

State Route 68/Corral de Tierra Road Intersection

Improvement Project *NES*



Natural Environment Study

State Route 68/Corral de Tierra Road Intersection Improvement Project

Monterey County, California

05-Mon-68 PM 12.8/13.2

EA 05-0H8230



February 2013

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February 2013

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Summary

The County of Monterey, funded by State Transportation Improvement Program funds and local funds, proposes operational improvements at the State Route 68 (SR-68) and Corral de Tierra Road intersection in an unincorporated area of Monterey County. Operational improvements will widen the SR-68/Corral de Tierra Road intersection to accommodate the construction of a second left turn lane from westbound SR-68 to southbound Corral de Tierra Road. In addition, a second southbound receiving lane will be constructed on Corral de Tierra Road.

The purpose of the proposed project is to relieve traffic congestion conditions during the evening peak traveling hours by improving level of service (LOS) to “C” at the SR-68/Corral de Tierra Road intersection and to reduce the accident rate related to left-turn movements from SR-68 onto Corral de Tierra Road. The intersection is currently operating at a LOS “D”.

The proposed project would widen the SR-68/Corral de Tierra Intersection to the north of the existing alignment to accommodate the construction of a second (additional) left turn lane from westbound SR-68 onto southbound Corral de Tierra Road. Approximately 520 feet of Steel Crib retaining wall (or equivalent) will be constructed west of Corral de Tierra Road along the north embankment of SR-68. The retaining wall will minimize the footprint of the embankment needed to accommodate the widened road section.

An additional receiving lane would be constructed on southbound Corral de Tierra Road, and a left turn lane would be constructed from westbound SR-68 into the Corral de Tierra Country Club driveway (located east of Corral de Tierra Road) on the south side of SR-68.

A “No Build” alternative is also being considered.

All of the work would be constructed within existing State and County rights-of-way, except for a small area of new State right-of-way that would be acquired on the north side of SR-68 just east of the intersection to accommodate relocation of a bus stop, widening and grading. Also, a temporary construction easement would be acquired along the east side of Corral de Tierra Road to accommodate grading near the edge of the County right-of-way. Temporary staging areas for construction equipment and materials would be located in those areas of the existing State and County rights-of-

way that are not designated as environmentally sensitive areas. Construction is expected to be completed in a single season.

The project will not affect any special status plants.

California tiger salamander, a federal and State listed threatened species, could potentially occur in the BSA and be affected by the project and, as a result, could result in “take” of this species under the California Endangered Species Act. As a result, a Section 2081 Incidental Take Permit will be required from California Department of Fish and Wildlife (CDFW) to authorize incidental take of California tiger salamander. The project will also include avoidance and minimization measures for California tiger salamander.

Per discussions with the U.S. Fish and Wildlife Service, with implementation of these measures, it is not expected that consultation with the U.S. Fish and Wildlife Service will be required. If California tiger salamander are found during pre-construction burrow surveys or during the course of construction, all project activities must immediately cease and U.S. Fish and Wildlife Service and Caltrans must be contacted within 48 hours. Incidental take authorization will likely need to be acquired from U.S. Fish and Wildlife Service in the form of a Habitat Conservation Plan/Federal Incidental Take Permit. This would likely delay further construction for months if not years, and could require additional compensatory mitigation

California red-legged frog and western spadefoot toad could potentially occur in the BSA. The project will include avoidance and minimization measures to ensure no “take” of these species occurs. As a result, it is not expected that consultation with the U.S. Fish and Wildlife Service will be required. The project also has potential to affect Cooper’s hawk and other nesting birds. No other special status wildlife will be affected by the project.

The project will not result in a discharge of fill into jurisdictional waters but will result in minor temporary impacts (0.001 acre) to riparian habitat under the jurisdiction of CDFW.

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List of Abbreviated Terms

ac	Acre(s)
ACOE	Army Corps of Engineers
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
Caltrans	California Department of Transportation
cm	Centimeter(s)
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CWA	Clean Water Act
dbh	Diameter at breast height
EFH	Essential fish habitat
EO	Executive Order
ESA	Environmentally Sensitive Area
FHWA	Federal Highway Administration
ft	Foot / feet
in	Inch(es)
LOS	Level of Service
LSA	LSA Associates, Inc.
MBTA	Migratory Bird Treaty Act
mi	Mile(s)
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Oceanic & Atmospheric Administration, National Marine Fisheries Service
County	Monterey County
PCWQCA	Porter Cologne Water Quality Control Act
RWQCB	Regional Water Quality Control Board
SR-68	State Route 68
USFWS	United States Fish and Wildlife Service

Chapter 1. Introduction

The proposed project was initiated by the Monterey County (County) and will be funded by a combination of State Transportation Improvement Program funds and local funds.

The proposed project includes operational improvements at the State Route 68 (SR-68) and Corral de Tierra Road intersection in an unincorporated area of Monterey County. The proposed project is located approximately 9 miles west of the City of Salinas and 13 miles east of the City of Monterey (Figures 1 and 2). The proposed roadway improvements will widen the SR-68/Corral de Tierra Road intersection to accommodate the construction of a second left turn lane from westbound SR-68 to southbound Corral de Tierra Road. In addition, a second southbound receiving lane will also be constructed on Corral de Tierra Road.

1.1. Project Purpose and Need

The purpose of the proposed project is to relieve traffic congestion conditions during the evening peak traveling hours and to reduce the accident rate related to left-turn movements from SR-68 onto Corral de Tierra Road. The SR-68/Corral de Tierra intersection is currently operating at a Level of Service (LOS) “D” in the evening peak hour resulting in long traffic queues on SR-68. The standard for the operation of arterial roadways as defined by the Monterey County General Plan is LOS “D”; therefore, the SR-68/Corral de Tierra Road intersection is not currently operating at a deficient LOS. However, without implementation of the proposed project, the SR-68/Corral de Tierra Road intersection LOS is predicted to deteriorate due to increased traffic. Forecast traffic operations for the year 2024 predict that the SR-68/Corral de Tierra Road intersection would operate at LOS “E” in the morning peak hour and LOS “F” in the evening peak hour without improvements.

1.2. Project Description

The proposed intersection improvements will extend along SR-68 approximately 925 feet west of Corral de Tierra Road and 1,435 feet east of Corral de Tierra Road. The alternatives identified include the proposed project and the “No Build” alternative.

The proposed project would widen the SR-68/Corral de Tierra Intersection to the north of the existing alignment to accommodate the construction of a second

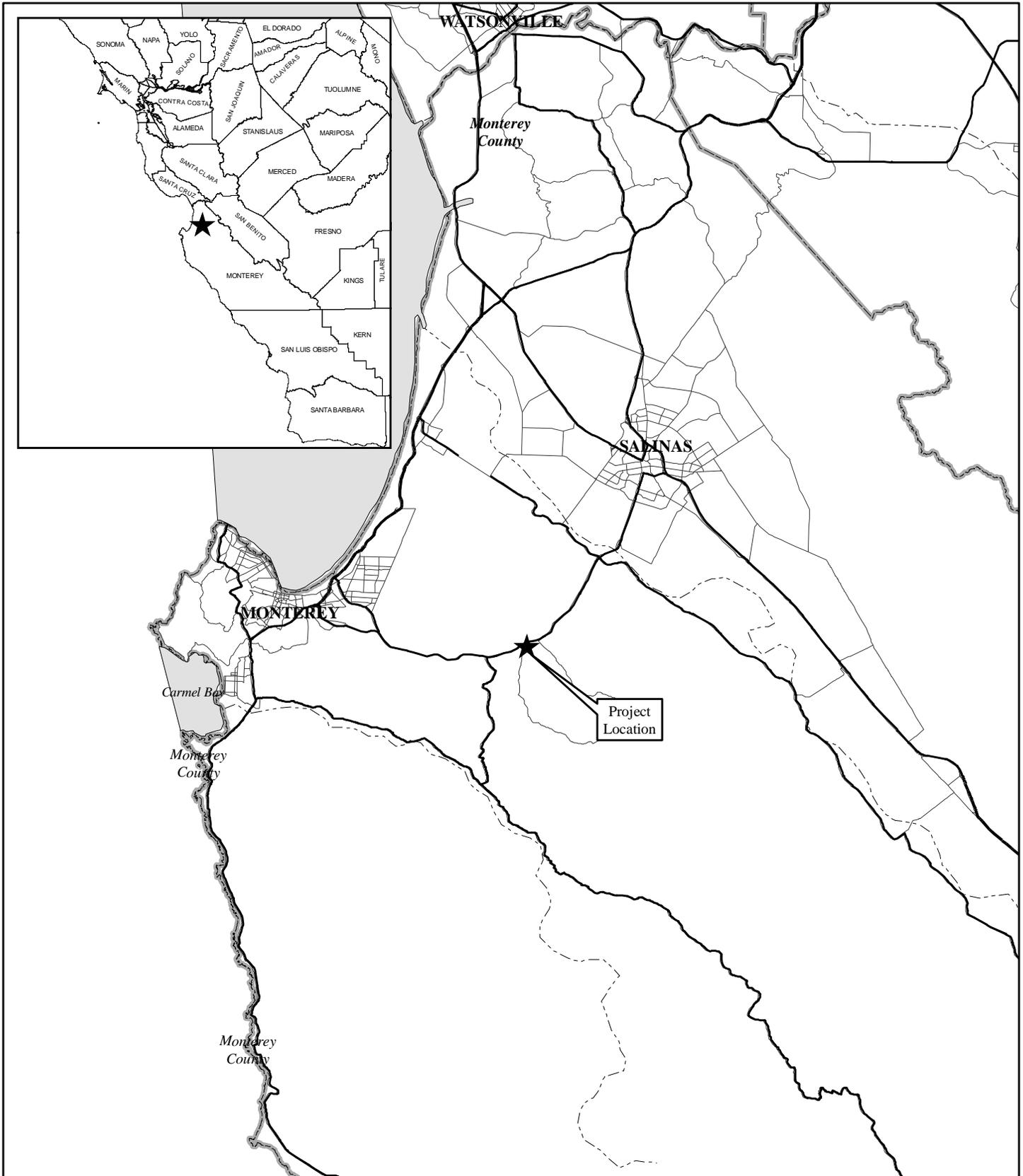


FIGURE 1

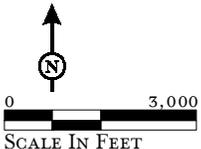


SCALE IN MILES
 SOURCE: U.S. CENSUS BUREAU TIGER 2K (2002)
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SR-68/Corral de Tierra Road
 Intersection Improvement Project
 05-MON-68 PM 12.8/13.2
 Regional Location Map



FIGURE 2



Legend

 Biological Study Area

SR-68/Corral de Tierra Road
Intersection Improvement Project
05-MON-68 PM 12.8/13.2
USGS Location Map

(additional) left turn lane from westbound SR-68 onto southbound Corral de Tierra Road. Both of the left turn lanes (in the median of SR-68) would have sufficient length to accommodate deceleration from 53 miles per hour. An additional receiving lane would also be constructed on southbound Corral de Tierra Road.

Approximately 520 feet of Steel Crib retaining wall (or equivalent) will be constructed west of Corral de Tierra Road along the north embankment of SR-68. The retaining wall will minimize the footprint of the embankment needed to accommodate the widened road section.

A left turn lane would also be constructed from westbound SR-68 into the Corral de Tierra Country Club driveway located east of Corral de Tierra Road on the south side of SR-68. No provision for left turns to or from the residential driveway on the north side of SR-68 would be made. As part of the proposed project, a painted median island would be created in front of the residential driveway restricting drivers to right-in, right-out access.

All of the work would be constructed within existing State and County rights-of-way, except for a small area of new State right-of-way that would be acquired on the north side of State Route 68 just east of the intersection to accommodate relocation of a bus stop, widening and grading. Also, a temporary construction easements would be acquired along the east side of Corral de Tierra Road to accommodate grading near the edge of the County right-of-way (refer to Figure 1-3: Build Alternative Design Plan). Temporary staging areas for construction equipment and materials would be located in those areas of the existing State and County rights-of-way that are not designated as Environmentally Sensitive Areas (ESA), as shown in Figure 6. Construction is expected to be completed in a single season.

The proposed design and appurtenant features are shown in Appendix A.

1.2.1. No Build Alternative

The “No Build” alternative assumes that no new improvements will be constructed. Under the No Build alternative, the roadway’s operational conditions will not improve to the standards of LOS “C”. Projections indicate that the unimproved intersection will have an LOS of “E” in the a.m. peak hour and an LOS “F” in the p.m. hour by 2024, and therefore, the “No Build” alternative fails to meet the purpose and need of this project.

Chapter 2. Study Methods

2.1. Regulatory Requirements

2.1.1. Special Status Species

Special status plants and wildlife are those species that are 1) listed as rare, threatened, or endangered by USFWS or CDFW under State or federal endangered species acts (see Section 4.1.1); 2) are on formal lists as candidates for listing as threatened or endangered; 3) are on formal lists as species of concern; or 4) are otherwise recognized at the State, federal, or local level as sensitive.

2.1.1.1. Federal and California Endangered Species Acts

Under the Federal Endangered Species Act (FESA), it is unlawful to “take” any species listed as threatened or endangered. “Take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as “take” even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration, National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project “may affect”, or result in “take” of, a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding if the project will modify designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to “take” any species listed as rare, threatened, or endangered. “Take” means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project will result in “take” of a listed species.

2.1.1.2. Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan. EFH includes “...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The MSA requires consultation with NMFS for

projects that include a federal action or federal funding and may adversely modify EFH.

2.1.2. Waters of the U.S. and Other Jurisdictional Waters

2.1.2.1. Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the 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 the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tidal line or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands.

Wetlands

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions.”

Nonwetland Waters

Nonwetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

2.1.2.2. Regional Water Quality Control Board

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The Regional Water Quality Control Boards (RWQCB) regulates these activities and issues water quality certification for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (PCWQCA).

2.1.2.3. California Department of Fish and Wildlife

CDFW, through provisions of Section 1602 of the State Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral or intermittent flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas.

2.1.3. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

2.1.4. California Fish and Game Code (Breeding Birds)

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or other regulation.

2.1.5. Executive Order 13112- Invasive Species

Under Executive Order (EO) 13112, an invasive species is defined as “an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health.” Invasive species are determined by the Invasive Species Council.

In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to “not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species...”

2.1.6. Monterey County Tree Ordinance

Section 21.64.260 of the Zoning Ordinance for the County of Monterey provides regulations for protection and preservation of oak and other specific types of trees depending on the locations of the project within the County. The proposed project is located in the Toro Area Plan area, which specifies that “No oak or madrone tree six inches or more in diameter at two feet above ground level shall be removed...without approval of the permit(s) required in Subsection 21.64.260D”.

The zoning ordinance also prohibits the removal of landmark oak trees (“defined as oak trees 24 inches or more in diameter when measured two feet above ground...”) without approval of the Director of Planning and Building Inspection pursuant to Subsection 21.64.260D. Permits specified in Subsection 21.64.260D require that a Use Permit be obtained prior to any tree removal.

2.2. Studies Required

Prior to conducting any field studies, the limits of the Biological Study Area (BSA) were established, as shown in Figure 3. The BSA, totaling approximately 9.48 acres, consists of the project footprint, existing roadways, cut/fill slopes, and access and staging areas, etc. The BSA also includes lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

The studies required to fully document the environmental conditions of the BSA included a general biological survey, focused plant surveys, an oak tree inventory, habitat assessments for California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*), and a jurisdictional delineation.



FIGURE 3



Legend

 Biological Study Area



0 200
SCALE IN FEET

SOURCE: BASEMAP - NAIP MONTEREY COUNTY (May 2005); MAPPING - LSA ASSOCIATES, INC. (2007)
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SR-68/Corral de Tierra Road
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Biological Study Area

2.2.1. Special Status Species

A list of sensitive wildlife and plant species potentially occurring within the BSA was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDDB 2012) and the California Native Plant Society (CNPS) Online Edition (2012), referencing the *Spreckels* U.S. Geological Survey quadrangle and eight surrounding quadrangles: *Salinas*, *Marina*, *Rana Creek*, *Carmel Valley*, *Mt. Carmel*, *Seaside*, *Chualar*, and *Natividad* and the U.S. Fish and Wildlife Service (USFWS) online list referencing Monterey County. These lists are included in Appendix B.

The special status species lists obtained from the CNDDDB, CNPS, and USFWS were reviewed to determine which species could potentially occur within the vicinity of the BSA. The cumulative list (shown in Table 3, Section 3.3) includes numerous species representing a variety of habitat types. The list includes each species' protection status, habitat information, status in the BSA, and supporting comments as necessary. The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within the species' known range. Species requiring specific habitat not present in the vicinity of the project (e.g., bogs, fens, vernal pools, etc.) were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA from a habitat suitability standpoint are discussed in Sections 4.2 and 4.3.

2.2.1.1. Special Status Plant Surveys

Two special status plant surveys were conducted for this project. The first survey was conducted by LSA biologist Laura Belt on October 24, 2006; the focus of this survey was Congdon's tarplant and other late-blooming species. The second survey was conducted by LSA botanist Lucie Adams and LSA biologist Mike Trueblood on May 7, 2007; the focus of this survey was plants that bloom earlier in the season.

2.2.1.2. California Red-Legged Frog/California Tiger Salamander Habitat Assessment

Field surveys for a California red-legged frog (CRLF) and California tiger salamander (CTS) habitat assessment were conducted by LSA biologist Brooke Langle on February 1, 2007. The assessment was prepared in accordance with USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (*Rana draytonii*), dated August 2005, and the USFWS Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a

Negative Finding of the California Tiger Salamander, dated October 2003. The assessment is included in Appendix F.

2.2.2. Plant Communities and Potential Jurisdictional Waters

Vegetation in the project area was classified according to the nomenclature given in *A Manual of California Vegetation* (Sawyer & Keeler-Wolf 1995), as appropriate. Plant species names conform to the standard nomenclature presented within *The Jepson Manual* (Hickman 1993). An inventory of all wildlife and plant species observed was recorded; a comprehensive species list is included in Appendix C.

All potential waters of the U.S. in the project area were delineated in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Routine Method). Wetland data sheets are included in Appendix D. The limit of California Department of Fish and Wildlife jurisdiction was also delineated.

2.2.3. Personnel and Survey Dates

LSA Associates, Inc. (LSA) staff surveyed the BSA four times between October 24, 2006 and May 7, 2007. A summary of the field effort is included in Table 1.

