i>Isocoma</i> observed during field survey.

Table 3**Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Lasthenia conjugens</i> Contra Costa goldfields	Fed: FE State: - CNPS: Rank 1B.1	March-June	Valley and foothill grassland (mesic); vernal pools.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Monolopia gracilens</i> Small-flowered monolopia	Fed: State: CNPS: Rank 1B.2	March-July	Coniferous and broadleaved upland forest openings, chaparral openings, and serpentine valley and foothill grassland. Elevation 100-1200 m.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Senecio aphanactis</i> Chaparral ragwort	Fed: - State: - CNPS: Rank 2.2	January-April	Foothill woodland; coastal scrub; (alkaline).	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Symphotrichum lentum</i> Suisun Marsh aster	Fed: - State: - CNPS: Rank 1B.2	August-November	Marshes and swamps (brackish and fresh water)	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 82)	None. No suitable habitat occurs onsite.
Boraginaceae					
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	Fed: - State: - CNPS: Rank 1B.2	March-June	Cismontane woodland, Valley and foothill grassland	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Phacelia phacelioides</i> Mount Diablo phacelia	Fed: - State: - CNPS: Rank 1B.2	April-May	Chaparral; cismontane woodland; [rocky].	On CNPS nine quad search	None. No suitable habitat occurs onsite.

Table 3

Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Plagiobothrys hystriculus</i> Bearded-nut popcornflower	Fed: - State: - CNPS: Rank 1B.1	April-May	Valley and foothill grasslands (mesic); vernal pools.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Brassicaceae					
<i>Erysimum capitatum angustatum</i> Contra Costa wallflower	Fed: FE State: CE CNPS: Rank 1B.1	March-July	Inland dunes.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Streptanthus albidus peramoenus</i> Uncommon jewelflower	Fed: - State: - CNPS: Rank 1B.2	April-June	Chaparral; valley and foothill grassland; [serpentinite].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Streptanthus hispidus</i> Mount Diablo jewelflower	Fed: - State: - CNPS: Rank 1B.3	March-June	Chaparral; valley and foothill grassland; [rocky].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Tropidocarpum californicum</i> Kings gold	Fed: - State: - CNPS: Rank 1B.1	March-March	Chenopod scrub.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Campanulaceae					
<i>Campanula exigua</i> Chaparral harebell	Fed: - State: - CNPS: Rank 1B.2	May-June	Chaparral (rocky, usually serpentinite).	On CNPS nine quad search	None. No suitable habitat occurs onsite.

Table 3**Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Downingia pusilla</i> Dwarf downingia	Fed: - State: - CNPS: Rank 2.2	March-May	Valley and foothill grassland (mesic); vernal pools.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Legenere limosa</i> Legenere	Fed: - State: - CNPS: Rank 1B.1	April-June	Vernal pools.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Chenopodiaceae					
<i>Atriplex cordulata cordulata</i> Heartscale	Fed: - State: - CNPS: Rank 1B.2	April-October	Meadows and seeps; chenopod scrub; valley and foothill grassland (sandy); [saline or alkaline].	On CNPS nine quad search	Low. Suitable habitat occurs on the project site. Not observed during appropriately timed survey. Additional surveys required.
<i>Atriplex depressa</i> Rhomboid bract saltbush	Fed: - State: - CNPS: Rank 1B.2	May-October	Chenopod scrub; playas; valley and foothill grassland; [alkaline or clay].	On CNPS nine quad search	Low. Marginally suitable habitat occurs on the project site. Not observed during appropriately timed survey. Additional surveys required.
Ericaceae					
<i>Arctostaphylos auriculata</i> Mount Diablo manzanita	Fed: - State: - CNPS: Rank 1B.3	January-March	Chaparral (sandstone).	On CNPS nine quad search	None. No suitable habitat occurs onsite. No species of <i>Arctostaphylos</i> observed during survey.
<i>Arctostaphylos manzanita laevigata</i> Contra Costa manzanita	Fed: - State: - CNPS: Rank 1B.2	January-February	Chaparral (rocky),	On CNPS nine quad search	None. No suitable habitat occurs onsite. No species of <i>Arctostaphylos</i> observed during survey.