Table 1: Survey Dates and Personnel

Date	Personnel	Purpose of Survey
October 24, 2006	L. Belt	Focused plant survey
February 1, 2007	B. Langle	CRLF/CTS habitat assessment
April 17, 2007	J. Bray, S. Cohn	Plant communities mapping, impact evaluation, jurisdictional delineation
May 7, 2007	L. Adams, M. Trueblood	Focused plant survey

2.3. Agency Coordination and Professional Contacts

LSA staff met with Caltrans biologist Dave Hacker on April 24, 2007 to discuss the potential project-related impacts to CRLF and CTS. In addition LSA, and Wood Rodgers, and County staff met with USFWS on the project site on November 7, 2008, and with CDFW on June 17, 2009, to discuss potential effects to CTS.

Documentation of agency coordination is included in Appendix E.

LSA consulted with CDFW biologist Linda Connolly during preparation of an application for 2081 Permit to authorize incidental “take” of CTS under the assumption of CTS presence in the BSA.

An Application for 2081 Permit to authorize incidental “take” of CTS was submitted to the CDFW August 2010 (Appendix G).

2.4. Limitations that May Influence Results

The lower than average rainfall during the 2006-07 water year could affect the results of the jurisdictional delineation. Low rainfall periods can alter the normal hydrological conditions in the BSA, potentially resulting in the absence of normal hydrology indicators and/or the limited distribution, or absence, of hydrophytic plant species compared with more normal rainfall periods. The potential implications from fluctuations in average rainfall were taken into consideration during data collection and site evaluation.

Chapter 3. Results: Environmental Setting

The project is located in western Monterey County along SR-68 approximately halfway between the cities of Monterey and Salinas. The regional topography is characterized by rolling hills. The predominant natural habitats in the region are coyote brush scrub, oak woodland, and grassland. The predominant land uses in the region include ranching and urban and rural residential.

3.1. Physical Description of the Biological Study Area

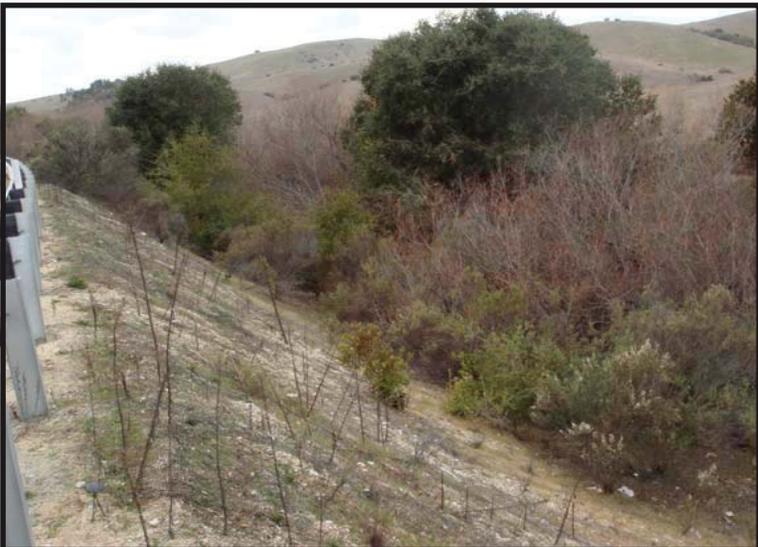
The majority of the BSA consists of paved roads (SR-68 and Corral de Tierra Road) and other developed lands. Some native plant communities also occur in the BSA, but are generally limited to areas along the edges of the BSA, mostly north of SR-68 at the west end of the BSA. The BSA is mostly flat, sloping gently to the northeast. The elevation is approximately 300 ft above mean sea level. Figure 4 includes representative photos of the BSA.

3.2. Biological Conditions in the Biological Study Area

The BSA is predominately comprised of developed and disturbed areas, but contains some native vegetation and a drainage feature, as described in the following sections.

3.2.1. Plant Communities / Land Uses in the Biological Study Area

The descriptions and names of communities used are based on field surveys and descriptions found in Sawyer and Keeler-Wolf (1995). Plant communities/land uses occurring in the BSA, as described below, include coast live oak series, arroyo willow series, coyote brush series, California annual grassland series, eucalyptus series and disturbed ruderal areas. Developed areas also occur in the BSA. Plant communities/land uses in the BSA are summarized in Table 2 and are shown in Figure 5.



View east from SR-68 (northeast shoulder).



View east from SR-68 (southwest shoulder).



View of ephemeral tributary culvert under SR-68.



Looking north along Corral De Tierra Road.

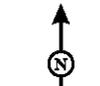


FIGURE 4

*SR-68/Corral de Tierra Road
Intersection Improvement Project
05-MON-68 PM 12.8/13.2
Project Photographs*



FIGURE 5



0 200

SCALE IN FEET

SOURCE: BASEMAP - NAIP MONTEREY COUNTY (May 2005); MAPPING - LSA ASSOCIATES, INC. (2007)

F:\Wrs0605\gis\fig5-plant_comm.mxd (12/18/12)

Legend



Biological Study Area

Plant Communities/Land Uses

Annual Grassland Series

Arroyo Willow Series

Coast Live Oak Series

Coyote Brush Series

Developed

Eucalyptus Series

Ruderal/Disturbed

SR-68/Corral de Tierra Road
 Intersection Improvement Project
 05-MON-68 PM 12.8/13.2
 Plant Communities/Land Uses

Table 2: Plant Communities / Land Uses in the BSA (acres)

Type	Area
Coast Live Oak Series	0.65
Arroyo Willow Series	0.20
Coyote Brush Series	0.69
California Annual Grassland Series	0.71
Eucalyptus Series	0.21
Disturbed / Ruderal	0.85
Developed	6.17
Total	9.48

3.2.1.1. Coast Live Oak Series

This series supports coast live oak trees (*Quercus agrifolia*) as the primary canopy species. It occurs in solid, closed-canopy stands and individually scattered throughout the area. In the dense stands, the understory has a thick duff layer that supports nonnative grasses, such as ripgut brome (*Bromus diandrus*). The more open areas with less canopy cover support shrubs and various herbaceous plants. This community is located at the west end of the BSA along the upper reach of the ephemeral tributary to El Toro Creek.

Coast live oak is the most common tree species present in and around the BSA. The understory species include, but are not limited to, coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), deerweed (*Lotus scoparius*), wild oats (*Avena* sp.), miner's lettuce (*Claytonia perfoliata*), black mustard (*Brassica nigra*), English plantain (*Plantago lanceolata*), scarlet pimpernel (*Anagallis arvensis*), bedstraw (*Galium* sp.), and coast wood fern (*Dryopteris arguta*).

Approximately 0.65 acre of coast live oak series occurs in the BSA.

3.2.1.2. Arroyo Willow Series

This vegetation series is dominated by arroyo willows (*Salix lasiolepis*) in a dense closed-canopy, with additional tree species, such as coast live oak and sycamore (*Platanus racemosa*) occasionally occurring. This community is typically associated with drainage features or wetlands. In the BSA, this community occurs north of SR-68 along the ephemeral tributary to El Toro Creek near the east end of the BSA.

Common plants occurring in the willow understory in the BSA include poison oak, California blackberry (*Rubus ursinus*), mugwort (*Artemisia douglasiana*), and stinging nettle (*Urtica dioica*).

Approximately 0.20 acre of arroyo willow series occurs within the BSA.

3.2.1.3. Coyote Brush Series

The coyote brush series is often a densely formed, sole-shrub community but can also occur in more open settings. Co-dominants can be California sage (*Artemisia californica*), buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), and poison oak, with forbs and nonnative annual grasses occurring in the open areas between the shrubs. In the BSA, this community is relatively open and occurs north of SR-68, near the SR-68/Corral de Tierra Road intersection, and south of SR-68 at the west end of the BSA.

Approximately 0.69 acre of coyote brush series occurs within the BSA.

3.2.1.4. California Annual Grassland Series

The California annual grassland series is an extensive series that is dominated by nonnative and native annual grasses, with a variety of herbaceous species occurring as occasional or co-dominant species.

Within the BSA, this vegetation community is found in the understory of the coast live oak woodland and in most open areas not dominated by trees or shrubs. Grass species present are mostly wild oats and ripgut brome; other species present include milk thistle (*Silybum marianum*), mustard, Italian thistle (*Carduus pycnocephalus*), California poppy (*Eschscholzia californica*), yellow star thistle (*Centaurea solstitialis*), horsetweed (*Conyza canadensis*), common vetch (*Vicia sativa* ssp. *sativa*), and prickly lettuce (*Lactuca serriola*).

Approximately 0.71 acre of California annual grassland series occurs within the BSA.

3.2.1.5. Eucalyptus Series

This vegetation community is dominated by a mature stand of eucalyptus (*Eucalyptus* sp.). The understory is sparse to non-existent due to the heavy amount of leaf, bark, and branch litter dropped by the trees, as is common with this series. In addition, eucalyptus oils have an allelopathic effect (i.e., prohibiting growth) on surrounding plant species.

Within the BSA, the eucalyptus series is present along the north shoulder of SR-68 east of Corral de Tierra Road. The understory is sparse and consists of herbaceous nonnative plants including black mustard, filaree (*Erodium* sp.), and milk thistle.

Approximately 0.21 acre of eucalyptus series occurs within the BSA.

3.2.1.6. Ruderal/Disturbed

Ruderal/disturbed areas are lands that have been altered by human actions such that the natural communities no longer exist. The ruderal/disturbed areas in the BSA occur on previously graded/constructed slopes and road shoulders along SR-68 and Corral de Tierra Road. Vegetation in these areas is dominated by nonnative species including bindweed (*Convolvulus arvensis*), filaree, wild radish (*Raphanus sativa*), alkali mallow (*Malvella leprosa*), common vetch and Italian thistle.

Approximately 0.85 acre of disturbed/ruderal area occurs in the BSA.

3.2.1.7. Developed

Developed areas consist of all human-made structures including structures, roads (paved and unpaved), and unvegetated areas.

Approximately 6.17 acres of developed areas occurs in the BSA.

3.2.2. Aquatic Resources in the Biological Study Area

Aquatic resources within the BSA are limited to an ephemeral tributary to El Toro Creek. The drainage originates near the west end of the BSA, north of SR-68, and flows east along the length of the BSA before crossing beneath SR-68 via a box culvert near the east end of the BSA. The confluence with El Toro Creek is approximately 400 feet east of the BSA.

The bed of the drainage has a sandy substrate and is mostly unvegetated. Vegetation on the banks consists of coast live oak or arroyo willow communities. The drainage appears to only carry flows during and immediately following rain events. No pools or ponded areas were observed in the drainage during any of the site visits (see Table 1 for survey dates).

3.2.3. Wildlife Usage/Movement in the Biological Study Area

Due to the predominantly developed nature of the BSA, wildlife usage is mostly limited to the BSA north of SR-68 where the majority of the native plant communities occur. The ephemeral drainage is also located in this area and may be used as a movement corridor, though no sign of substantial wildlife movement was observed

during field surveys. Wildlife expected to occur in and around the BSA include primarily common mammals such as coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*), and common birds such as western scrub jay (*Aphelocoma californica*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), and sparrows; frogs and toads could also utilize the ephemeral drainage during the rainy season.

3.3. Regional Species and Habitats of Concern

Table 3 provides a listing of special status species that could potentially occur in the region, and therefore in the BSA. LSA reviewed the specific habitats required by each species listed in Table 3, and the specific habitats and habitat conditions present in the BSA. Our previous experience with these species was also taken into consideration. Based on this evaluation, we determined the likelihood of each species listed in Table 3 occurring in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors are discussed more fully in Sections 4.2 and 4.3 of this report. Species determined unlikely to occur in the BSA based on these same factors are documented accordingly in Table 3, and are not discussed further in this report.

Table 3: SR-68/Corral de Tierra Road Intersection Operational Improvements - Special Status Species Potentially Occurring in the Biological Study Area and Vicinity