Table 3

Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Arctostaphylos pallida</i> Pallid manzanita	Fed: FT State: CE CNPS: Rank 1B.1	January-December	Broad-leaved upland forest; chaparral; cismontane woodland; [siliceous shale]	On CNPS nine quad search	None. No suitable habitat occurs onsite. No species of <i>Arctostaphylos</i> observed during survey.
Fabaceae					
<i>Astragalus tener tener</i> Alkali milkvetch	Fed: - State: - CNPS: Rank 1B.2	March-June	Playas; valley and foothill grassland (adobe clay), vernal pools (alkaline).	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Lathyrus jepsonii jepsonii</i> Delta tule pea	Fed: - State: - CNPS: Rank 1B.2	May-September	Marshes and swamps (freshwater and brackish).	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 87)	None. No suitable habitat occurs onsite.
<i>Trifolium hydrophilum</i> Saline clover	Fed: - State: - CNPS: Rank 1B.2	April-June	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools. 0-300 m.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Geraniaceae					
<i>California macrophylla</i> Large-leaf storksbill	Fed: - State: - CNPS: Rank 1B.1	March-May	Cismontane woodland; valley and foothill grassland/clay.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Liliaceae					
<i>Calochortus pulchellus</i> Mt. Diablo fairy lantern	Fed: - State: - CNPS: Rank 1B.2	April-June	Chaparral; cismontane woodland; valley and foothill grassland.	Closest record for this species is located 4.9 miles south of the project site (Occurrence No. 27)	None. No suitable habitat occurs onsite.

Table 3**Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Fritillaria liliacea</i> Fragrant fritillary	Fed: - State: - CNPS: Rank 1B.2	February-April	Coastal prairie; coastal scrub; valley and foothill grassland; [often serpentinite].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Linaceae					
<i>Hesperolinon breweri</i> Brewer's dwarf flax	Fed: - State: - CNPS: Rank 1B.2	May-July	Chaparral; cismontane woodland; valley and foothill grassland; [mostly serpentinite].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Malvaceae					
<i>Malacothamnus hallii</i> Hall's bush mallow	Fed: - State: - CNPS: Rank 1B.2	May-September	Chaparral.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Onagraceae					
<i>Oenothera deltoides howellii</i> Antioch dunes evening-primrose	Fed: FE State: CE CNPS: Rank 1B.1	March-September	Interior dunes.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Orobanchaceae					
<i>Castilleja affinis neglecta</i> Tiburon paintbrush	Fed: FE State: CT CNPS: Rank 1B.2	April-June	Valley and foothill grassland [serpentinite]	On CNPS nine quad search	None. No suitable habitat occurs onsite.

Table 3**Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
<i>Chloropyron molle hispidum</i> Hispid salty bird's-beak	Fed: - State: - CNPS: Rank 1B.1	June-September	Meadows; playas; [alkaline]. 1-155m.	On CNPS nine quad search	None. No suitable salt marsh habitat occurs onsite.
<i>Chloropyron molle molle</i> Soft salty bird's-beak	Fed: FE State: CR CNPS: Rank 1B.2	July-September	Marshes and swamps (coastal salt).	Closest record for this species is located 4.0 miles southeast of the project site (Occurrence No. 14)	None. No suitable habitat occurs onsite.
<i>Cordylanthus nidularius</i> Mount Diablo bird's-beak	Fed: FC State: CR CNPS: Rank 1B.1	July-August	Chaparral (serpentine).	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Papaveraceae					
<i>Meconella oregana</i> Oregon meconella	Fed: State: CNPS: Rank 1B.1	March-April	Coastal prairie and coastal scrub. Elevation 250-620 meters.	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Polemoniaceae					
<i>Eriastrum brandegeae</i> Brandegee's eriastrum	Fed: - State: - CNPS: Rank 1B.2	May-August	Chaparral; cismontane woodland; [volcanic].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Navarretia gowenii</i> Lime Ridge navarretia	Fed: - State: - CNPS: Rank 1B.1	May-June	Chaparral.	On CNPS nine quad search	None. No suitable habitat occurs onsite.