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
Mammals					
<i>Enhydra lutris nereis</i>	Southern sea otter	FT	Ocean	A	Project area is not accessible to the ocean.
<i>Neotoma macrotis Luciana</i>	Monterey dusky-footed woodrat	CSC	Forest habitats of moderate canopy and dense understory. Requires sufficient twiggy litter for nesting material.	A	No suitable habitat present in the BSA.
<i>Taxidea taxus</i>	American badger	CSC	Open stages of shrub, forest and herbaceous habitats in friable soils. Requires a sufficient food base (burrowing rodents).	A	No suitable habitat present in the BSA.
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, ST	Annual grasslands or grassy open stages with scattered vegetation; need loose-textured soils for burrowing, and a suitable prey base.	A	No suitable habitat present in the BSA.
Birds					
<i>Accipiter cooperii</i>	Cooper's hawk	CSC	Forages in dense woodland habitat. Primarily nests in riparian growths of deciduous trees.	HP	Marginal foraging habitat present in the BSA. See discussion in Section 4.3.1.
<i>Agelaius tricolor</i>	Tricolored blackbird	CSC	Cattail or tule marshes, as well as thickets of willow, blackberry and wild rose; forages in fields and farms.	A	No suitable habitat present in the BSA.
<i>Athene cunicularia hypugaea</i>	Western burrowing owl	CSC	Open, dry annual grasslands; deserts and scrublands.	A	Suitable burrows (i.e., with openings at least 4 inches wide) are present in the BSA north of SR-68 but the surrounding vegetation is not suitable for burrowing owl (i.e., vegetation is too tall/shrubby). No burrowing owl or sign were observed during any of the site visits. Consequently, this species is considered absent from the BSA.
<i>Brachyramphus marmoratus marmoratus</i>	Marbled murrelet	FT, SE	Nest inland (up to six miles) along the coast, in old-growth redwood-dominated forests, often in Douglas firs; feed near-shore (ocean).	A	No suitable habitat present in the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Buteo regalis</i>	Ferruginous hawk	CSC	Open grasslands and shrub habitat. Requires sustainable lagomorph population as main food source.	A	No suitable habitat present in the BSA.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	FT, CSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy, gravelly or friable soils for nesting.	A	No suitable habitat present in the BSA.
<i>Coccyzus americanus</i>	Yellow-billed cuckoo	FC, SE	Riparian corridors with dense vegetation along the broad, lower flood-bottoms of larger river systems.	A	No suitable habitat present in the BSA.
<i>Eremophila alpestris actia</i>	California horned lark	CSC	Short grassland habitat in coastal regions.	A	No suitable habitat present in the BSA.
<i>Falco mexicanus</i>	Prairie falcon	CSC	Dry, open terrain, either level or hilly; breeding sites located on cliffs. Forages far afield, in marshlands and on ocean shores.	A	No suitable habitat present in the BSA.
<i>Gymnogyps californicus</i>	California condor	FE, SE	Vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude; nest in deep canyons containing clefts in rocky walls, foraging up to 100 mi from roost/nest.	A	No suitable habitat present in the BSA.
<i>Haliaeetus leucocephalus</i>	Bald eagle	FT, SE	Nest in large, old growth, or dominant live tree with open branches near ocean shore, lake margins, and rivers.	A	No suitable habitat present in the BSA.
<i>Pelecanus occidentalis</i>	Brown pelican	FE, SE	Colonial nester on islands just outside of the surf line.	A	No suitable habitat present in the BSA.
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE, SE	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay.	A	No suitable habitat present in the BSA.
<i>Sterna antillarum browni</i>	California least tern	FE, SE	Colonial breeder on sparsely vegetated or bare areas on flat substrates such as sandy beaches, alkali flats, landfills, and paved areas.	A	No suitable habitat present in the BSA.
<i>Vireo bellii pusillus</i>	Least Bell's vireo	FE, SE	Summer resident (nesting) of southern California in riparian habitat within the vicinity of water, or in dry river bottoms; below elevations of 2,000 ft. U.S. populations are currently known only from Santa Barbara County and southern California.	A	Project outside of known range of species.
Reptiles					
<i>Anniella pulchra nigra</i>	Black legless lizard	CSC	Sandy soil/dunes area in the Monterey and Morro Bay regions; require moist soil.	A	No suitable habitat present in the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Clemmys marmorata pallida</i>	Southwestern pond turtle	CSC	Permanent or nearly permanent bodies of water with suitable nesting sites, in a wide variety of habitats; below 6,000 ft elevation.	A	No suitable habitat present in the BSA.
<i>Gambelia silus</i>	Blunt-nosed leopard lizard	FE, SE	Sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	A	No suitable habitat present in the BSA.
<i>Phrynosoma coronatum frontale</i>	California horned lizard	CSC	Lowlands along sandy washes with scattered low bushes.	A	No suitable habitat present in the BSA.
<i>Thamnophis hammondi</i>	Two-striped garter snake	CSC	Coastal California from Salinas to northwest Baja, California; sea level to 7,000 ft elevation. Found in and near permanent freshwater streams with rocky beds and riparian growth.	A	No suitable habitat present in the BSA.
Amphibians					
<i>Ambystoma californiense</i>	California tiger salamander	FT, ST	Most commonly found in grasslands or open woodland habitats. Lives in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocket gopher), and occasionally other underground retreats, throughout most of the year. Lays eggs on submerged stems and leaves, usually in shallow ephemeral or semi-permanent pools and ponds that fill during heavy winter rains, sometimes in permanent ponds.	HP	Potential upland habitat is present in the BSA. See discussion in Section 4.3.2.
<i>Ambystoma macrodactylum croceum</i>	Santa Cruz long-toed salamander	FE, SE	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey Counties.	A	No suitable habitat present in the BSA.
<i>Bufo microscaphus californicus</i>	Arroyo toad	FE, CSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian habitats; also rivers with sandy banks, willows, cottonwoods, and sycamores.	A	No suitable habitat present in the BSA.
<i>Rana aurora draytonii</i>	California red-legged frog	FT, CSC	Lowlands and foothills; in or near permanent bodies of water with dense, shrubby, or emergent vegetation.	HP	Potential habitat present in the BSA. See discussion in Section 4.3.3.
<i>Rana boylei</i>	Foothill yellow-legged frog	CSC	Found in small, partially shaded shallow streams and riffles with a rocky substrate, in a variety of habitats.	A	No suitable habitat present in the BSA.
<i>Spea hammondi</i>	Western spadefoot toad	CSC	Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	HP	Potential upland habitat is present in the BSA. See discussion in Section 4.3.4.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Taricha torosa torosa</i>	Coast range newt	CSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats near ponds, reservoirs or slow moving streams for breeding.	A	No suitable habitat present in the BSA.
Fish					
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE, CSC	Brackish water habitats along the coast from San Diego County north, to the mouth of the Smith River, in shallow lagoons and lower stream reaches.	A	Project not within range of this species.
<i>Oncorhynchus mykiss irideus</i>	South/Central California Coast steelhead	FT	Coastal Basin runs from the Pajaro River south to, but not including, the Santa Maria River.	A	No suitable habitat present in the BSA.
Invertebrates					
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	Large turbid pools in grasslands of the Central Valley.	A	No suitable habitat present in the BSA.
<i>Branchinecta longiantenna</i>	Longhorn fairy shrimp	FE	Small clear to turbid vernal pools along the eastern margin of the central coast mountains.	A	No suitable habitat present in the BSA.
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	Vernal pools in grasslands in the Central Valley, central coast mountains, and south coast mountains.	A	No suitable habitat present in the BSA.
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	FE	Coastal dunes and sage scrub habitats in Monterey and Santa Cruz Counties; <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> both larval and adult host plants.	A	No suitable habitat present in the BSA.
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	FT	Restricted to grasslands on serpentine outcrops. <i>Plantago erecta</i> is the primary host plant.	A	No suitable habitat present in the BSA.
Plants					
<i>Allium hickmanii</i>	Hickman's onion	CNPS 1B	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands (15-600 ft). The blooming period is April–May.	A	No suitable habitat present in the BSA.
<i>Amorpha californica var. napensis</i>	Napa false indigo	CNPS 1B	Broadleaf upland forests and woodlands (400-6,600 ft). The blooming period is April–June.	A	No suitable habitat present in the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	CNPS 1B	Sandy soils in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub (280-1,000 ft). The blooming period is January–June.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Arctostaphylos montereyensis</i>	Monterey manzanita	CNPS 1B	Sandy soils in chaparral, cismontane woodland, and coastal scrub (100-2,400 ft). The blooming period is February–March.	A	Species not observed during focused plant surveys; surveys conducted outside of the regular blooming period, but plant would have been readily identifiable if present. As a result, this species is considered absent from the BSA.
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	CNPS 1B	Chaparral; sandy soil (100-2,500 ft). The blooming period is December–March.	A	No suitable habitat present in the BSA.
<i>Arctostaphylos pumila</i>	Sandmat manzanita	CNPS 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub; in openings with sandy soil (10-675 ft). The blooming period is February–May.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Astragalus tener</i> var. <i>tener</i>	Alkali milk vetch	CNPS 1B	Playas, valley and foothill grasslands with adobe clay soil, and vernal pools with alkaline soil (3-200 ft). The blooming period is March–June.	A	No suitable habitat present in the BSA.
<i>Astragalus tener</i> var. <i>titi</i>	Coastal dunes milk-vetch	FE, SE, CNPS 1B	Coastal bluff scrub (sandy), coastal dunes, and coastal prairie with mesic soil (3-165 ft). The blooming period is March–May.	A	No suitable habitat present in the BSA.
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	CNPS 1B	Valley and foothill grasslands with alkaline soil (3-750 ft). The blooming period is May–November.	HP	Potential habitat present in the BSA. Species not observed during focused plant surveys which were conducted within the regular blooming period for this species (October). A reference population of this species located west of the BSA near Laguna Seca was reviewed prior to the survey and was found to be blooming and identifiable. As a result, this species is considered absent from the BSA.
<i>Chlorogalum purpureum</i> var. <i>purpureum</i>	Purple amole	FT, CNPS 1B	Chaparral, cismontane woodland, valley and foothill grassland with gravelly, clay soil (800-1,120 ft). The blooming period is April–June.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	FT, CNPS 1B	Chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands with sandy soil (10-1480 ft). The blooming period is April–June.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Chorizanthe robusta</i> var. <i>robusta</i>	Robust spineflower	FE, CNPS 1B	Cismontane woodland, coastal dunes, and coastal scrub; openings with sandy or gravelly soils (10-1000 ft). The blooming period is April–September.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Clarkia jolonensis</i>	Jolon clarkia	CNPS 1B	Chaparral, Cismontane woodland, and coastal scrub (65-2,165 ft). The blooming period is April–June.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	Seaside bird’s beak	SE, CNPS 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy soils. Often found in disturbed areas (0–1,400 ft). The blooming period is April–October.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Corethrogyne leucophylla</i>	Branching beach aster	CNPS 3	Closed-cone coniferous forest, coastal dunes (10-200 ft). The blooming period is May–December.	A	No suitable habitat present in the BSA.
<i>Cupressus goveniana</i> ssp. <i>goveniana</i>	Gowen cypress	FT, CNPS 1B	Closed-cone coniferous forest, chaparral (maritime); 100-1,000 ft.	A	No cypress trees are present in the BSA.
<i>Delphinium hutchinsoniae</i>	Hutchinson’s larkspur	CNPS 1B	Broad-leafed upland forest, chaparral, coastal prairie, and coastal scrub (0–1,300 ft). The blooming period is March–June.	A	No suitable habitat present in the BSA.
<i>Ericameria fasciculata</i>	Eastwood’s goldenbush	CNPS 1B	Closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub; in openings with sandy soil (100-900 ft). The blooming period is July–October.	A	No suitable habitat present in the BSA.
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	CNPS 1B	Chaparral and valley and foothill grasslands in sandy soils. Often in areas recently burned (1,000-3,200 ft). The blooming period is May–August.	A	No suitable habitat present in the BSA.
<i>Erysimum ammophilum</i>	Coast wallflower	CSC, CNPS 1B	Chaparral, coastal dunes, and coastal scrub; in openings with sandy soil (0–200 ft). The blooming period is February–June.	A	No suitable habitat present in the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Erysimum menziesii</i> ssp. <i>yadonii</i>	Yadon's wallflower	FE, SE, CNPS 1B	Coastal dunes (0–30 ft). The blooming period is May–September.	A	No suitable habitat present in the BSA.
<i>Erysimum menziesii</i> ssp. <i>menziesii</i>	Menzies' wallflower	FE, SE, CNPS 1B	Coastal dunes (0–115 ft). The blooming period is March–June.	A	No suitable habitat present in the BSA.
<i>Fritillaria liliacea</i>	Fragrant fritillary	CNPS 1B	Found in woodlands, coastal scrub and grassland habitats typically in serpentine soils (10-1,350 ft). The blooming period is February to April.	A	No suitable habitat present in the BSA.
<i>Galium clementis</i>	Santa Lucia bedstraw	CNPS 1B	Lower montane coniferous forest and upper montane coniferous forest on granitic or serpentine outcrops (3,700-5,850 ft). The blooming period is May–July.	A	No suitable habitat present in the BSA.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Sand gilia	FE, ST, CNPS 1B	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub in openings with sandy soil. Found in bare, wind-sheltered areas often near the dune summit or in the hind dunes (0–150 ft). The blooming period is April–June.	A	No suitable habitat present in the BSA.
<i>Grindelia hirsutula</i> var. <i>maritima</i>	San Francisco gumplant	CNPS 1B	Coastal bluff scrub, coastal scrub, and valley and foothill grasslands on sandy or serpentine substrate (50-1,300 ft). The blooming period is August–September.	A	No suitable habitat present in the BSA.
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT, SE, CNPS 1B	Coastal prairie, coastal scrub, valley and foothill grassland; often in clay, sandy soil (30-725 ft). The blooming period is June–October.	A	No suitable habitat present in the BSA.
<i>Horkelia cuneata</i> ssp. <i>sericea</i>	Kellogg's horkelia	CSC, CNPS 1B	Closed-cone coniferous forest, chaparral, and coastal scrub; in openings with sandy or gravelly soil (30-650 ft). The blooming period is April–September.	A	No suitable habitat present in the BSA.
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, CNPS 1B	Playas (alkaline soil) (1–60 m), vernal pools within cismontane woodland, and valley and foothill grassland. The blooming period is March–June.	A	No suitable habitat present in the BSA.
<i>Layia carnosa</i>	Beach Layia	FE, SE, CNPS 1B	Coastal dunes, coastal scrub with sandy soil (0–200 ft). The blooming period is March–July.	A	No suitable habitat present in the BSA.
<i>Lembertia congdonii</i>	San Joaquin wooly-threads	FE, CNPS 1B	Chenopod scrub, valley and foothill grassland with sandy soil (200-2,600 ft). The blooming period is February–May.	A	No suitable habitat present in the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Lupinus tidestromii</i>	Tidestrom's lupine	FE, SE, CNPS 1B	Coastal dunes (0–300 ft). The blooming period is April–June.	A	No suitable habitat present in the BSA.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	Santa Lucia bush mallow	CNPS 1B	Chaparral (200-1,200 ft). The blooming period is May–July.	A	No suitable habitat present in the BSA.
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush mallow	CSC, CNPS 1B	Talus hilltops and slopes in chaparral, cismontane woodland, and coastal scrub; burn dependent. Sometimes found on serpentine. (100-3,600 ft.) The blooming period is May–October.	A	No suitable habitat present in the BSA.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	CNPS 1B	Chaparral with rocky soil (80-1,100 ft). The blooming period is March–December.	A	No suitable habitat present in the BSA.
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	CNPS 3	Bare, grassy, or rocky slopes in broadleaf upland forest, chaparral, cismontane woodland, and valley and foothill grassland (150-2,700 ft). The blooming period is March–May.	A	No suitable habitat present in the BSA.
<i>Microseris paludosa</i>	Marsh microseris	CNPS 1B	Closed-cone forest, cismontane woodland, coastal scrub, and valley and foothill grassland (15-1,000 ft). The blooming period is April–June.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Pinus radiata</i>	Monterey pine	CNPS 1B	Closed-cone coniferous forest, cismontane woodland; three primary stands native to California (80-600 ft).	P	Species observed in landscaped areas in the BSA during surveys. These trees appear to be planted by humans and are not part of a native stand of pine trees. As a result, natural-occurring Monterey pines are considered absent from the BSA.
<i>Piperia yadonii</i>	Yadon's piperia	FE, CNPS 1B	Coastal bluff scrub, closed-cone coniferous forest, and chaparral with sandy soil (30-1,350 ft). The blooming period is May–August.	A	No suitable habitat present in the BSA.
<i>Plagiobothrys uncinatus</i>	Hooked popcorn-flower	CSC, CNPS 1B	Chaparral with sandy soil; cismontane woodland, and valley and foothill grassland; found on sandstone outcrops and canyon sides (1,000-2,400 ft). The blooming period is April–May.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present/Absent	Rationale
<i>Potentilla hickmanii</i>	Hickman's cinquefoil	FE, SE, CNPS 1B	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps (vernally mesic), and freshwater marshes and swamps (30-450 ft). The blooming period is April–August.	A	No suitable habitat present in the BSA.
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	CSC, CNPS 1B	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub and valley and foothill grassland. Found in open areas, sometimes in serpentine soil (30-1,650 ft). The blooming period is April–May.	A	No suitable habitat present in the BSA.
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	CSC, CNPS 1B	Moist grasslands in broadleafed upland forest, cismontane woodland, and coastal prairie, in margins (345-2,000 ft). The blooming period is April–October.	A	Species not observed during focused plant surveys which were conducted within the regular blooming period for this plant. As a result, this species is considered absent from the BSA.
<i>Trifolium polyodon</i>	Pacific Grove clover	SR, CNPS 1B	Closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland; in mesic soil (15-400 ft). The blooming period is April–June.	A	No suitable habitat present in the BSA.
<i>Trifolium trichocalyx</i>	Monterey clover	FE, SE, CNPS 1B	Closed-cone coniferous forest, in openings with sandy soil, and in burned areas (100-800 ft). The blooming period is April–June.	A	No suitable habitat present in the BSA.

Legend

A (Absent) – No habitat present and no further work is needed.

HP (Habitat Present) – Habitat is or maybe present; species may be present.

P (Present) – The species is present.

CH (Critical Habitat) – The project is located within designated critical habitat.

ST/SE – State Threatened/Endangered

SR – State Rare

SC – State Candidate

CSC – State Species of Concern

FT/FE – Federal Threatened/Endangered

FT/FPE – Federal Proposed Threatened/Endangered

FC – Federal Candidate

FD – Federal Delisted

CNPS 1A – Presumed extinct in California

CNPS 1B – Rare or Endangered in California and elsewhere

CNPS 2 – Rare or Endangered in California, more common elsewhere

CNPS 3 – Review List - Plants About Which More Information is Needed

Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

Figure 6 shows the approximate limits of work for the build alternative. The only permanent impacts/disturbance resulting from the project will be to ruderal/disturbed vegetation on the existing SR-68 fill slope, totaling 0.16 ac, as described in Section 4.3.2.3. The project will also result in temporary impacts/disturbance to 0.56 acre of ruderal/disturbed vegetation due to minor grading along the road shoulders.

4.1. Natural Communities of Special Concern

Of the plant communities occurring in the BSA, only coast live oak series and arroyo willow series are communities of special concern. The project will not result in permanent impacts to the coast live oak community and result in only minimal temporary impacts, as described below. The project will not impact the arroyo willow community.

4.1.1. Coast Live Oak

4.1.1.1. Survey Results

The coast live oak community is located at the west end of the BSA along the upper reach of the ephemeral tributary to El Toro Creek. Figure 5 shows the location of this community in the BSA.

4.1.1.2. Avoidance and Minimization Efforts

1. Prior to the start of construction, ESA fencing shall be installed along the perimeter of the coast live oak community in the BSA to minimize encroachment during construction. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete.
2. Where construction encroaches into the coast live oak woodland community at the west end of the project, tree limbs that must be removed will be cut with a sharp saw (i.e., versus removal with heavy equipment). In this area, the ESA fencing shall be installed along the limits of work. No trees will be removed.
3. The exclusion fencing shall be removed following the completion of work.



FIGURE 6



0 200
SCALE IN FEET

SOURCE: BASEMAP - NAIP MONTEREY COUNTY (May 2005); MAPPING - LSA ASSOCIATES, INC. (2007)
F:\Wrs0605\gis\fig6-work_limits-esa.mxd (12/18/12)

Legend

- | | |
|-----------------------|--------------------------------|
| Biological Study Area | Approximate Work Limits |
| ESA Fencing | Permanent |
| | Temporary |

SR-68/Corral de Tierra Road
Intersection Improvement Project
05-MON-68 PM 12.8/13.2
Approximate Work Limits and ESA Fencing

4.1.1.3. Project Impacts

The project will impact 0.001 ac of the coast live oak community during construction of the fill slope at the west end of the project. Impacts will be limited to pruning of coast live oak trees. No oak trees will be removed.

4.1.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.1.1.2.

4.1.1.5. Cumulative Effects

Since the project will not remove any coast live oaks and will result in only minimal impacts to the coast live oak community, the project will not substantially contribute to cumulative effects for the coast live oak community.

4.2. Special Status Plant Species

No special status plants occur in the BSA. Since no construction activity will occur beyond the limits of the BSA, the project will not impact any special status plants.

4.3. Special Status Wildlife Species

After evaluation of the special status wildlife species potentially occurring in the BSA, as shown in Table 3, the following wildlife species were determined to have a reasonable likelihood of occurring in the BSA and being affected by the project.

4.3.1. Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is a State species of concern; it has no federal status. The Cooper's hawk generally nests in stands of riparian vegetation and forages in open woodlands.

4.3.1.1. Survey Results

Marginally suitable foraging and nesting habitat for Cooper's hawk is present at the west end of the BSA, north of SR-68, in the coast live oak community associated with the ephemeral tributary to El Toro Creek. Though potentially suitable nest trees are present, the trees are relatively small, and coupled with the proximity to SR-68 and urban development, it is unlikely that Cooper's hawk would nest in the BSA. No raptor nest was identified during any of the surveys but since potential habitat is present, Cooper's hawk could occur in the BSA.

4.3.1.2. Avoidance and Minimization Efforts

1. If work must begin during the nesting season (February 16 to August 31), no more than 14 working days prior to the start of construction, a qualified biologist shall survey all suitable nest trees in the BSA for presence of nesting Cooper's hawks. If no nesting activity is observed, work shall proceed as planned. If an active nest is discovered, ESA fencing shall be installed around the dripline of tree and maintained in good condition until the end of the nesting season or until the young have fledged, as determined by a qualified biologist.
2. All construction shall be conducted during daylight hours.

4.3.1.3. Project Impacts

The project may temporarily disturb Cooper's hawk if they are nesting or foraging in the BSA during construction activities. The project may also result in minor impacts to potential nesting habitat if tree pruning is necessary.

4.3.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.3.1.2.

4.3.1.5. Cumulative Effects

Since the project will not remove any potential nest trees and will result in only minimal impacts to the Cooper's hawk habitat (i.e., pruning), the project will not substantially contribute to cumulative effects for Cooper's hawk.

4.3.2. California Tiger Salamander

The California tiger salamander (*Ambystoma californiense*) (CTS) is State and federally listed as a threatened species. Critical habitat for CTS was designated on August 23, 2006. The BSA is not located in critical habitat for CTS; the closest critical habitat is Unit 3 - Central Coast Region, located approximately 14 miles southeast of the BSA.

CTS are large, terrestrial salamanders and are most commonly found in annual grassland habitat. They may also occur in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. They range from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County.

CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds (including man-made ponds, etc., that are allowed to dry out in summer) surrounded by grasslands. Adult CTS spend most of their lives underground in small mammal burrows, which are a required habitat element. CTS are relatively poor burrowers and require refuges provided by ground squirrels and other burrowing mammals. CTS estivate in burrows during the dry months. After the onset of winter rains, adult salamanders move to larger, longer lasting vernal pools and other seasonal pools to breed. Breeding season is November through February; timing is dependent on rainfall. The larval stage of CTS usually lasts 3 to 6 months. Following metamorphosis, juveniles emigrate at night from drying breeding sites up to 1 mile to refuge sites.

4.3.2.1. Survey Results

The site is within the historic range of CTS. There are no known occurrences within the BSA. However, there are 12 known occurrences within 3.1 miles of the BSA with the closest occurrence approximately 1 mile to the north (refer to Appendix F for detailed information).

There is no suitable aquatic habitat for CTS in the BSA, but suitable aquatic habitat (i.e., a seasonal pond) known to be used by CTS occurs approximately 0.9 mile north of the BSA. In addition, a second seasonal pond occurs approximately 0.3 mile northeast of the BSA, though it is not known if CTS utilize this pond. No suitable habitat was identified south of SR-68. The coyote brush community and some ruderal/disturbed areas (i.e., the existing SR-68 fill slope) in the BSA could provide suitable upland habitat for CTS due to the presence of ground squirrel and other rodent burrows which could be used as refugia during estivation. The potential CTS upland habitat in the BSA is low quality since a portion of the habitat consists of the existing road fill for SR-68 and due to the location adjacent to a major roadway (i.e., SR-68).