Table 3

Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Polygonaceae					
<i>Eriogonum luteolum caninum</i> Tiburon buckwheat	Fed: - State: - CNPS: Rank 1B.2	June-September	Chaparral; coastal prairie; valley and foothill grassland; [serpentinite].	On CNPS nine quad search	None. No suitable habitat occurs onsite.
<i>Eriogonum truncatum</i> Mount Diablo buckwheat	Fed: - State: - CNPS: Rank 1B.1	April-September	Chaparral; coastal scrub; valley and foothill grassland; [sandy].	On CNPS nine quad search	None. No suitable habitat occurs onsite. Not observed during appropriately timed survey.
Potamogetonaceae					
<i>Stuckenia filiformis alpina</i> Slender-leaved pondweed	Fed: - State: - CNPS: Rank 2.2	May-July	Marshes and swamps (assorted shallow freshwater).	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Ranunculaceae					
<i>Delphinium californicum interius</i> Hospital Canyon larkspur	Fed: - State: - CNPS: Rank 2.2	April-June	Cismontane woodland (mesic).	On CNPS nine quad search	None. No suitable habitat occurs onsite.
Rhamnaceae					
<i>Ceanothus purpureus</i> Holly-leaf ceanothus	Fed: - State: - CNPS: Rank 1B.2	February-April	Chaparral (volcanic).	On CNPS nine quad search	None. No suitable habitat occurs onsite. No species of <i>Ceanothus</i> observed during survey.

Table 3

Special-Status Plant Species Known To Occur within 5 Miles of the Goodyear Road Property

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Scrophulariaceae					
<i>Limosella subulata</i> Southern mudwort	Fed: - State: - CNPS: Rank 2.1	May-August	Marshes and swamps; intertidal mudflats.	On CNPS nine quad search	None. The project site has no tidal influence.
Thymelaeaceae					
<i>Dirca occidentalis</i> Western leatherwood	Fed: - State: - CNPS: Rank 1B.2	January-April	Chaparral; riparian, broadleaf, and coniferous woodlands and forests; [mesic locations].	On CNPS nine quad search	None. No suitable habitat occurs onsite.

***Status**

- Federal:
 FE - Federal Endangered
 FT - Federal Threatened
 FPE - Federal Proposed Endangered
 FPT - Federal Proposed Threatened
 FC - Federal Candidate
- State:
 CE - California Endangered
 CT - California Threatened
 CR - California Rare
 CC - California Candidate
 CSC - California Species of Special Concern
- CNPS:
 Rank 1A - Presumed extinct in California
 Rank 1B - Plants rare, threatened, or endangered in California and elsewhere
 Rank 1B.1 - Seriously endangered in California (over 80% occurrences threatened/ high degree and immediacy of threat)
 Rank 1B.2 - Fairly endangered in California (20-80% occurrences threatened)
 Rank 1B.3 - Not very endangered in California (<20% of occurrences threatened or no current threats known)

- CNPS Continued:
 Rank 2 - Plants rare, threatened, or endangered in California, but more common elsewhere
 Rank 2.1 - Seriously endangered in California, but more common elsewhere
 Rank 2.2 - Fairly endangered in California, but more common elsewhere
 Rank 2.3 - Not very endangered in California, but more common elsewhere
 Rank 3 - Plants about which we need more information (Review List)
 Rank 3.1 - Plants about which we need more information (Review List)
 Seriously endangered in California
 Rank 3.2 - Plants about which we need more information (Review List)
 Fairly endangered in California
 Rank 4 - Plants of limited distribution - a watch list

Table 4
Special-Status Wildlife Species Known to Occur within 5 Miles of the Goodyear Road Property

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Fish				
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	Fed: State: CSC Other:	Endemic to the lakes and rivers of the Central Valley; now confined to the delta, Suisun Bay, and associated marshes. Inhabits slow moving river sections and dead-end sloughs. Needs flooded vegetation for spawning.	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 5)	None. No suitable habitat onsite.
Amphibians				
California red-legged frog <i>Rana draytonii</i>	Fed: FT State: CSC Other:	Occurs in lowlands and foothills in deeper pools and streams, usually with emergent wetland vegetation. Requires 11-20 weeks of permanent water for larval development.	Closest record for this species is located 4.2 miles north of the project site (Occurrence No. 857)	None. No suitable habitat present onsite.
Reptiles				
Western pond turtle <i>Emys marmorata</i>	Fed: -- State: CSC Other:	Inhabits ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs suitable basking sites and upland habitat for egg laying. Occurs in the Central Valley and Contra Costa County.	Closest record for this species is located 4.5 miles north of the project site (Occurrence No. 200)	None. No suitable habitat present.
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	Fed: FT State: CT Other:	Coastal scrub and chaparral habitats of Contra Costa and Alameda Counties. Prefers south-facing slopes with a mosaic of shrubs, trees, and grassland.	Closest record for this species is located 2.0 miles west (Occurrence No. 74)	None. No suitable habitat present onsite.

Table 4
Special-Status Wildlife Species Known to Occur within 5 Miles of the Goodyear Road Property

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Birds				
Northern harrier <i>Circus cyaneus</i>	Fed: - State: CSC Other: *	Found in or near freshwater and salt marshes. Nests on the ground or in shrubby vegetation.	Closest record for this species is located 4.4 miles west of the project site (Occurrence No. 30).	Observed flying over the project site. Suitable nesting and foraging habitat in Conservation Area. Surveys needed. See text.
Golden eagle <i>Aquila chrysaetos</i>	Fed: - State: - Other: *	Found in rolling foothill grassland with scattered trees. Nests on cliffs and in large trees in open areas.	Closest record for this species is located 3.6 miles west of the project site (Occurrence No. 113)	None. No suitable habitat present onsite.
American peregrine falcon <i>Falco peregrinus anatum</i>	Fed: - State: CE Other: *	Nests on high cliffs. Also nests on human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Closest record for this species is located 2.0 miles west of the project site (Occurrence No. 29)	None. No suitable habitat present onsite.
California black rail <i>Laterallus jamaicensis coturniculus</i>	Fed: -- State: CT Other: *	Inhabits salt marshes bordering larger bays. Prefers tidal salt marshes of pickleweed. May also occur in fresh to brackish marshes.	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 88)	None. No suitable habitat present onsite.
California clapper rail <i>Rallus longirostris obsoletus</i>	Fed: FE State: CE Other: *	Inhabits salt water and brackish marshes with tidal sloughs in San Francisco Bay. Prefers dense pickleweed for cover, but forages for invertebrates along mud-bottomed sloughs.	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 93)	None. No suitable habitat present onsite.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	Fed: -- State: CSC Other:	Found in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Closest record for this species is located 4.7 miles north of the project site (Occurrence No. 556)	None. No suitable habitat present onsite.

Table 4
Special-Status Wildlife Species Known to Occur within 5 Miles of the Goodyear Road Property