The BSA contains only potential upland habitat for CTS; no suitable aquatic habitat is present. The nearest potential aquatic habitat is a seasonal pond located approximately 0.3 mile to the northeast; however, residential and other developed areas occur between the seasonal pond and the BSA with the exception of an approximate 500-ft swath of undeveloped land. The location of the developed area blocks much of the access to the BSA and decreases the probability for CTS to occur in the BSA and utilize the seasonal pond. The nearest CTS aquatic habitat with unimpeded access to the BSA is a seasonal pond approximately 0.9 acre to the north.

At 0.9 mile, the BSA is at the upper end of the 1.4 mile dispersal limit defined by the USFWS. Considering these factors and the low quality of the upland habitat in the BSA, it is unlikely CTS occur in the BSA.

However, CDFW considers CTS potentially present in the BSA despite the low quality of the habitat. The County has opted to infer presence of CTS in the BSA instead of conducting presence/absence surveys.

4.3.2.2. Avoidance and Minimization Efforts

Per discussions with the USFWS, with implementation of these measures, it is not expected that consultation with the USFWS will be required.

1. A retaining wall shall be constructed along the north side of SR-68, west of Corral de Tierra Road, to minimize the footprint of the new fill slope which, in turn, will minimize effects to potential CTS upland habitat.
2. ESA fencing shall be installed along the limits of work associated with construction of the new fill slope and retaining wall to prevent encroachment into adjacent CTS upland habitat.
3. All construction and staging shall be located within the existing State and County rights of way.
4. Following completion of work, areas of potential CTS upland habitat in the BSA denuded during project construction shall be revegetated with locally occurring native species as described in the Revegetation Guidelines in Appendix H.

The following measures were developed during coordination with USFWS biologist Doug Cooper (see Appendix E).

5. Exclusion fencing shall be installed along the boundary of the work area that would affect CTS habitat. Exclusion fencing shall consist of silt fence or equivalent material, and shall be installed such that no openings are present. Additionally, the bottom three inches of fence shall be buried. The exclusion fencing shall be maintained in good condition until project construction is complete.
6. All burrows in the area to be disturbed will be surveyed during the dry season for presence of estivating CTS. Surveys will be conducted at each burrow via either hand excavation or surveying with a fiber optic camera. Written documentation of

the survey results shall be provided to the USFWS within two weeks of completion of the surveys.

If CTS are not found, construction may proceed at any time provided the exclusion fencing is maintained in good condition. If CTS are identified, the surveys shall be immediately halted and USFWS shall be contacted within 48 hours. Work shall not commence until take authorization is provided by USFWS. Take authorization will most likely be accomplished through preparation of a Habitat Conservation Plan and issuance of an Incidental Take Permit.

7. The silt fence shall be removed following the completion of work.

4.3.2.3. Project Impacts

Since CTS could potentially occur in the BSA, the project could affect CTS during construction. Effects to potential CTS upland habitat will be limited to construction of the new fill slope on the north side of SR-68, west of Corral de Tierra Road. Approximately 0.16 acre of potential CTS upland habitat will be removed during construction of the new fill slope (Figure 7).

The project will not affect aquatic habitat for CTS.

4.3.2.4. Compensatory Mitigation

Since CTS are considered present in the BSA and could potentially be affected by project construction, compensatory mitigation will be required for the loss of habitat. Since the habitat quality is low, CDFW concurred that a 1:1 mitigation ratio is appropriate. Consequently, in order to compensate for the loss of 0.16 acre of CTS upland habitat, a total of 0.16 acre of mitigation area that provides CTS upland habitat shall be purchased and preserved in perpetuity through use of a conservation easement or equivalent means.

4.3.2.5. Cumulative Effects

It is likely that similar projects in the vicinity could result in impacts to potential CTS upland habitat similar to those from the proposed project. Since CTS are not likely to occur in the BSA and the project will only affect low quality upland habitat, the proposed project will not substantially contribute to cumulative effects for CTS.

4.3.3. California Red-legged Frog

The California red-legged frog (*Rana draytonii*) is a federally threatened species and a State species of concern. Critical habitat for California red-legged frog (CRLF) was initially designated in March 2001, but was subsequently vacated (with the exception



FIGURE 7



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SCALE IN FEET

SOURCE: BASEMAP - NAIP MONTEREY COUNTY (May 2005); MAPPING - LSA ASSOCIATES, INC. (2007)
F:\Wrs0605\gis\fig7-cts_impacts.mxd (12/18/12)

Legend

-  Biological Study Area
-  Limits of Impact to CTS Upland Habitat (0.16 ac)
-  ESA Fencing

Approximate Work Limits

-  Permanent
-  Temporary

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Impacts to CTS Upland Habitat

of one unit in the Sierra Nevada) pursuant to a November 6, 2002, court order by the U.S. District Court for the District of Columbia. A revised critical habitat designation was finalized on April 13, 2006. Per the revised critical habitat designations, the BSA is not located in critical habitat. The nearest critical habitat is Unit MNT-2, located approximately 3.8 miles southwest of the BSA in the Carmel Valley.

The CRLF inhabits lowlands and foothills in or near permanent sources of deep water. This frog prefers ponds or creeks with extensive shoreline vegetation but will disperse 1.0 mile or more during and after rain events.

4.3.3.1. Survey Results

Aquatic habitat in the BSA is limited to ephemeral tributary to El Toro Creek. However, since the tributary conveys only ephemeral flows (i.e., during or immediately following substantial rain events) and no continuous flows or ponding occurs, this habitat is only marginally suitable for CRLF. Plant communities adjacent to the drainage could provide suitable upland habitat.

Offsite, east of the BSA, El Toro Creek supports dense willow riparian vegetation that would be suitable for CRLF foraging or dispersal if they are present in the area. Other potential aquatic habitat for CRLF in the vicinity of the BSA include a pond on private property to the northeast, a pond on the Rancho El Toro golf course to the south, pooled areas in the ephemeral drainage to the south, and a stock pond within one mile of the BSA.

Several protocol-level and other surveys for CRLF have been conducted in or near the BSA between 2003 and 2007 with negative findings (refer to Appendix F for detailed information).

Considering the negative findings from the surveys and the marginal aquatic habitat for CRLF in the ephemeral drainage (i.e., no persistent flow or ponding), it is unlikely CRLF occur in the BSA.

4.3.3.2. Avoidance and Minimization Efforts

1. ESAs, as shown in Figure 6, shall be marked using orange construction fencing or equivalent and shall be maintained in good condition until construction is complete.
2. Following completion of work, all areas denuded during project construction shall be revegetated with locally occurring native species as described in the Revegetation Guidelines in Appendix H.

4.3.3.3. Project Impacts

The project will not impact CRLF as this species is not expected to occur in the BSA.

4.3.3.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.3.3.2.

4.3.3.5. Cumulative Effects

Since the project will not affect CRLF, the proposed project will not contribute to cumulative effects for CRLF.

4.3.4. Western Spadefoot Toad

The western spadefoot toad (*Spea hammondi*) is a California Species of Special Concern. Historically, the western spadefoot toad ranged from Redding to northwest Baja California. In California this species was found throughout the Central Valley and in the Coast Ranges from San Francisco to Mexico. Breeding habitat for this species includes temporary pools or ephemeral drainages; breeding occurs from January to May. Water temperatures within these pools must stay between 48° and 86° F in order to serve as suitable breeding habitat. Eggs are deposited on emergent vegetation or detritus. Once pools begin to dry, western spadefoot toads use “spades” on their hind feet to burrow into the ground. Once fully concealed, these toads enter a period of subterranean hibernation until the following wet season, often eight to nine months.

4.3.4.1. Survey Results

There is no suitable aquatic habitat for western spadefoot toad in the BSA, but suitable aquatic habitat occurs within a mile of the BSA north of SR-68; no suitable habitat was identified south of SR-68. In addition, the coyote brush community in the BSA could provide suitable upland habitat for western spadefoot toad. The potential western spadefoot toad upland habitat in the BSA is low quality habitat due to the long distance (approximately 1 mile) from suitable breeding habitat and the location adjacent to a major roadway (i.e., SR-68).

The BSA contains only potential upland habitat for western spadefoot toad; no suitable aquatic habitat is present. The nearest suitable aquatic habitat is located approximately 1 mile to the north and suitable aquatic habitat is not present south of the BSA. Consequently, the western spadefoot toad upland habitat in the BSA is likely at the outer limits of western spadefoot toad dispersal from aquatic habitat to the north and it is unlikely western spadefoot toad occur in the BSA.

4.3.4.2. Avoidance and Minimization Efforts

1. Exclusion fencing shall be installed along the boundary of the work area that would affect western spadefoot toad habitat. Exclusion fencing shall consist of silt fence or equivalent material, and shall be installed such that no openings are present. Additionally, the bottom three inches of fence shall be buried. The exclusion fencing shall be maintained in good condition until project construction is complete.
2. The exclusion fence shall be removed following the completion of work.
3. All construction and staging shall be located within the existing State and County rights of way.
4. Following the completion of work, areas of potential western spadefoot toad upland habitat in the BSA denuded during project construction shall be revegetated with locally occurring native species as described in the Revegetation Guidelines in Appendix H.

4.3.4.3. Project Impacts

The project is not likely to directly affect western spadefoot toad since this species is not likely to be present in the work area. The project will not affect aquatic habitat for western spadefoot toad.

4.3.4.4. Compensatory Mitigation

Due to the low likelihood of western spadefoot toad occurring in the BSA, the low quality upland habitat present, and with implementation of the measures in Section 4.3.4.2, no compensatory mitigation is proposed.

4.3.4.5. Cumulative Effects

It is likely that similar projects in the vicinity could result in impacts to potential western spadefoot toad upland habitat similar to those from the proposed project. Since western spadefoot toad are not likely to occur in the BSA and the project will only affect low quality upland habitat, the proposed project will not substantially contribute to cumulative effects for western spadefoot toad.

4.4. Jurisdictional Waters

Jurisdictional waters, as referenced in this document, include waters of the U.S., waters of the State, and CDFW waters/riparian. Unless otherwise noted, waters of the State are identical to waters of the U.S. In the BSA, jurisdictional waters are limited

to the ephemeral tributary to El Toro Creek, as described in Table 4 and shown in Figure 8.

Table 4: Jurisdictional Waters in the BSA (acres)

Type	Total
Waters of the U.S.	
Wetlands	0.0
Nonwetland waters	0.032
Nonwetland waters (ACOE File No. 400399S)	0.038
Total Waters of the U.S.	0.070
Waters of the State	0.070
CDFW Waters	0.850

4.4.1. Waters of the U.S./State

4.4.1.1. Survey Results

Waters of the U.S./State in the BSA are limited to the ephemeral tributary to El Toro Creek, totaling 0.07 acre of nonwetland waters. No wetlands are present in the BSA.

Data collection occurred during the April 17, 2007, site visit. Data was collected at five points along the drainage (see Figure 8). The ephemeral drainage was mostly unvegetated and averaged 3 feet wide within the BSA. No indicators for wetland vegetation, hydric soils, or wetland hydrology were observed at any of the data points. Wetland data sheets are included in Appendix D.

The eastern reach of the tributary in the BSA, as shown in Figure 8, was delineated as part of a separate project, the SR-68 / San Benancio Road Intersection Improvement Project (ACOE File No. 400399S).

4.4.1.2. Avoidance and Minimization Efforts

1. Prior to the start of construction, ESA fencing shall be installed along the reaches of the ephemeral drainage, or the adjacent riparian vegetation where present, within the BSA to prevent unnecessary encroachment into these areas.
2. Contract specifications will require the contractor to refer to the Caltrans “Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program



FIGURE 8



0 200
SCALE IN FEET

SOURCE: BASEMAP - NAIP MONTEREY COUNTY (May 2005); MAPPING - LSA ASSOCIATES, INC. (2007)
F:\Wrs0605\gis\fig8-juris_wats.mxd (12/18/12)

Legend

-  Biological Study Area
-  Nonwetland Waters (0.032 acre)
-  Nonwetland Waters (0.038 acre, ACOE File No. 400399S)
-  CDFG Riparian (0.85 acre)
-  Data Point

SR-68/Corral de Tierra Road
Intersection Improvement Project
05-MON-68 PM 12.8/13.2
Jurisdictional Waters

(WPCP) Preparation Manual” and “Construction Site BMPs Manual” to prepare a SWPPP.

3. All areas of the BSA denuded of vegetation during project construction shall be revegetated with locally occurring native species as described in the Revegetation Guidelines in Appendix H.

4.4.1.3. Project Impacts

The project will not result in impacts to waters of the U.S./State since work will not encroach into the ephemeral tributary to El Toro Creek.

4.4.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.4.1.2.

4.4.1.5. Cumulative Effects

The project will not impact waters of the U.S./State and, therefore, will not result in cumulative effects to this resource.

4.4.2. CDFW Waters/Riparian

4.4.2.1. Survey Results

CDFW waters in the BSA, totaling 0.85 acre, include the ephemeral tributary and associated riparian vegetation (see Figure 8). Riparian vegetation, where present, is comprised of coast live oak woodland at the west end of the BSA and arroyo willow at the east end.

4.4.2.2. Avoidance and Minimization Efforts

1. Prior to the start of construction, ESA fencing shall be installed along the perimeter of the coast live oak community in the BSA to minimize encroachment during construction. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete.
2. If construction encroaches into the canopy of any coast live oak trees at the west end of the project, tree limbs that must be removed will be cut with a sharp saw (i.e., versus removal with heavy equipment). In this area, the ESA fencing shall be installed along the limits of work. No trees will be removed.
3. Prior to the start of construction, ESA fencing shall be installed along the limits of work adjacent to the arroyo willow community near the east end of the BSA to prevent unnecessary encroachment during construction. ESA fencing shall consist

of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete.

4. Contract specifications will require the contractor to refer to the Caltrans “Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual” and “Construction Site BMPs Manual” to prepare a SWPPP.
5. Following completion of work, any areas of the BSA denuded of vegetation during project construction shall be revegetated using locally occurring native species as described in the Revegetation Guidelines in Appendix H.

4.4.2.3. Project Impacts

The project will impact approximately 0.001 ac of riparian vegetation in the coast live oak community during construction of the fill slope at the west end of the project. Impacts will be limited to tree pruning. No trees will be removed.

4.4.2.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.4.2.2.

4.4.2.5. Cumulative Effects

It is likely that similar projects in the vicinity could result in impacts to CDFW waters/riparian similar to those from the proposed project. Since the project will only result in minor impacts to CDFW waters/riparian, the proposed project will not substantially contribute to cumulative effects for this resource.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

Two federally listed species, the CRLF and CTS, are known to occur in the vicinity of the BSA. CRLF is not expected to occur in the BSA and, therefore, will not be affected by the project and no consultation is required. CTS could potentially occur in the BSA; however, per discussions with the USFWS, with implementation of the measures in Section 4.3.2.2, it is not expected that consultation with the USFWS will be required.

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

The proposed project is not located in, nor will it affect, EFH.

5.3. California Endangered Species Act Consultation Summary

CTS was designated as a State threatened under CESA on May 12, 2010. The project could affect CTS if this species is present in the work area during construction. The County has taken the approach of inferring presence of CTS. Consequently, a Section 2081 Incidental Take Permit will be required from CDFW to authorize incidental take of CTS resulting from project construction.

5.4. Wetlands and Other Waters Coordination Summary

The waters of the U.S. in the ephemeral tributary to El Toro Creek are likely regulated by the USACE under Section 404 of the CWA (see Section 4.2.1). The project will not discharge fill into the ephemeral tributary. Therefore, no USACE permit is required.

Discharges into waters of the U.S. under Section 404 also require a water quality certification from the RWQCB, pursuant to Section 401 of the CWA (see Section 4.2.2). The RWQCB may opt to waive the water quality certification and instead issue waste discharge requirements pursuant to their authority under the Porter-

Cologne Act. No discharge is proposed as part of this project. Therefore neither a water quality certification nor waste discharge requirements are required.

The ephemeral tributary to El Toro Creek and associated riparian vegetation are regulated by the CDFW under Section 1602 of the Fish and Game Code (see Section 4.2.3). A Streambed Alteration Agreement from CDFW is required if a project will result in alteration of lake or streambed and “adversely affect fish and wildlife resources.” Since the project will only result in pruning of some of the coast live oaks adjacent to the drainage, the project will not adversely affect fish and wildlife resources. As a result, a Streambed Alteration Agreement will not be required.

5.5. Executive Order 13112 – Invasive Species

To avoid the introduction of invasive species into the BSA during project construction, contract specifications shall include, at a minimum, the following measures.

- All earthmoving equipment to be used during project construction shall be thoroughly cleaned before arriving on the project site.
- All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.

To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.

5.6. Migratory Bird Treaty Act and California Fish and Game Code (Breeding Birds)

The proposed project could potentially affect migratory birds nesting in the BSA if they are present when construction begins. Disturbance of these birds during their nesting season (February 16 to August 31) could result in “take” which is prohibited under the MBTA and Section 3503 of the California Fish and Game Code.

The following seasonal work restrictions will be implemented during construction to avoid disturbing nesting birds:

1. If work must begin during the nesting season (February 16 to August 31), no more than ten working days prior to the start of construction, a qualified biologist shall survey all suitable nest trees in the BSA for presence of nesting birds. If no nesting activity is observed, work shall proceed as planned. If an

active nest is discovered, ESA fencing shall be installed around the drip line of the tree and maintained in good condition until the end of the nesting season or until the young have fledged, as determined by a qualified biologist.

5.7. County of Monterey Native Tree Preservation

The project will not remove any trees species protected by the County Tree Ordinance.

Chapter 6. References

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- California Native Plant Society. 2012. 8th Inventory of Rare and Endangered Vascular Plants of California - Online Edition.
- Cooper, Doug. U.S. Fish and Wildlife Service, biologist. Personal communication, November 2008.
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- Holland, Robert F., Ph.D. 1986. Preliminary descriptions of the terrestrial natural communities of California. Department of Fish and Game, Sacramento, CA.
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- Keegan, David. Denise Duffy and Associates, biologist. Personal communication. February 2007.
- Sawyer, John O. and Todd Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, CA.
- Trenham, Peter C. and H. Bradley Shaffer. 2005. Amphibian Upland Habitat Use and its Consequences for Population Viability. *Ecological Applications* 15(4): 1158-1168.
- U.S. Fish and Wildlife Service. 2012. Online Threatened and Endangered Species Lists. Sacramento Fish and Wildlife Office.