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Short-eared owl <i>Asio flammeus</i>	Fed: -- State: WL Other:	Found in fresh and saltwater marshes; lowland meadows; irrigated alfalfa fields. Tule patches/ tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	Closest record for this species is located 4.5 miles northeast of the project site (Occurrence No. 12)	None. No suitable habitat present onsite.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	Fed: - State: CSC Other: *	Resident of freshwater and salt water marshes in the San Francisco Bay region. Requires thick, continuous cover for foraging and tall grasses, tules, or willows for nesting.	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 85)	None. No open water associated with riparian habitat on or near the project site.
Suisun song sparrow <i>Melospiza melodia maxillaris</i>	Fed: -- State: CSC Other: *	Resident of brackish marshes surrounding Suisun Bay. Prefers cattails, tules, sedges, and pickleweed. Also found in tangles bordering sloughs.	Closest record for this species is located 0.4 miles east of the project site (Occurrence No. 30)	Low. Marginally suitable habitat present onsite. Surveys needed. See text.
Tricolored blackbird <i>Agelaius tricolor</i>	Fed: -- State: CSC Other:	Colonial nester in dense cattails, tules, brambles or other dense vegetation. Requires open water, dense vegetation, and open grassy areas for foraging.	Closest record for this species is located 2.1 miles west of the project site (Occurrence No. 327)	Low. Marginally suitable habitat present in Conservation Area. Surveys needed see text.
Mammals				
Suisun shrew <i>Sorex ornatus sinuosus</i>	Fed: -- State: CSC Other:	Inhabits tidal marshes in the northern end of San Pablo and Suisun Bays. Requires dense, low cover of plants, driftwood, and other litter above the mean high tide line.	Closest record for this species is located 4.3 miles west of the project site (Occurrence No. 4)	None. No suitable habitat present onsite.
Big free-tailed bat <i>Nyctinomops macrotis</i>	Fed: - State: CSC Other:	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops.	Closest record for this species is located 4.1 miles south of the project site (Occurrence No. 1)	None. No suitable habitat present onsite.

Table 4
Special-Status Wildlife Species Known to Occur within 5 Miles of the Goodyear Road Property

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	Fed: FE State: CE Other: *	Inhabits saline emergent wetlands in the San Francisco Estuary. Prefers pickleweed marshes. Requires higher areas for escaping high water.	Closest record for this species is located just outside the project site, east of the railroad tracks. (Occurrence No. 156)	None. No suitable habitat. No pickleweed present on project site. May occur in Conservation Area. See Avoidance Measures in text.

***Status**

Federal:

- FE - Federal Endangered
- FT - Federal Threatened
- FPE - Federal Proposed Endangered
- FPT - Federal Proposed Threatened
- FC - Federal Candidate
- FPD - Federally Proposed for delisting

State:

- CE - California Endangered
- CT - California Threatened
- CR - California Rare
- CC - California Candidate
- CSC - California Species of Special Concern
- WL - Watch List. Not protected pursuant to CEQA

***Other:**

Most birds have protection under the Migratory Bird Treaty Act. Raptors and their nests are protected by provisions of the California Fish and Game Code. A few species, such as the monarch butterfly and "California Fully Protected Animals," may be protected by policies of the California Department of Fish and Game.

OWNERS/SUBDIVIDER
 EMERGEN MANAGEMENT GROUP
 606 NORTH FIRST STREET
 SAN JOSE, CA. 95112

ENGINEER
 APEX CIVIL ENGINEERING & LAND SURVEYING
 822 ALHAMBRA AVE. STE. 16
 MARTINEZ, CA. 94553
 PH: 925-476-8499

GENERAL
 ASSESSORS PARCEL NO: 0080-320-410
 VACANT
 PROPOSED USE: COMMERCIAL/ENVIRONMENTAL
 PRESENT ZONING: CG (GENERAL COMMERCIAL)
 TOTAL GROSS AREA: 10.94 ACRES

PROPOSED PARCELS
 PARCEL A AREA: 4.58 ACRES
 PARCEL B AREA: 6.36 ACRES

FACILITIES
 PARK DISTRICT: CITY OF BENICIA
 POLICE: CITY OF BENICIA
 WATER DISTRICT: CITY OF BENICIA
 SEWER DISTRICT: CITY OF BENICIA
 STORM DRAINAGE: CITY OF BENICIA
 GAS & ELECTRIC: PACIFIC GAS & ELECTRIC
 ATT