U.S. Fish and Wildlife Service. 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (*Rana aurora draytonii*). Sacramento Fish and Wildlife Office, August 2005.

U.S. Fish and Wildlife Service. 2003. Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, October 2003.

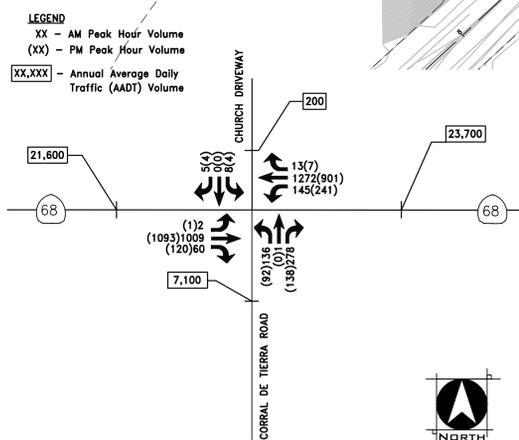
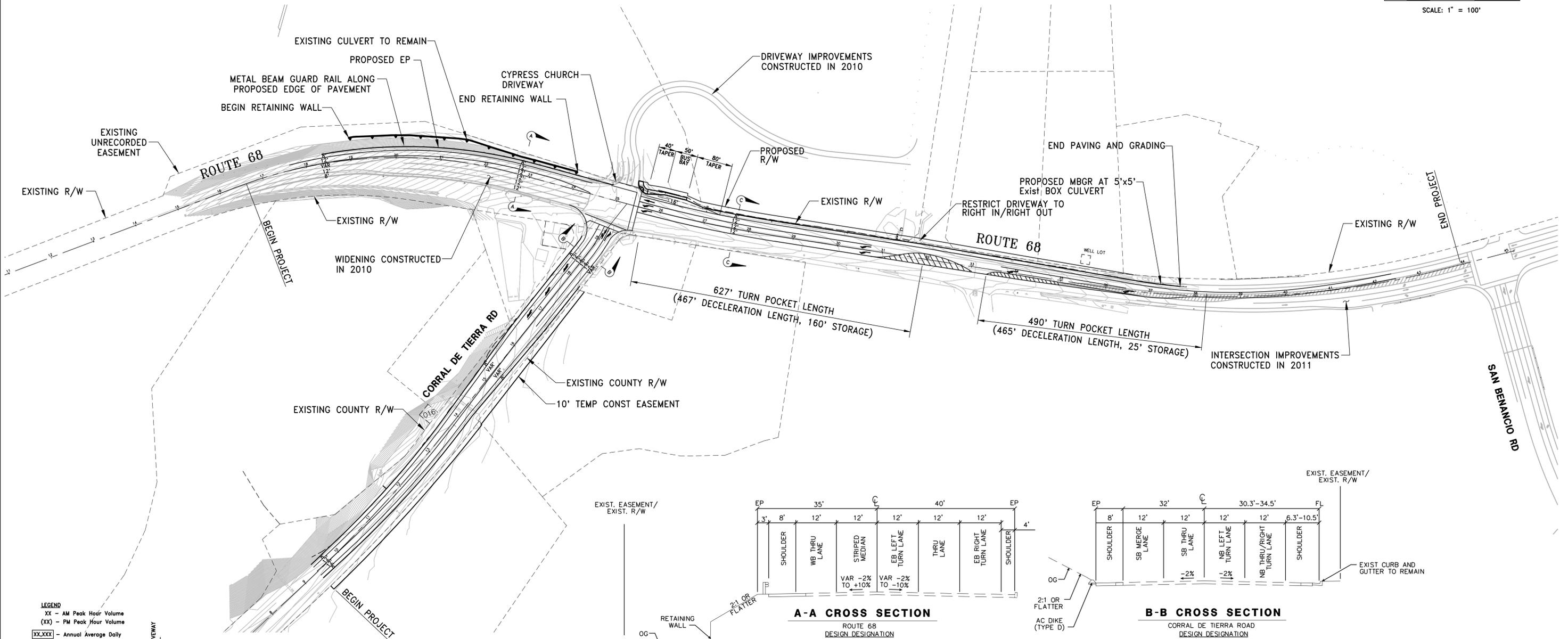
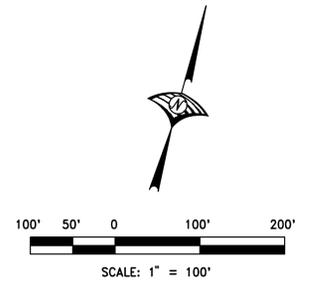
Appendix A Design Plans

ROUTE 68/CORRAL DE TIERRA ROAD INTERSECTION IMPROVEMENTS

BUILD ALTERNATIVE

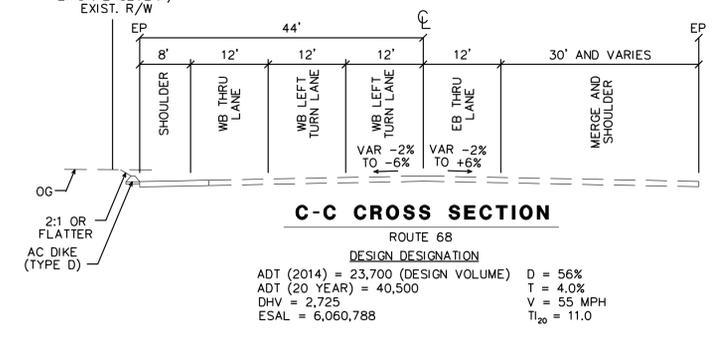
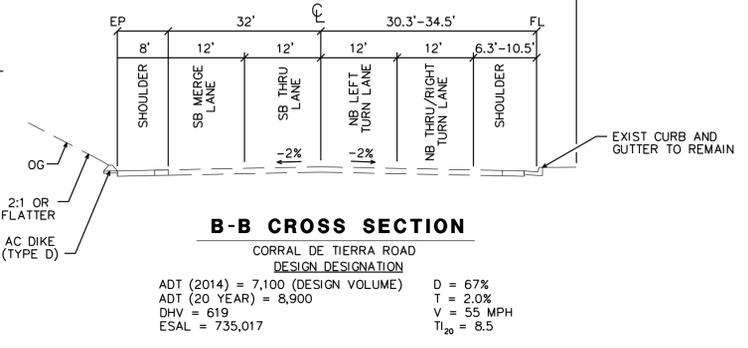
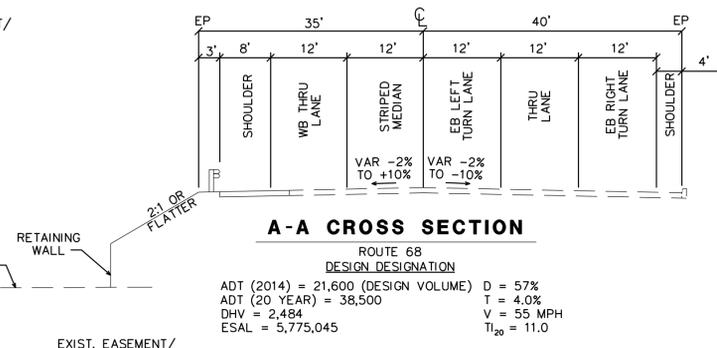
COUNTY OF MONTEREY CALIFORNIA

JANUARY, 2013



*NOTE: This volume scenario does not include traffic volumes from the proposed Shopping Center on the south-east quadrant of the project intersection.

TRAFFIC DESIGN VOLUME YEAR 2014



Appendix B USFWS, CNDDDB and CNPS Lists



United States Department of the Interior
FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825



November 6, 2012

Document Number: 121106030254

Laurel Frakes
LSA Associates, Inc.
1998 Santa Barbara Street, Ste 120
San Luis Obispo, CA 93401

Subject: Species List for SR-68/Corral de Tierra Intersection Improvement Project

Dear: Ms. Frakes

We are sending this official species list in response to your November 6, 2012 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be February 04, 2013.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found [here](#).

Endangered Species Division



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

Document Number: 121106030647

Database Last Updated: September 18, 2011

No quad species lists requested.

County Lists

Monterey County

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Euphydryas editha bayensis

bay checkerspot butterfly (T)

Fish

Eucyclogobius newberryi

critical habitat, tidewater goby (X)

Hypomesus transpacificus

delta smelt (T)

Oncorhynchus kisutch

coho salmon - central CA coast (E) (NMFS)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Critical habitat, Central California coastal steelhead (X) (NMFS)

South Central California steelhead (T) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

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

Rana draytonii

California red-legged frog (T)

Critical habitat, California red-legged frog (X)

Reptiles

Gambelia (=Crotaphytus) sila

blunt-nosed leopard lizard (E)

Birds

Brachyramphus marmoratus

marbled murrelet (T)

Charadrius alexandrinus nivosus

Critical habitat, western snowy plover (X)

Gymnogyps californianus

California condor (E)

Rallus longirostris obsoletus

California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni

California least tern (E)

Vireo bellii pusillus

Least Bell's vireo (E)

Mammals

Dipodomys ingens

giant kangaroo rat (E)

Vulpes macrotis mutica

San Joaquin kit fox (E)

Plants

Camissonia benitensis

San Benito evening-primrose (T)

Caulanthus californicus

California jewelflower (E)

Chorizanthe robusta var. *robusta*
robust spineflower (E)

Erysimum menziesii (includes ssp. *yadonii*)
Menzies's wallflower (E)

Holocarpha macradenia
Critical habitat, Santa Cruz tarplant (X)
Santa Cruz tarplant (T)

Lasthenia conjugens
Contra Costa goldfields (E)

Layia carnosa
beach layia (E)

Lupinus tidestromii
clover lupine [Tidestrom's lupine] (E)

Monolopia congdonii (= *Lembertia congdonii*)
San Joaquin woolly-threads (E)

Potentilla hickmanii
Hickman's potentilla (=cinquefoil) (E)

Key:

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

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

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

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

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

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

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

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

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be February 04, 2013.



Selected Elements by Scientific Name

California Department of Fish and Game

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFG SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S3	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	None	G2G3	S2	SSC
<i>Agrostis lacuna-vernalis</i> vernal pool bent grass	PMPOA041N0	None	None	G1	S1	1B.1
<i>Allium hickmanii</i> Hickman's onion	PMLIL02140	None	None	G2	S2.2	1B.2
<i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SSC
<i>Amorpha californica var. napensis</i> Napa false indigo	PDFAB08012	None	None	G4T2	S2.2	1B.2
<i>Anniella pulchra nigra</i> black legless lizard	ARACC01011	None	None	G3G4T2T3Q	S2	SSC
<i>Anniella pulchra pulchra</i> silvery legless lizard	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
<i>Arctostaphylos hookeri ssp. hookeri</i> Hooker's manzanita	PDERI040J1	None	None	G3T2?	S2?	1B.2
<i>Arctostaphylos montereyensis</i> Toro manzanita	PDERI040R0	None	None	G2	S2.1	1B.2
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	PDERI04100	None	None	G2	S2.1	1B.1
<i>Arctostaphylos pumila</i> sandmat manzanita	PDERI04180	None	None	G2	S2.2	1B.2
<i>Astragalus tener var. tener</i> alkali milk-vetch	PDFAB0F8R1	None	None	G2T2	S2	1B.2
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S2	SSC
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<i>California macrophylla</i> round-leaved filaree	PDGER01070	None	None	G2	S2	1B.1
<i>Castilleja ambigua ssp. insalutata</i> pink Johnny-nip	PDSCR0D403	None	None	G4T1	S1	1B.1
Central Dune Scrub Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	
Central Maritime Chaparral Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	PDAST4R0P1	None	None	G4T2	S2	1B.2
<i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G4T3	S2	SSC



Selected Elements by Scientific Name

California Department of Fish and Game

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFG SSC or FP
<i>Chorizanthe pungens var. pungens</i> Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
<i>Chorizanthe robusta var. robusta</i> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
<i>Clarkia jolonensis</i> Jolon clarkia	PDONA050L0	None	None	G2	S2.2	1B.2
<i>Coelus globosus</i> globose dune beetle	IICOL4A010	None	None	G1	S1	
<i>Cordylanthus rigidus ssp. littoralis</i> seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
<i>Danaus plexippus</i> monarch butterfly	IILEPP2010	None	None	G5	S3	
<i>Delphinium californicum ssp. interius</i> Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T2?	S2?	1B.2
<i>Delphinium hutchinsoniae</i> Hutchinson's larkspur	PDRAN0B0V0	None	None	G2	S2.1	1B.2
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T3Q	S3	WL
<i>Ericameria fasciculata</i> Eastwood's goldenbush	PDAST3L080	None	None	G2	S2.1	1B.1
<i>Eriogonum nortonii</i> Pinnacles buckwheat	PDPGN08470	None	None	G2	S2.3	1B.3
<i>Erysimum ammophilum</i> sand-loving wallflower	PDBRA16010	None	None	G2	S2.2	1B.2
<i>Erysimum menziesii ssp. yadonii</i> Yadon's wallflower	PDBRA160E4	Endangered	Endangered	G3?T1	S1	1B.1
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S2S3	SSC
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	IILEPG2026	Endangered	None	G5T1T2	S1S2	
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	
<i>Falco mexicanus</i> prairie falcon	ABNKD06090	None	None	G5	S3	WL
<i>Fritillaria liliacea</i> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<i>Gilia tenuiflora ssp. arenaria</i> sand gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	PDROS0W043	None	None	G4T2	S2?	1B.1



Selected Elements by Scientific Name

California Department of Fish and Game

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFG SSC or FP
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4?	
<i>Lasthenia conjugens</i> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<i>Legenere limosa</i> legenere	PDCAM0C010	None	None	G2	S2.2	1B.1
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G3	S2S3	
<i>Malacothamnus palmeri var. involucratus</i> Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	G3T2Q	S2.2	1B.2
<i>Malacothrix saxatilis var. arachnoidea</i> Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2.2	1B.2
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2.2	1B.2
Monterey Pine Forest Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	AMAFF08083	None	None	G5T3?	S3?	SSC
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Oncorhynchus mykiss irideus</i> steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	SSC
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G4G5	S3S4	SSC
<i>Pinus radiata</i> Monterey pine	PGPIN040V0	None	None	G1	S1.1	1B.1
<i>Piperia yadonii</i> Yadon's rein orchid	PMORC1X070	Endangered	None	G2	S2	1B.1
<i>Plagiobothrys uncinatus</i> hooked popcornflower	PDBOR0V170	None	None	G2	S2.2	1B.2
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	None	G3	S2S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G4T2T3	S2S3	SSC
<i>Reithrodontomys megalotis distichlis</i> Salinas harvest mouse	AMAFF02032	None	None	G5T1	S1	
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2S3	
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3G4	S3S4.2	4.2
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2.2	1B.2



Selected Elements by Scientific Name

California Department of Fish and Game

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFG SSC or FP
<i>Taricha torosa</i> Coast Range newt	AAAAF02032	None	None	G5T4	S4	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S4	SSC
<i>Thamnophis hammondi</i> two-striped garter snake	ARADB36160	None	None	G3	S2	SSC
<i>Trifolium buckwestiorum</i> Santa Cruz clover	PDFAB402W0	None	None	G1	S1.1	1B.1
<i>Trifolium polyodon</i> Pacific Grove clover	PDFAB402H0	None	Rare	G1Q	S1.1	1B.1
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 69



Inventory of Rare and Endangered Plants

v7-12dec 12-15-12

Status: search results - Fri, Dec. 21, 2012 17:21 c

Tip: Terms prefixed by "+" are required, and by "-" excluded. [\[all tips and help.\]](#) [\[search history\]](#)

Your Quad Selection: Spreckels (365C) 3612156, Rana Creek (343A) 3612145, Carmel Valley (343B) 3612146, Seaside (366D) 3612157, Marina (366A) 3612167, Mount Carmel (344A) 3612147, Chualar (365D) 3612155, Natividad (365A) 3612165, Salinas (365B) 3612166

Hits 1 to 41 of 41
[Requests that specify topo quads will return only Lists 1-3.](#)

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Agrostis lacuna-vernalis</u>	vernal pool bent grass	Poaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Allium hickmanii</u>	Hickman's onion	Alliaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Arctostaphylos hookeri</u> ssp. <u>hookeri</u>	Hooker's manzanita	Ericaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Arctostaphylos montereyensis</u>	Toro manzanita	Ericaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Arctostaphylos pajaroensis</u>	Pajaro manzanita	Ericaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Arctostaphylos pumila</u>	sandmat manzanita	Ericaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Astragalus tener</u> var. <u>tener</u>	alkali milk-vetch	Fabaceae	List 1B.2
	<input type="checkbox"/>	1	<u>California macrophylla</u>	round-leaved filaree	Geraniaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Castilleja ambigua</u> ssp. <u>insalutata</u>		Orobanchaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Centromadia parryi</u> ssp. <u>congdonii</u>	Congdon's tarplant	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Chorizanthe pungens</u> var. <u>pungens</u>	Monterey spineflower	Polygonaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Chorizanthe robusta</u> var. <u>robusta</u>	robust spineflower	Polygonaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Clarkia jolonensis</u>	Jolon clarkia	Onagraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Cordylanthus rigidus</u> ssp. <u>littoralis</u>	seaside bird's-beak	Orobanchaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Corethrogyne leucophylla</u>	branching beach aster	Asteraceae	List 3.2
	<input type="checkbox"/>	1	<u>Delphinium californicum</u> ssp. <u>interius</u>	Hospital Canyon larkspur	Ranunculaceae	List 1B.2

	<input type="checkbox"/>	1	<u>Delphinium hutchinsoniae</u> 	Hutchinson's larkspur	Ranunculaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Ericameria fasciculata</u> 	Eastwood's goldenbush	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Eriogonum nortonii</u> 	Pinnacles buckwheat	Polygonaceae	List 1B.3
	<input type="checkbox"/>	1	<u>Erysimum ammophilum</u> 	sand-loving wallflower	Brassicaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Erysimum menziesii</u> ssp. <u>yadonii</u> 	Yadon's wallflower	Brassicaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Fritillaria liliacea</u> 	fragrant fritillary	Liliaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Galium clementis</u> 	Santa Lucia bedstraw	Rubiaceae	List 1B.3
	<input type="checkbox"/>	1	<u>Gilia tenuiflora</u> ssp. <u>arenaria</u> 	Monterey gilia	Polemoniaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Grindelia hirsutula</u> var. <u>maritima</u> 	San Francisco gumplant	Asteraceae	List 3.2
	<input type="checkbox"/>	1	<u>Horkelia cuneata</u> var. <u>sericea</u>	Kellogg's horkelia	Rosaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lasthenia conjugens</u> 	Contra Costa goldfields	Asteraceae	List 1B.1
	<input type="checkbox"/>	1	<u>Legenere limosa</u> 	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lessingia hololeuca</u> 	woolly-headed lessingia	Asteraceae	List 3
	<input type="checkbox"/>	1	<u>Lupinus tidestromii</u> 	Tidestrom's lupine	Fabaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Malacothamnus palmeri</u> var. <u>involutus</u> 	Carmel Valley bush-mallow	Malvaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Malacothamnus palmeri</u> var. <u>palmeri</u>	Santa Lucia bush-mallow	Malvaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Malacothrix saxatilis</u> var. <u>arachnoidea</u> 	Carmel Valley malacothrix	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Micropus amphibolus</u> 	Mt. Diablo cottonweed	Asteraceae	List 3.2
	<input type="checkbox"/>	1	<u>Microseris paludosa</u> 	marsh microseris	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Pinus radiata</u> 	Monterey pine	Pinaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Piperia yadonii</u> 	Yadon's rein orchid	Orchidaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Plagiobothrys uncinatus</u> 	hooked popcorn-flower	Boraginaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Stebbinsoseris decipiens</u>	Santa Cruz microseris	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Trifolium buckwestiorum</u> 	Santa Cruz clover	Fabaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Trifolium polyodon</u> 	Pacific Grove clover	Fabaceae	List 1B.1

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press

check all

check none

Selections will appear in a new window.

No more hits.



Appendix C Species Observed in the BSA

**WILDLIFE AND PLANT SPECIES OBSERVED ON THE STATE ROUTE 68
/ CORRAL DE TIERRA ROAD INTERSECTION OPERATIONAL
IMPROVEMENTS PROJECT SITE**

Wildlife

Scientific Name	Common Name
Birds	
<i>Aphelocoma californica</i>	Western scrub jay
<i>Columba livia</i>	Rock dove
<i>Corvus corax</i>	Common raven
<i>Sayornis nigricans</i>	Black phoebe
<i>Turdus migratorius</i>	American robin
Mammals	
<i>Canis latrans</i>	Coyote (scat)
<i>Procyon lotor</i>	Raccoon (tracks)
Reptiles	
<i>Sceloporus occidentalis</i>	Western fence lizard

Plants

SCIENTIFIC NAME	COMMON NAME	FAMILY
<i>Aesculus californica</i>	Buckeye	Hippocastanaceae
<i>Aira caryophyllea</i>	Silver European hairgrass	Poaceae
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Rancher's fireweed	Boraginaceae
<i>Anagallis arvensis</i>	Scarlet pimpernel	Primulaceae
<i>Artemisia californica</i>	California sagebrush	Asteraceae
<i>Artemisia douglasiana</i>	Mugwort	Asteraceae
<i>Avena barbata</i>	Wild oats	Poaceae
<i>Baccharis pilularis</i>	Coyote bush	Asteraceae
<i>Brassica nigra</i>	Black mustard	Brassicaceae
<i>Briza major</i>	Rattlesnake grass	Poaceae
<i>Bromus diandrus</i>	Ripgut brome	Poaceae
<i>Bromus hordaceus</i>	Soft chess	Poaceae
<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae
<i>Carpobrotus chilensis</i>	Sea fig	Aizoaceae
<i>Centaurea solstitialis</i>	Yellow star-thistle	Asteraceae
<i>Chamomilla suaveolens</i>	Pineapple weed	Asteraceae
<i>Chlorogalum pomeridanum</i>	Soap plant	Liliaceae
<i>Cichorium intybus</i>	Chicory	Asteraceae
<i>Claytonia perfoliata</i>	Miners lettuce	Portulacaceae
<i>Conium maculatum</i>	Poison hemlock	Apiaceae
<i>Convolvulus arvensis</i>	Field bindweed	Convolvulaceae
<i>Crassula tillaea</i>	Pygmy stonecrop	Crassulaceae
<i>Cynodon dactylon</i>	Bermuda grass	Poaceae
<i>Cyperus eragrostis</i>	Nutsedge	Cyperaceae
<i>Cyperus esculentus</i>	Nutsedge	Cyperaceae

SCIENTIFIC NAME	COMMON NAME	FAMILY
<i>Distichlis spicata</i>	Saltgrass	Poaceae
<i>Epilobium ciliatum</i>	Willow herb	Onagraceae
<i>Eremocarpus setigerus</i>	Dove weed	Euphorbiaceae
<i>Erodium botrys</i>	Storksbill	Geraniaceae
<i>Erodium cicutarium</i>	Filaree	Geraniaceae
<i>Eschscholzia californica</i>	California poppy	Papaveraceae
<i>Eucalyptus</i> sp.	Gum tree	Myrtaceae
<i>Foeniculum vulgare</i>	Fennel	Apiaceae
<i>Geranium dissectum</i>	Cranesbill	Geraniaceae
<i>Heterotheca sessiliflora</i>	Telegraph weed	Asteraceae
<i>Hirschfeldia incana</i>	Short pod mustard	Brassicaceae
<i>Hordeum marinum gussoneanum</i>	Mediterranean barley	Poaceae
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Barley	Poaceae
<i>Hypochaeris glabra</i>	Cat's-ear	Asteraceae
<i>Juncus balticus</i>	Rush	Juncaceae
<i>Juncus bufonius</i>	Toadrush	Juncaceae
<i>Juncus effusus</i>	Rush	Juncaceae
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae
<i>Lathyrus latifolius</i>	Sweet pea	Fabaceae
<i>Lepidium</i> sp.	Peppergrass	Brassicaceae
<i>Leymus triticoides</i>	Creeping wildrye	Poaceae
<i>Lolium multiflorum</i>	Ryegrass	Poaceae
<i>Lomatium californicum</i>	California lomatium	Apiaceae
<i>Lupinus bicolor</i>	Miniature lupine	Fabaceae
<i>Lupinus microcarpus</i>	Lupine	Fabaceae
<i>Malva parviflora</i>	Cheeseweed	Malvaceae
<i>Malvella leprosa</i>	Alkali-mallow	Malvaceae
<i>Marah fabaceus</i>	California man-root	Cucurbitaceae
<i>Marrubium vulgare</i>	Horehound	Lamiaceae
<i>Medicago polymorpha</i>	Bur-clover	Fabaceae
<i>Melilotus indica</i>	Sourclover	Fabaceae
<i>Pinus radiata</i>	Monterey pine	Pinaceae
<i>Plantago coronopus</i>	Cut-leaved plantain	Plantaginaceae
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae
<i>Poa annua</i>	Annual bluegrass	Poaceae
<i>Polygonum arenastrum</i>	Common knotweed	Polygonaceae
<i>Polypogon monspeliensis</i>	Annual beard grass	Poaceae
<i>Populus fremontia</i> ssp. <i>fremontii</i>	Fremont cottonwood	Salicaceae
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Self-heal	Lamiaceae
<i>Pteridium aquilinum</i>	Bracken fern	Polypodiaceae
<i>Quercus agrifolia</i>	Coast live oak	Fagaceae
<i>Quercus lobata</i>	Valley oak	Fagaceae
<i>Raphanus sativus</i>	Wild radish	Brassicaceae
<i>Rosa californica</i>	California rose	Roseaceae
<i>Rubus ursinus</i>	California blackberry	Rosaceae
<i>Rumex acetosella</i>	Sheep sorrel	Polygonaceae

Appendix C Species Observed in the BSA

SCIENTIFIC NAME	COMMON NAME	FAMILY
<i>Rumex crispus</i>	Curly dock	Polygonaceae
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae
<i>Senecio vulgaris</i>	Common groundsel	Asteraceae
<i>Sidalcea diplosypha</i>	Checkerbloom	Malvaceae
<i>Silybum marinum</i>	Milk thistle	Asteraceae
<i>Stipa pulchra</i>	Purple needlegrass	Poaceae
<i>Toxicodendron diversiloba</i>	Poison oak	Anacardiaceae
<i>Trifolium hirtum</i>	Rose clover	Fabaceae
<i>Triteleia ixioides ssp. ixioides</i>	Golden brodiaea	Liliaceae
<i>Vicia sativa</i>	Vetch	Fabaceae
<i>Vicia villosa</i>	Hairy vetch	Fabaceae
<i>Vulpia bromoides</i>	Six-week fescue	Poaceae

*Plant names are consistent with Hickman (1993).

Appendix D Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR168 / CORRAL DE TIERRA City/County: MONTEREY COUNTY Sampling Date: 4.17.07
 Applicant/Owner: MONTEREY COUNTY DEPT. OF PUBLIC WORKS State: CA Sampling Point: 1
 Investigator(s): J. BERRY, S. COHN Section, Township, Range: T15S, R2E, SECTIONS 3, 34, 35
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRRC Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <p style="font-size: 1.2em; margin-left: 20px;">Low RAINFALL YEAR.</p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: _____				
Herb Stratum				
1. <u>JUNCUS PATENS</u>	<u>3</u>	<u>Y</u>	<u>FAC</u>	
2. <u>CONIUM MACULATUM</u>	<u>1</u>	<u>Y</u>	<u>FACW</u>	
3. <u>CARIACUS PINOCEPHALUS</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>5</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>95%</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	—	—	—	—	—	—	SAND	
16-20	10YR 3/2	100	5YR 4/6	7	C	R, C	SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): > 20"
 Saturation Present? Yes _____ No Depth (inches): > 20"
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR-68 / CORRAL DE TIERRA City/County: MONTEREY COUNTY Sampling Date: 4.17.07
 Applicant/Owner: MONTEREY COUNTY DEPT. OF PUBLIC WORKS State: CA Sampling Point: 2
 Investigator(s): J. BEXY, S. COHN Section, Township, Range: T15S, R2E, SECTIONS 3, 34, 35
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRRC Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>LOW RAINFALL YEAR</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>0</u> (B)																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Total Cover: _____																				
Sapling/Shrub Stratum																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: _____																				
Herb Stratum																				
1. <u>JUNCUS PATENS</u>	<u>1</u>	<u>N</u>	<u>FAC</u>																	
2. <u>CONIUM MACULATUM</u>	<u>1</u>	<u>N</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
Total Cover: <u>2</u>																				
Woody Vine Stratum																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: _____																				
% Bare Ground in Herb Stratum <u>98%</u> % Cover of Biotic Crust <u>0</u>																				

Remarks:
COVER NOT SUFFICIENT FOR AREA TO BE DETERMINED "VEGETATED."

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11							SAND	
11-14	10YR 3/2	70	5YR 4/6	1	C	RC	SILT	
11-14	10YR 4/2	30	5YR 4/6	1	C	RC	SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): 714"
 Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 714"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR468 / CORRAL DE TIERRA City/County: MONTEREY COUNTY Sampling Date: 4.17.07
 Applicant/Owner: MONTEREY COUNTY DEPT. OF PUBLIC WORKS State: CA Sampling Point: 3
 Investigator(s): J. BEZAY, S. COHN Section, Township, Range: T15S, R2E, SECTIONS 3, 34, 35
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRRC Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
--	--

Remarks:
LOW RAINFALL YEAR.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>BACCHARIS PILULARIS</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: <u>25</u>				
Herb Stratum				
1. <u>CONIUM MACULATUM</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
2. <u>CARDUUS PTEROCEPHALUS</u>	<u>35</u>	<u>Y</u>	<u>UPL</u>	
3. <u>JUNCUS PATENS</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
4. <u>VULPIA BROMOIDES</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>108</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR3/2.5	100					SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): 7.5"
 Saturation Present? Yes _____ No Depth (inches): 7.5"
 (Includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR68 / CORRAL DE TIERRA City/County: MONTEREY COUNTY Sampling Date: 4.17.07
 Applicant/Owner: MONTEREY COUNTY DEPT. OF PUBLIC WORKS State: CA Sampling Point: 4
 Investigator(s): J. BEXY, S. COHN Section, Township, Range: T15S, R2E, SECTIONS 3, 34, 35
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRRC Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>LOW RAINFALL YEAR.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>QUERCUS AGRIIFOLIA</u>	<u>50</u>	<u>Y</u>	<u>UPL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u>SALIX LASIOLEPIS</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: <u>100</u>				
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. <u>JUNCUS XIPHOIDES</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>TOXICODENDRON DIVERSILORUM</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>40</u>				
Woody Vine Stratum				
1. <u>TOXICODENDRON DIVERSILORUM</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	
2. _____				
Total Cover: <u>25</u>				
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13							SAND	
13-17	10YR 4/3	100	5YR 4/6	2	C	M	SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): >17"
 Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): >17"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SR168 / CORRAL DE TIERRA City/County: MONTEREY COUNTY Sampling Date: 4.17.07
 Applicant/Owner: MONTEREY COUNTY DEPT. OF PUBLIC WORKS State: CA Sampling Point: 5
 Investigator(s): J. BERRY, S. COHN Section, Township, Range: T15S, R2E, SECTIONS 3, 34, 35
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): LRCC Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	

Remarks:
LOW RAINFALL YEAR.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>BACCHARIS PILULARIS</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: <u>20</u>				
Herb Stratum				
1. <u>CONIUM MACULATUM</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. <u>VULPIA BROMOIDES</u>	<u>75</u>	<u>Y</u>	<u>FACU</u>	
3. <u>CARDUUS PYNDOCEPHALUS</u>	<u>20</u>	<u>N</u>	<u>UPL</u>	
4. <u>JUNCUS PATENS</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>140</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100	5YR 4/6	3	C	M	SILT	
8-15	10YR 3.5/2	100	5YR 4/6	5	C	M	SILT	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): 715"
 Saturation Present? Yes _____ No Depth (inches): 715"
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix E Agency Coordination

Meeting notes from Tuesday 4/24/07 with Dave Hacker:

CRLF (Frogs):

Dave thought it would be a No Effect; however he said that he's learned that golf course ponds can support RLF and that anywhere there's water they could show up; nonetheless, there's no project work planned for the south side of 68 near the golf pond. Minimization actions such as working in the dry season should cover it.

If No Federal Nexus (currently what we know), then we submit the Site Assessment to the FWS and call DFG for their thoughts as to likely degree of effects.

CTS (Salamander):

More of an issue because the intersection site is within the 2 km radius the FWS considers as the dispersal buffer. Therefore, we would assume presence.

If Federal Nexus, we would do Section 7 consultation, and Caltrans could call it a No Effect or Not Likely to Affect. Does not have to go through FHWA under No effect scenario. If Affect is determined likely by Caltrans, they would initiate Informal or Formal Consultation with FWS. Would need to treat it the same with CDFW under a 2081 CESA permit. CDFW would expect full mitigation; Dave recommended that we talk with CDFW rep (Martha Schauss?) and see how they want to go on it (see if she or someone else in their region is a CTS expert) .

Dave will give Sara contact information for a BLM biologist that works a lot on Fort Ord and see what information he has about the project area; could help.

If No Federal Nexus, FWS and/or DFG could require mitigation and a permit, under Section 10. More onerous, could mean an HCP.

Dave said that it would be possibly advantageous in this case to have a Federal Nexus if the agencies think that there could be an affect on CTS, because then after we submit the Site Assessment, we'd prepare a joint BA for both species, include conclusions on potential take and then include avoidance/minimization measures as part of the project description. Could still do CE's under NEPA and CEQA that way. However, if the FWS does not think there would be an affect then Section 10 wouldn't be an issue.

Jill will coordinate with Keith Hallsten at WR to further explore the possibility of the design possibly impacting the tributary to E.T. Creek, resulting in a Fed. Nexus (404) trigger, either through Caltrans' requirements for shallow slope grades that would have to be applied adjacent to the tributary creek on the north side of 68, or drainage culverts, etc. If 404 was triggered from impacts to the drainage, the Corps could probably support Caltrans' opinion of No Affect, in Dave's experience.

At this point, we should plan to prepare the full NES (rather than an MI) regardless of federal nexus status because this would ensure that agencies' questions are addressed.

Dave suggested that Brooke contact him when she returns - he has a previous report with information on the unnamed drainage that could enhance the information in the draft Site Assessment.