LEGEND

- PROPERTY LINE
- PROPOSED PARCEL LINE
- RIGHT OF WAY
- EXISTING ADJACENT PROPERTY LINE
- WETLAND DELINEATION AS SHOWN IN THE ENVIRONMENTAL RESOURCE REPORT PROVIDED BY MONK AND ASSOC. DATED SEPTEMBER 27, 2012
- INDEX CONTOUR
- INTERMEDIATE CONTOURS
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING STORM LINE
- EXISTING STREET MONUMENT
- AC PAVING
- STORM INLET
- ELECTROILER
- TREE

TENTATIVE PARCEL MAP

PARCEL A (33 PM 90)

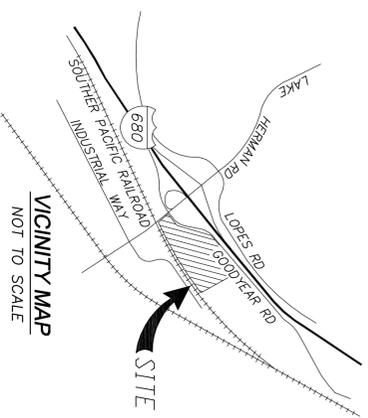
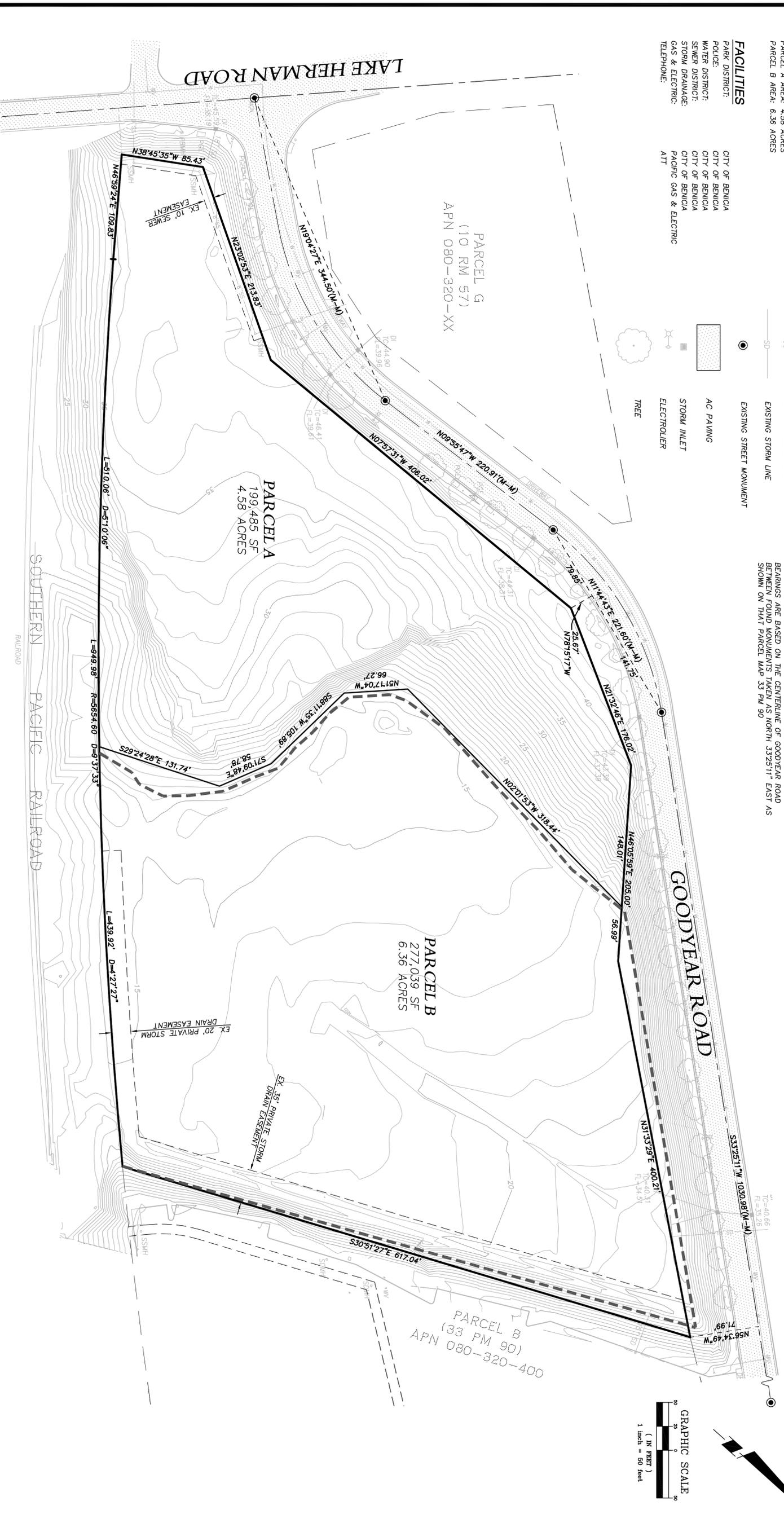
CITY OF BENICIA
 COUNTY OF SOLANO