MEETING MINUTES

PROJECT: SR-68/Corral de Tierra Road Intersection Operational Improvements

CLIENT: Monterey County

LSA PROJECT NO.: WRS0605

RE: Coordination with U.S. Fish and Wildlife Service Re: CTS and the Need to Prepare an HCP

DATE / LOCATION: Friday, November 7, 2008, 1:00 pm
Project Site

ATTENDEES: Jonathan Pascua, Monterey County DPW, Engineer
Doug Cooper, USFWS Ventura, Biologist
Keith Hallsten, Wood Rogers, Project Engineer
Jeff Bray, LSA Associates, Biologist

TOPICS DISCUSSED	ACTION REQUIRED
<p>Keith started the meeting by providing a brief history of the project and then describing the proposed project improvements at the intersection. Keith noted that the SR-68 roadway would be widened to the north through the SR-68/Corral de Tierra Road intersection and this is where the project would encroach into areas of possible CTS habitat.</p> <p>Jeff stated that there is a known CTS breeding pond approximately 0.9 mile north of the project site, so the project is within accepted CTS dispersal range. Doug confirmed this. Jeff stated that the primary purpose of the meeting was to determine if preparation of an HCP was the only approach to authorizing potential project-related effects (i.e., “take”) to CTS. Jeff explained that the County has exhausted all means to establish a Section 7 nexus (e.g., via federal funding or a Section 404 permit). Doug stated that in the absence of a federal nexus, if the project will impact suitable CTS habitat, then preparation of the HCP was the only approach to obtain “take” authorization.</p> <p>Jeff suggested we review the habitat on the ground before proceeding. Once on the north side of SR-68, Keith and Jeff explained that the widening would be limited to the existing fill slope and the narrow area of land between the toe of slope and the Caltrans right-of-way fence. Jeff stated that while the area to be disturbed appeared to be marginal CTS upland habitat, it did contain rodent burrows (i.e., CTS refugia) and was within 0.9 mile of a known breeding pond. Doug agreed that the habitat was marginal upland habitat for CTS. However, he noted that it</p>	

<p>is unlikely CTS would utilize the fill slope and/or area at the toe given its disturbed nature and overall low quality. Furthermore, given that the project is at the outer limit of CTS dispersal distance from the known breeding pond, the presence of much better upland habitat to the north (i.e., between the project and the known breeding pond), and the fact that SR-68 is considered a dispersal barrier for CTS, it is even less likely CTS would utilize the fill slope and area at its toe.</p> <p>Doug stated that given the low quality of the habitat to be disturbed, if the County would be willing to implement certain avoidance and minimization measures, the USFWS would be able to issue a technical assistance letter stating that the project would not result in take of CTS. The primary avoidance and minimization measures would include surveying the burrows in the area to be disturbed during the dry season when any CTS occurring there would be underground, and installing exclusion fencing along the boundary of the work area that would affect CTS habitat. Surveys could be accomplished via hand excavation of each burrow or surveying the burrows using a fiber optic camera. Doug stated that if CTS were found during the burrow surveys, then the County would need to initiate discussions with the USFWS to prepare an HCP. Doug thought the likelihood of CTS using the area to be disturbed was very low.</p>	<p>LSA, on behalf of Monterey County, will prepare a letter to the USFWS requesting technical assistance for project effects to CTS. The letter will describe the project and propose the avoidance and minimization measures Doug recommended.</p> <p>The USFWS will respond to the letter stating that the project will not result in take of CTS provided the avoidance and minimization measures are implemented and the results of the burrow surveys are negative.</p>
---	--

Note: *These minutes are the preparer's understanding of the items discussed at the meeting. If discrepancies or omissions are noted, please contact the preparer within three days of receipt.*

PREPARED BY: Jeff Bray

REVIEWED BY: Keith Hallsten

MEETING MINUTES

PROJECT: SR-68/Corral de Tierra Road Intersection Operational Improvements

CLIENT: Monterey County

LSA PROJECT NO.: WRS0605

RE: Coordination with California Department of Fish and Wildlife Re: CTS

DATE / LOCATION: Wednesday, June 17, 2009, 11:00 am
Project Site

ATTENDEES: Rick Sauerwein, Monterey County DPW
Laura Peterson-Diaz, CDFW
Lisa Schicker, Caltrans
Keith Hallsten, Wood Rodgers
Ali Hemmati, Wood Rodgers
Jill O’Connor, LSA
Jeff Bray, LSA

TOPICS DISCUSSED	ACTION REQUIRED
<p>Keith started the meeting by describing the proposed project improvements at the intersection. Keith noted that the SR-68 roadway would be widened to the north through the SR-68/Corral de Tierra Road intersection and this is where the project would encroach into areas of potential CTS habitat.</p> <p>The group crossed to the north side of SR-68 to review the area in question. Keith explained that the limits of impact will be completely confined to the existing fill slope. Laura stated that although the fill slope is marginal habitat for CTS, CDFW would still require negative survey results to conclude absence of CTS at the site. Laura provided a copy of CDFW Inland Fisheries – Informational Leaflet No. 44 that describes survey methodologies for CTS. Laura noted that since only potential upland habitat for CTS occurs on the site, the nocturnal surveys described in the leaflet would be required. The surveys would need to be conducted between November and March (but could be finished in February).</p> <p>As an alternative to the surveys, we also discussed the potential for assuming presence of CTS and starting the 2081 Incidental Take Permit process. Jeff noted that assuming presence would require mitigating for the lost habitat; considering the low quality of the habitat, the County would probably only propose a 1:1 mitigation ratio. Laura said CDFW would likely support that</p>	<p>Laura to check with her supervisor re: assuming presence of CTS and the subsequent 2081 Permit process.</p>

approach. Laura said she would need to review this approach with her supervisor to determine if it was feasible, especially in regard to the schedule for obtaining a 2081 Permit.

We also discussed how USFWS has taken a different position than CDFW re: CTS for the project. Jeff stated that since USFWS and CDFW have different positions on the approach to dealing with CTS, the County would like to keep the approval paths for CDFW and USFWS separate. However, Jeff thought that if nocturnal surveys were conducted, USFWS would accept the results of these surveys in lieu of scoping the burrows with a fiber optic camera prior to construction.

Lisa asked Laura if she was concerned about the artificial pond on the south side of SR-68. Laura responded that since project impacts will be limited to the north side of SR-68 and the pond is outside of the impact area, aquatic surveys of the pond would not be required. The subject of whether SR 68 is a dispersal barrier to CTS was discussed; when asked her opinion Laura could not say absolutely that the highway acts as a barrier to CTS movement. Laura noted that, for instance, the highway did not include raised medians that would prevent CTS movement.

Laura reviewed the remainder of the impact areas to the east and determined surveys for CTS would only be required on the fill slope. While at the eastern extent of the project, we discussed the ephemeral drainage and the potential need for a 1602 Agreement. Keith stated that the project would not affect the drainage at all; the only work in this area would be minor pavement widening and installing a guard rail atop the existing box culvert. Laura stated that, as described, the project would not require a 1602 Agreement.

Note: *These minutes are the preparer's understanding of the items discussed at the meeting. If discrepancies or omissions are noted, please contact the preparer within three days of receipt.*

PREPARED BY: Jeff Bray

Appendix F CRLF and CTS Habitat Assessment

**CALIFORNIA RED-LEGGED FROG AND
CALIFORNIA TIGER SALAMANDER HABITAT
ASSESSMENT**

State Route 68/Corral de Tierra Intersection Improvement Project

Monterey County, California

Submitted to:

U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

Prepared by:

LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
San Luis Obispo, California 93401
(805) 782-0745

LSA Project No. WRS0605

LSA

April 2007

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INTRODUCTION

LSA Associates, Inc. (LSA) conducted a habitat assessment for California red-legged frog (*Rana aurora draytonii*) (CRLF) and California tiger salamander (*Ambystoma californiense*) (CTS) for the State Route 68 (SR-68)/Corral de Tierra Intersection Improvement Project (see Figure 1: Vicinity Map). The site is located in Monterey County, approximately seven miles east of Monterey (project site) and is situated within the *Spreckels* U.S. Geological Survey (USGS) 7.5 minute quadrangle (quad). The following habitat assessment was conducted according to the revised United States Fish and Wildlife Service (USFWS) protocol for CRLF and the interim guidance on site assessment and field surveys for determining presence or a negative finding of CTS (USFWS 2005, 2003). This report documents the findings of the habitat assessment.

The proposed project includes operational improvements to bring the intersection to an adequate level of service (LOS). The existing SR-68/Corral del Tierra Road intersection exhibits an evening peak hour LOS D. Both Caltrans and County planning documents cite LOS C as the standard for operations on SR-68. The purpose of the project is to improve traffic operations within the intersection to LOS C upon completion of project construction.

Three alternatives have been identified for planning purpose. The description of each alternative is detailed as follows:

Build Alternative 1: Project Build Alternative 1 consists of improving the SR-68/Corral de Tierra Road intersection as follows: (1) widening SR-68 by 3.6 meters (12 feet) on the north side for a distance of approximately 450 meters (1,476 feet) to the east of the Corral de Tierra Road intersection to accommodate a second SR-68 westbound turn lane to southbound Corral de Tierra Road and a left turn lane to the golf and tennis club driveway on the south side of SR-68; (2) widening SR-68 on the north side for a distance of approximately 250 meters (820 feet) west of the intersection with Corral de Tierra Road; (3) widening Corral de Tierra Road on the east side of the current alignment from the intersection with SR-68 for a distance of approximately 320 meters (1,050 feet) south to accommodate a second southbound receiving lane and lengthen the northbound turn lanes; (4) striping removal and replacement throughout the project limits; (5) potentially constructing drainage system improvements on the north side of SR-68; (6) potentially relocating the bus stop sign and bench currently located along the shoulder on the north side of SR-68 west of the church driveway if the bus stop is not relocated during the construction of the church driveway; and (7) relocating existing utilities located on the east side of Corral de Tierra Road.

The proposed operational improvements under Build Alternative 1 involve widening the SR-68/Corral de Tierra Road intersection to accommodate two westbound left-turn lanes (addition of a second lane from westbound SR-68 to southbound Corral de Tierra Road) and a left turn lane to the golf club driveway, and widening Corral de Tierra Road to accommodate a second southbound receiving lane.

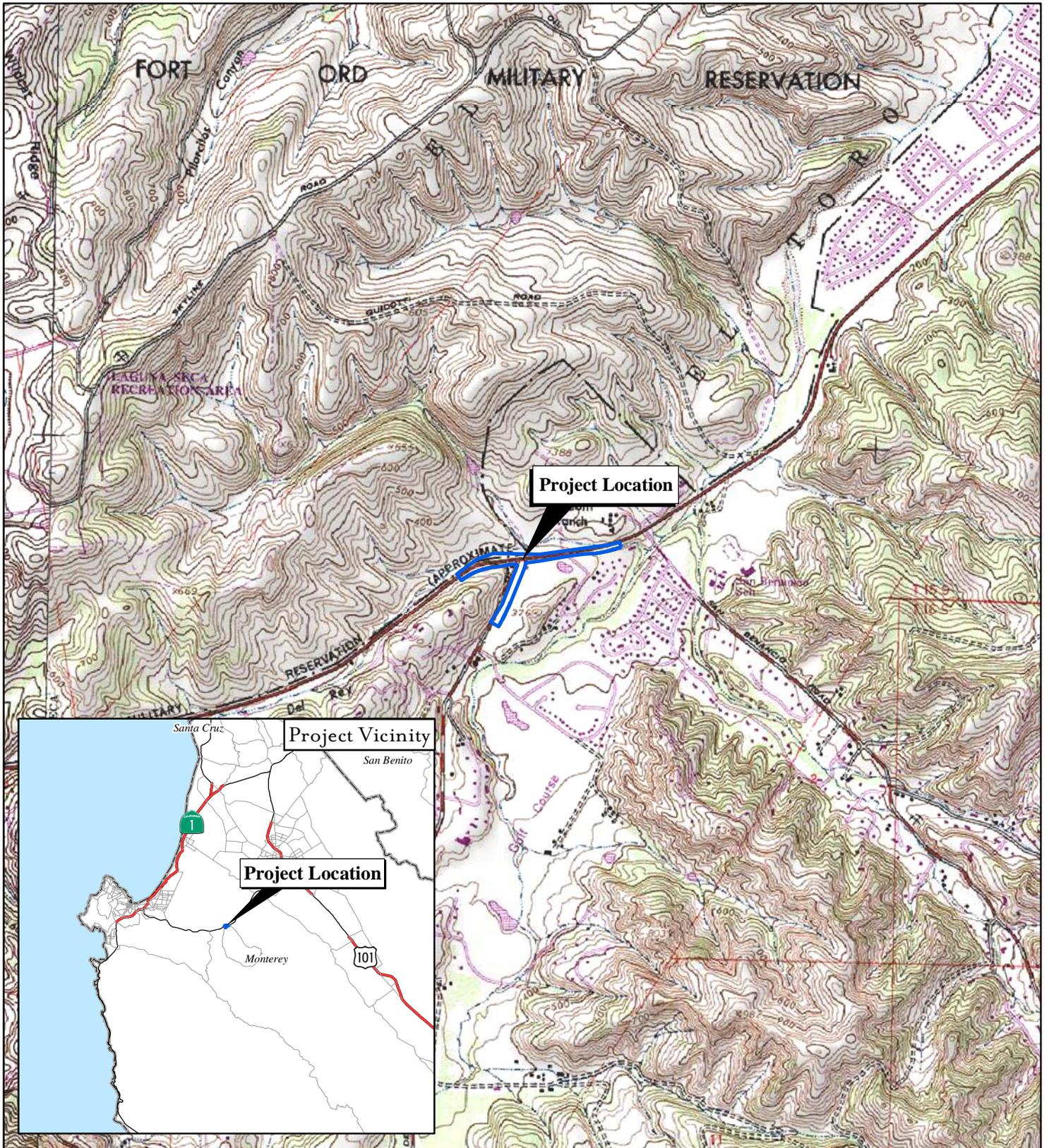
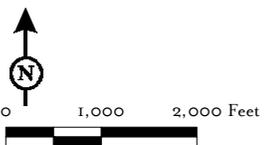


FIGURE 1

LSA



Corral de Tierra / SR 68 Interchange Expansion
Project Location Map

Build Alternative 2: Project Build Alternative 2 consists of improving the SR-68/Corral de Tierra Road intersection as follows: (1) widening SR-68 by 3.6 meters (12 feet) on the north side for a distance of approximately 320 meters (1,050 feet) to the east of the Corral de Tierra Road intersection to accommodate a second SR-68 westbound turn lane to southbound Corral de Tierra Road and a two-way left turn lane to the driveways on both sides of SR-68; (2) widening SR-68 on the north side for a distance of approximately 250 meters (820 feet) west of the intersection with Corral de Tierra Road; (3) widening Corral de Tierra Road on the east side of the current alignment from the intersection with SR-68 for a distance of approximately 320 meters (1,050 feet) south to accommodate a second southbound receiving lane and lengthen the northbound turn lanes; (4) striping removal and replacement throughout the project limits; (5) potentially constructing drainage system improvements on the north side of SR-68; (6) potentially relocating the bus stop sign and bench currently located along the shoulder on the north side of SR-68 west of the church driveway if the bus stop is not relocated during the construction of the church driveway; and (7) relocating existing utilities located on the east side of Corral de Tierra Road.

The proposed operational improvements under Build Alternative 2 involve widening the SR-68/Corral de Tierra Road intersection to accommodate two westbound left-turn lanes (addition of a second lane from westbound SR-68 to southbound Corral de Tierra Road) and a two way left turn lane for driveways, and widening Corral de Tierra Road to accommodate a second southbound receiving lane.

No Build Alternative: No new intersection or road improvements would take place under this alternative.

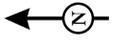
METHODS

LSA biologist Brooke Langle conducted a site visit of the proposed project area on February 1, 2007. The site assessment focused on the entire project area plus a radius of one and a half miles outside of the project area. This area will be referred to as the biological study area (BSA) for purposes of this document. The area that was assessed for suitable CRLF and CTS habitat included the project impact area, El Toro Creek and surrounding drainages, and other areas that were accessible within one and a half miles of the project site. Occurrence of CTS was considered within 3.1 miles of the project impact area (see Figure 2 Project Impact Area). A review of an aerial photograph (NAIP 2005) was conducted for areas within the one and a half mile radius where access was not possible. Additionally, past biological work conducted in the vicinity by LSA was reviewed. The fieldwork included foot, road, and aerial map surveys.

A California Natural Diversity Data Base (CNDDB) records search was conducted to find all known CRLF and CTS occurrences within the BSA. In addition to consulting LSA staff with knowledge of the area, California Department of Fish and Game biologist Mike Hill and Denise Duffy and Associates biologist Dave Keegan were contacted regarding their knowledge of sensitive species in the project area.



LSA



LEGEND

 Project Impact Area

FIGURE 2

Corral de Tierra / SR 68 Interchange Expansion
Project Impact Area

SOURCE: Aerial - NAIP (2005); Boundary - Wood Rodgers (2006)

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FINDINGS

Vegetation Communities

Vegetation communities and descriptions were classified and standardized using *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). Representative photographs of the survey area are provided in Appendix A.

Coast Live Oak Series

This series supports coast live oak trees (*Quercus agrifolia*) as the primary canopy species. It occurs in solid, closed-canopy stands and individually scattered throughout the area. In the dense stands, the understory has a thick duff layer and is comprised of nonnative grasses, such as ripgut brome (*Bromus diandrus*). Other stands and the areas with greater opening in the canopy support shrubs and other herbaceous plants.

Coast live oak is the most common tree species present in and around the BSA. The understory species include, but are not limited to, coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), deerweed (*Lotus scoparius*), wild oats (*Avena* sp.), miner's lettuce (*Claytonia perfoliata*), mustard, cat's tongue (*Plantago lanceolata*), scarlet pimpernel (*Anagallis arvensis*), bedstraw (*Galium* sp.), and coast wood fern (*Dryopteris arguta*). Some coast live oaks occur in or near the riparian areas within the BSA.

Arroyo Willow Series

This vegetation community is dominated by arroyo willows (*Salix lasiolepis*) in a dense closed-canopy, with occasional other tree species, such as coast live oak and sycamore (*Platanus racemosa*) occurring. This series is often found in wetland and/or drainage corridors, as is the case within the BSA.

Common plants occurring in the understory of this vegetation community within the BSA include poison oak, blackberry (*Rubus ursinus*), mugwort (*Artemisia douglasiana*), and stinging nettle (*Urtica dioica*). In more upland areas or in flattened areas surrounding the drainage channels, coyote brush is found.

Coyote Brush Series

The coyote brush series is often a densely formed, sole-shrub community. Co-dominants can be California sage (*Artemisia californica*), buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), and poison oak, with forbs and nonnative annual grasses occurring in the open areas between the shrubs.

Coyote brush occurs in several forms within the BSA: a sole dominant, a co-dominant within the arroyo willow series, and as occasional shrub on the fringe of the coast live oak woodlands. Poison oak is a common co-dominant within the BSA.

Eucalyptus Series

This vegetation community is dominated by a mature stand of eucalyptus (*Eucalyptus* sp.). The understory is sparse to non-existent due to the heavy amount of leaf, bark, and branch litter dropped by the trees, as is common with this series. In addition, eucalyptus oils are thought to have an allelopathic effect on surrounding plant species.

One stand of eucalyptus occurs within the area to be directly impacted by the proposed project. This stand is located on the northeastern portion of the area, roughly between the intersection and the driveway to the nearby church. The understory is sparse and consists of herbaceous nonnative plants including mustard (*Brassica* sp.), filaree (*Erodium* sp.), and milk thistle (*Silybum marianum*).

California Annual Grassland Series

This is an extensive series that is dominated by nonnative and native annual grasses, with a variety of herbaceous species occurring as occasional or co-dominant species.

Within the BSA, this vegetation community is found in the understory of the coast live oak woodland and in most open areas not dominated by trees or shrubs. The winter season hindered identification of most grass species, but wild oats and ripgut brome appear to be the dominant species with the BSA. Roadside edges and other disturbed areas with the BSA support ruderal type vegetation along with the grasses, including milk thistle, mustard, Italian thistle (*Carduus pycnocephalus*), California poppy (*Eschscholzia californica*), yellow star thistle (*Centaurea solstitialis*), horseweed (*Conyza canadensis*), common vetch (*Vicia sativa* ssp. *sativa*), and prickly lettuce (*Lactuca serriola*).