ABBREVIATIONS

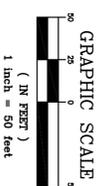
SMMH STORM MANHOLE
 SSMH SEWER MANHOLE
 DI DRAINAGE INLET
 TC TIE OFF CURB
 FG FLOWLINE
 PGE ELECTRICAL BOX

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CENTERLINE OF GOODYEAR ROAD BETWEEN FOUND MONUMENTS TAKEN AS NORTH 33°25'11" EAST AS SHOWN ON THAT PARCEL MAP 33 PM 90



VICINITY MAP
 NOT TO SCALE



NO.	REVISIONS	BY	APP	DATE



822 Alhambra Avenue Ste. 16
 Martinez, CA 94553
 Ph: (925) 476-8499
 www.apexce.net



TENTATIVE MAP
 GOODYEAR ROAD
 BENICIA, CA.

SHEET
 1 OF 1
 DATE
 10-14-12

VESTING TENTATIVE PARCEL MAP

PARCEL D (33 PM 90)

CITY OF BENICIA
COUNTY OF SOLANO

OWNER/SUBDIVIDER
EVERGREEN MANAGEMENT GROUP
606 NORTH FIRST STREET
SAN JOSE, CA. 95112

ENGINEER
APEX CIVIL ENGINEERING & LAND SURVEYING
822 ALHAMBRA AVE. STE. 16
MARTINEZ, CA. 94553
PH: 925-476-8499

GENERAL

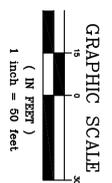
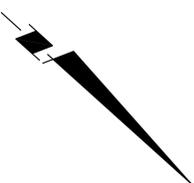
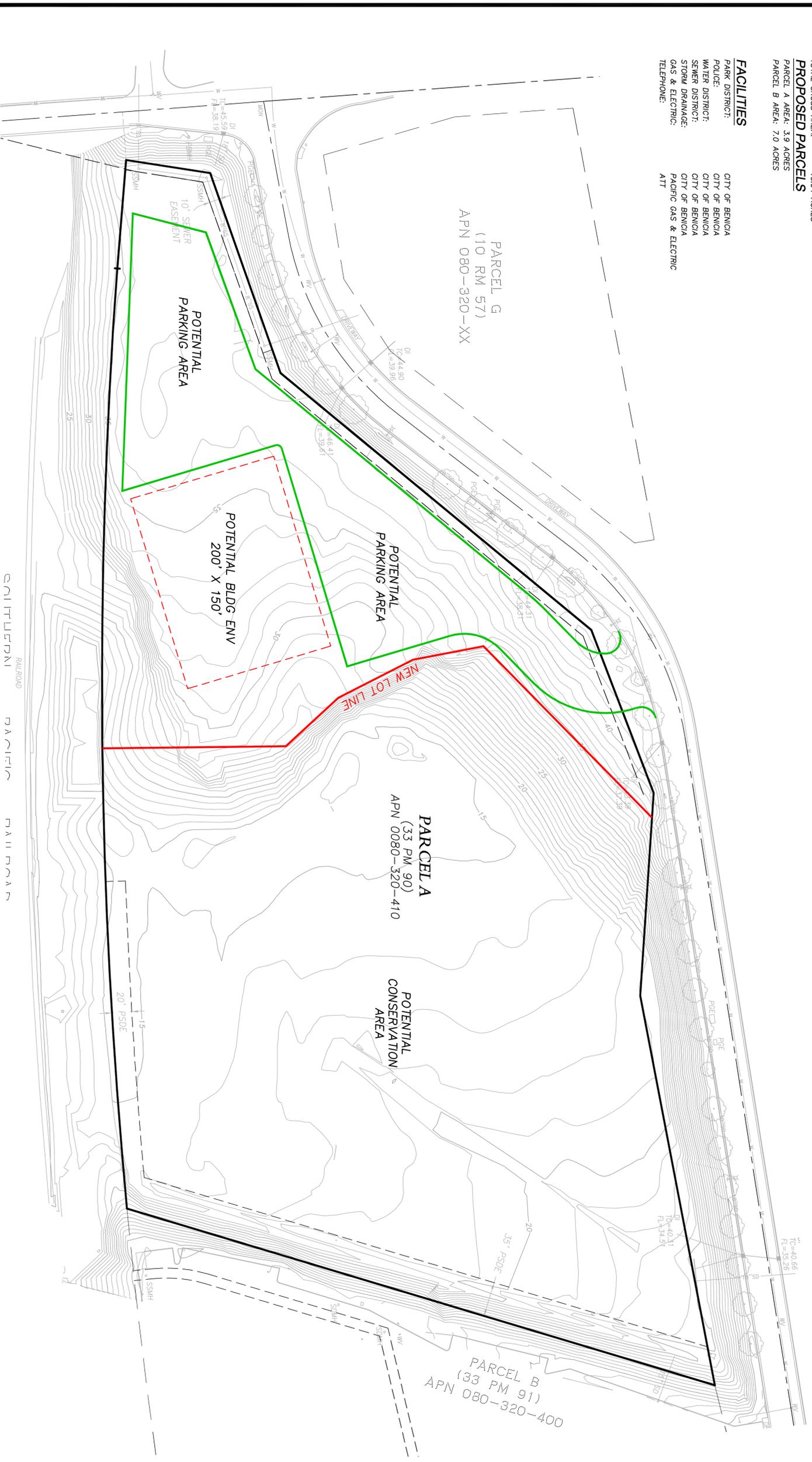
ASSESSOR'S PARCEL NO: 0080-320-410
PRESENT USE: VACANT
PROPOSED USE: COMMERCIAL/ENVIRONMENTAL
PRESENT ZONING: CC (GENERAL COMMERCIAL)
TOTAL GROSS AREA: 10.94 ACRES

PROPOSED PARCELS

PARCEL A AREA: 3.9 ACRES
PARCEL B AREA: 7.0 ACRES

FACILITIES

PARK DISTRICT: CITY OF BENICIA
POLICE: CITY OF BENICIA
WATER DISTRICT: CITY OF BENICIA
SEWER DISTRICT: CITY OF BENICIA
STORM DRAINAGE: CITY OF BENICIA
GAS & ELECTRIC: CITY OF BENICIA
TELEPHONE: ATT
PAIFIC GAS & ELECTRIC



SHEET 1 OF 1
DATE 07-12-12

VESTING TENTATIVE MAP
GOODYEAR ROAD
BENICIA, CA.

NO.	REVISIONS	BY	APP	DATE



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