Chamise-Black Sage Series

This community can be described as an area dominated by dense shrubs species, including chamise (*Adenostoma fasciculatum*), ceanothus (*Ceanothus* spp.), California sage, poison oak, and buckwheat.

This series appears to occur in within the one and a half mile radius of the BSA. None of these areas were accessible during the survey (due to private property restrictions), but a review of the aerial photography of the site and similar occurring areas that were accessible outside of the BSA support this finding.

Habitat Types and Land Uses Within the Project Area

Vegetation communities within the project area are described above. The predominant vegetation community that would support CRLF or CTS in the project impact area is the arroyo willow series associated with the ephemeral drainage. The drainage itself will not be directly impacted by the proposed project. This area appears to carry flows during storm events and quickly dries out. No pools or ponded areas were observed in the drainage parallel to the project area. Other upland areas including the annual grassland and shrub areas may provide underground refugia for CTS and possibly for CRLF.

Developed areas that do not support plant life are present in within the project area and consist of paved roads, maintained road shoulders, and a small commercial area on either side of Corral de Tierra to the south of SR-68.

El Toro Creek and Tributaries

El Toro Creek is a perennial tributary to the Salinas River. El Toro Creek originates approximately 5.0 miles south of the project impact area. It is fed by several tributaries including Watson Creek, San Benancio Gulch, and Harper Creek. Once through the project area, El Toro Creek flows generally northeast before it joins the Salinas River approximately 5.0 miles downstream of the project area.

California Red-legged Frog

The site is within the historic range of CRLF. There are two records of CRLF within the *Spreckels* quad. One record is from the Las Palmas Ranch Development that occurred in 1995 and the second is an unverified record near the Las Palmas Ranch Development also from 1995. Neither of these records are in the CNDDDB. The Las Palmas Ranch Development record is 3.8 miles from the project impact area and the unverified report is 2.6 miles away. Protocol-level surveys for CRLF conducted in 2003 resulted in negative findings in the area immediately surrounding the project impact area, specifically near the intersections of Corral de Tierra and SR-68 and San Benancio Road and SR-68 (LSA 2003; DD&A 2003). Additionally, site visits of the immediate project area have not documented CRLF in the project vicinity (LSA 2003, 2006; DD&A 2001, 2002, 2005).

Aquatic habitat within the project impact area is limited to ephemeral flows in the west-to-east flowing tributary to El Toro Creek. At the time of the site visit, there was no flow present, even though there had been a recent storm event. Due to the sandy substrate, no pools or ponding were observed. El Toro Creek does support dense willow riparian vegetation that would be suitable for CRLF foraging or dispersal if they are present in the area. Upland refugia exists in the form of ground squirrel (*Spermophilus beecheyi*) burrows occurring on the road side and within the annual grassland areas.

Suitable aquatic and upland habitat exists in the BSA, including a pond on private property to the northeast of the project, a pond on the Rancho El Toro golf course to the south, a few pooled areas in the ephemeral drainage to the south of the project, and a stock pond within one mile of the project impact area that was not accessible during the survey but was visible on an aerial photograph.

A data sheet for CRLF per USFWS protocol requirements is provided in Appendix B.

California Tiger Salamander

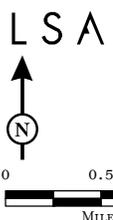
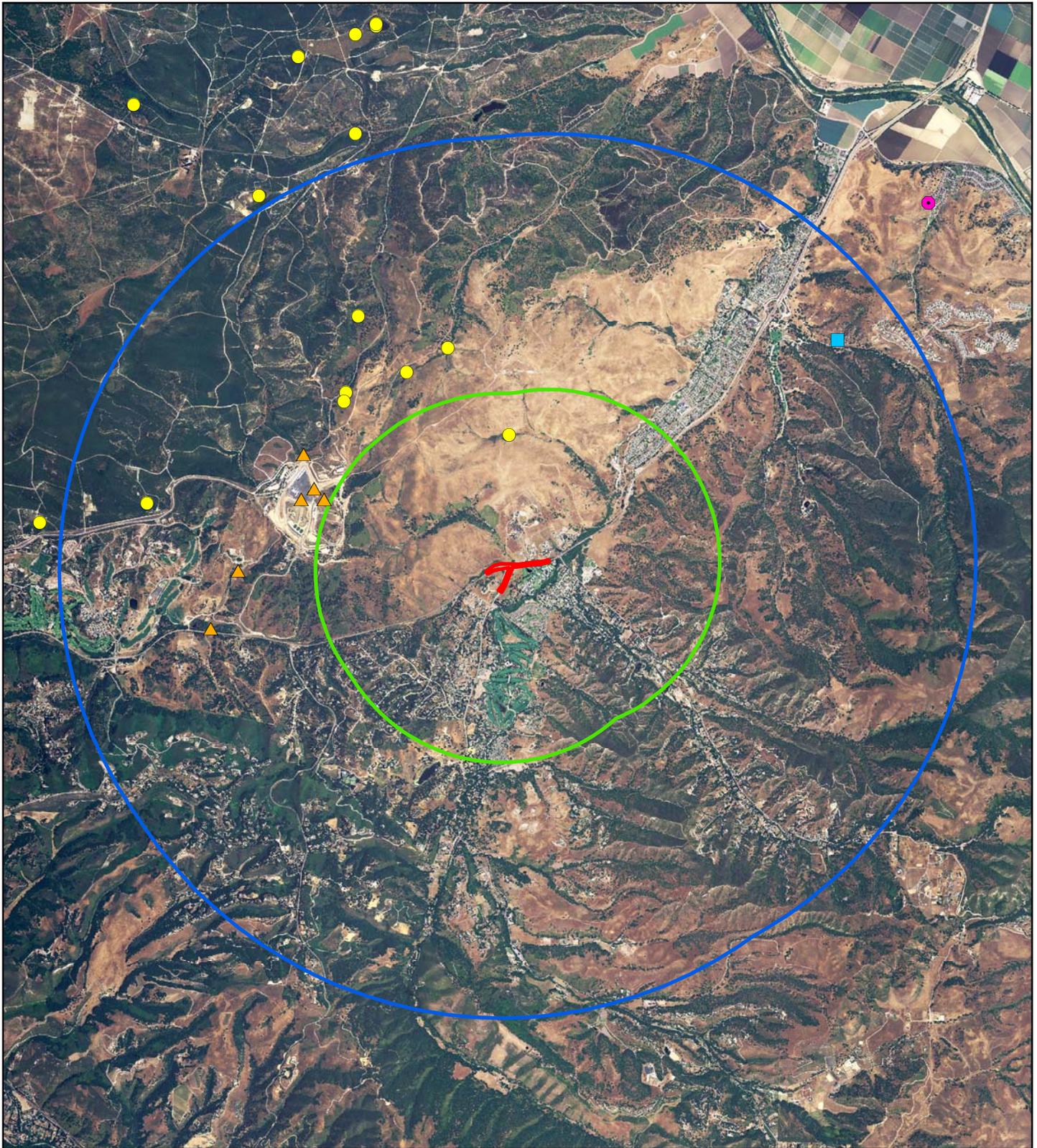
The site is within the historic range of CTS. There are no known occurrences within the project impact area, however, there are 12 known occurrences within 3.1 miles of the project boundary. The closest of these occurrences is less than 1 mile from the project impact area (see Figure 3: California Tiger Salamander and California Red-legged Frog Occurrences).

Suitable aquatic habitat exists in the areas surrounding the project (as described above for CRLF). Additionally, ground squirrel burrows in the upland areas within the project impact area may provide habitat for CTS. It should be noted that the grasslands on the north side of SR-68 provide suitable habitat for CTS. The numerous ponds scattered throughout these grasslands provide suitable breeding habitat that appear to support a sustainable population in this area.

SUMMARY

No occurrences of CRLF are documented in or near the project area. Habitat within the project area consists of an ephemeral drainage and associated upland areas. If CRLF were present in the area, they may utilize this area during rain events or wet periods as a travel corridor or to forage. There is potential aquatic habitat in the form of nearby ponds and the flows within El Toro Creek.

There are known occurrences of CTS within 0.91 mile of the project area. The closest occurrence is documented near the ponded area visible on aerial photos (CNDDDB record 751). Habitat within the project area consists of the grassland and ruderal communities with numerous ground squirrel burrows occurring within the upland areas surrounding the drainage. The more rugged lands south of SR-68 do not appear to provide suitable habitat as evidenced by the lack of CTS records.



LEGEND

- ▭ Project Impact Area
- ▭ 2 kilometer buffer
- ▭ 5 kilometer buffer

- CNDDDB California Tiger Salamander Occurrences
- ▲ Additional California Tiger Salamander Occurrences

- California Red-Legged Frog CRLF Occurrence
- Unverified CRLF Occurrence

FIGURE 3

*Corral de Tierra / SR 68 Interchange Expansion
California Red-Legged Frog and
California Tiger Salamander Occurrences*

SOURCE: NAIP (2005); Wood Rodgers (2006); Denise Duffy & Assoc. (01/2007)

I:\WRS0605\GIS\cts_and_crlf_occurrences.mxd (4/4/2007)

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- 2003. Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (*Ambystoma californiense*).

APPENDIX A

PHOTOGRAPHS



View northwest from State Route 68 (February 2007).



View west of ephemeral drainage below work area (February 2007).



View northeast El Toro Creek at State Route 68 overcrossing (outside project area) (February 2007).



Impact area: view northwest from State Route 68 west of Corral de Tierra (February 2007).

APPENDIX B

DATA SHEET

California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Site Assessment: 02/01/07
(mm/dd/yyyy)

Site Assessment Biologist: Langle, Brooke
(Last name) (first name)

Site Location: Monterey County, SR-68/Corral de Tierra Intersection UTM: 10 613932E 4048668N (NAD 27)

(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: State Route 68/Corral de Tierra Intersection Improvement Project
Brief description of proposed action:
Widen SR-68 in the area of the intersection with Corral de Tierra to improve traffic congestion.

- 1) Is this site within the current or historic range of the CRF (circle one)? **YES** NO
- 2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES **NO**
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION
(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND:

Size: No ponds on site Maximum depth: _____

Vegetation: emergent, overhanging, dominant species: _____

Substrate: _____

Perennial or **Ephemeral** (circle one). If ephemeral, date it goes dry: Unknown

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 8 feet
Depth at bank full: 2 feet
Stream gradient: Flat, to slight

Are there pools (circle one)? YES **NO**

If yes,

Size of stream pools: N/A

Maximum depth of stream pools:

Characterize non-pool habitat: run, riffle, glide, other: Run to glide during periods of flow; dry during fall and early winter

Vegetation: emergent, overhanging, dominant species: Arroyo willow dominant, intermixed Coast live oaks; poison oak co-dominant

Substrate: Sandy

Bank description: Small to indistinct bank in some areas, transition from dense riparian woodland to coyote brush scrub to open (grass cover).

Perennial or Ephemeral (*circle one*). If ephemeral, date it goes dry: Unknown

Other aquatic habitat characteristics, species observations, drawings, or comments:

See attached site assessment for further characterization of habitat, maps, and aquatic habitat description.

Appendix G Application for CTS 2081 Permit

**APPLICATION FOR 2081 PERMIT TO
AUTHORIZE INCIDENTAL TAKE OF
CALIFORNIA TIGER SALAMANDER**

**STATE ROUTE 68/CORRAL DE TIERRA ROAD INTERSECTION
OPERATIONAL IMPROVEMENTS**

MONTEREY COUNTY, CALIFORNIA

LSA

August 2010

**APPLICATION FOR 2081 PERMIT TO
AUTHORIZE INCIDENTAL TAKE OF
CALIFORNIA TIGER SALAMANDER**

**STATE ROUTE 68/CORRAL DE TIERRA ROAD INTERSECTION
OPERATIONAL IMPROVEMENTS**

MONTEREY COUNTY, CALIFORNIA

Submitted to:

Monterey County Resource Management Agency
Department of Public Works
168 W. Alisal St., 2nd Floor
Salinas, California 93901
(831) 755-4823

Prepared by:

LSA Associates, Inc.
1998 Santa Barbara Street, Suite 120
San Luis Obispo, California 93401
(805) 782-0745

LSA Project No. WRS0605

LSA

August 2010

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APPENDICES

A: DESIGN PLANS

STATE ROUTE 68/CORRAL DE TIERRA ROAD INTERSECTION OPERATIONAL IMPROVEMENTS APPLICATION FOR 2081 PERMIT¹ TO AUTHORIZE INCIDENTAL TAKE OF CALIFORNIA TIGER SALAMANDER

1. APPLICANT

Monterey County Resource Management Agency
Department of Public Works
168 W. Alisal St., 2nd Floor
Salinas, California 93901
(831) 755-4823
Contact: Yazdan T. Emrani, P.E.

2. SPECIES ACCOUNT

The requested permit is intended to authorize incidental take of California tiger salamander (*Ambystoma californiense*). The California tiger salamander (CTS) is a federally threatened species and a State candidate species. On March 3, 2010, the California Fish and Game Commission accepted a recommendation from the California Department of Fish and Game (CDFG) to designate CTS as State threatened; however, as of this writing, the regulatory language has not been completed so CTS remains a State candidate.

Critical habitat for CTS was designated by the United States Fish and Wildlife Service (USFWS) on August 23, 2005. The USFWS designated 199,109 acres of critical habitat in 19 counties for the central population.

CTS is not currently the subject of rules and guidelines pursuant to Section 2112 and Section 2114 of the California Fish and Game Code.

Status and Natural History

The CTS is a large fossorial salamander endemic to California (Petranka, 1998). The central California population of this species is listed as a federally threatened species. In 2000, the Santa Barbara County population was listed as federally endangered as a distinct population segment. In 2002, the Sonoma County population was listed as Federally Endangered on an emergency basis; in 2003, that listing was made permanent. Subsequently the Central California Distinct Population Segment of the CTS, which occurs in Solano County, was proposed for threatened status.

Adult salamanders are 75-125 millimeters in length and are jet-black, or dark brown, with white or yellow spots or bars (Stebbins, 2003). Larvae are 10.5 millimeters in length when hatched and vary from 41 to 78 millimeters at metamorphosis.

¹ This application was prepared in accordance with the California Code of Regulations, Title 14, Section 783.2.

The CTS occurs in grassland, oak woodland, and coastal sage scrub communities in the central Coast Ranges of California, from southern Solano County to eastern Kern County and in the Sierra Nevada foothills, from southern Sacramento County to northern Tulare County (Stebbins 2003). Adult CTS spend the majority of the year below ground in rodent burrows or other natural crevices (Twitty, 1941; Anderson, 1968; Feaver, 1971; Shaffer et. al., 1993). Individuals are most frequently observed in the vicinity of burrows of California ground squirrels (*Spermophilus beecheyi*) or Botta's pocket gophers (*Thomomys bottae*) (Shaffer et. al., 1993; Loredó et. al., 1996). The activity of CTS during the majority of the year in these burrows has not been well documented.

The adults become active above ground during nights with rains or high humidity conditions during the late fall through the early spring (Twitty, 1941; Anderson, 1968; Feaver, 1971; Shaffer et. al., 1993). Individuals can be observed on these nights crawling through the grass, sitting at or in the mouth of rodent burrows, or entering breeding ponds. After rainfall fills suitable breeding locations, such as stock ponds, vernal pools, or other similar aquatic features, the adult salamanders move into these sites. Jennings and Hayes (1994) report the species moves in nocturnal migrations over distances of 1,000 meters or more and there is a report of observations of adult CTS in locations up to 2 kilometers from suitable breeding and larval habitat. However, the results of a study conducted at the Jepson Prairie Preserve in Solano County, which consisted of placing drift fences with pit-fall traps at 10, 50, 100, 200, 400, and 800 meter intervals from the edge of a breeding pond (Trenham and Shaffer, 2004), indicated CTS typically migrate much shorter distances to breeding habitat. Capture data from this study suggest that 95 percent of subadult and adult salamanders live within 640 meters of the pond. As anticipated captures of adults declined steadily away from the breeding pond but captures of subadults increased from 10-meters to 400-meters and declined to zero at 800 meters.

Males have been found to arrive in larger numbers first and to remain in the ponds for longer periods of time (Twitty, 1941; Loredó and Van Vuren, 1996; Trenham et. al., 2000). It has been postulated that males arrive earlier and stay longer to maximize breeding success, while females may maximize reproductive success by waiting for a prolonged period of favorable environmental conditions (Douglas, 1979; Loredó and Van Vuren, 1996).

As with most ambystomid salamanders, males leave spermatophores for the females to pick-up for fertilization of eggs (Twitty, 1941). After fertilization, breeding females grasp vegetation, usually wholly to partially submerged grass, sticks, or roots, with hind legs to lay eggs singly or in small groups of two to five (Twitty, 1941; Anderson, 1968). The number of eggs laid per female ranges from 400 to 1300 (Trenham, 1998; Trenham et. al., 2000). Where vegetation is not available, females may lay eggs on rocks, or other detritus on the pool bottom (LSA observations). Eggs hatch in 10-14 days (Anderson, 1968). Upon leaving breeding sites, adult CTS have been observed to travel at least 130 meters before entering rodent burrows (Loredó et. al., 1996).

Larvae require between 6.5-12 weeks before metamorphosing into juveniles (Anderson, 1968; Feaver, 1971). Young and small larvae feed mainly on small invertebrates, such as ostracods and copepods, and algae. As larvae grow, they appear to become more carnivorous eventually feeding on amphibian larvae, including their own species, and larger invertebrate species, such as water beetles and backswimmers (Anderson, 1968; Feaver, 1971). Size and age at metamorphosis varies (41-78 millimeters according to Trenham (2000), but is dependent on diet, pond age, pond temperature, and pond depth (Anderson, 1968). Metamorphosis usually coincides with the drying out of larval habitats

(Anderson, 1968; Feaver, 1971; Ahl, 1991; Loredo and Van Vuren, 1996; Trenham et. al., 2000). Juvenile CTS have been observed to move up to 60 meters in an evening upon leaving a pond, eventually seeking shelter in rodent burrows or cracks in the soil (Loredo et. al., 1996). Whether the juveniles remained in these locations after the first night was not determined (Loredo et al., 1996).

CTS require between 2 and 6 years to reach maturity (Loredo and Van Vuren, 1996; Trenham et. al., 2000) and can live in excess of 10 years (Trenham et. al., 2000). The diet of adult salamanders has not been studied but can assume to be similar to other ambystomids and include insects, worms, and other invertebrates. Adults have been observed feeding on earthworms while in burrows during the winter (LSA observation).

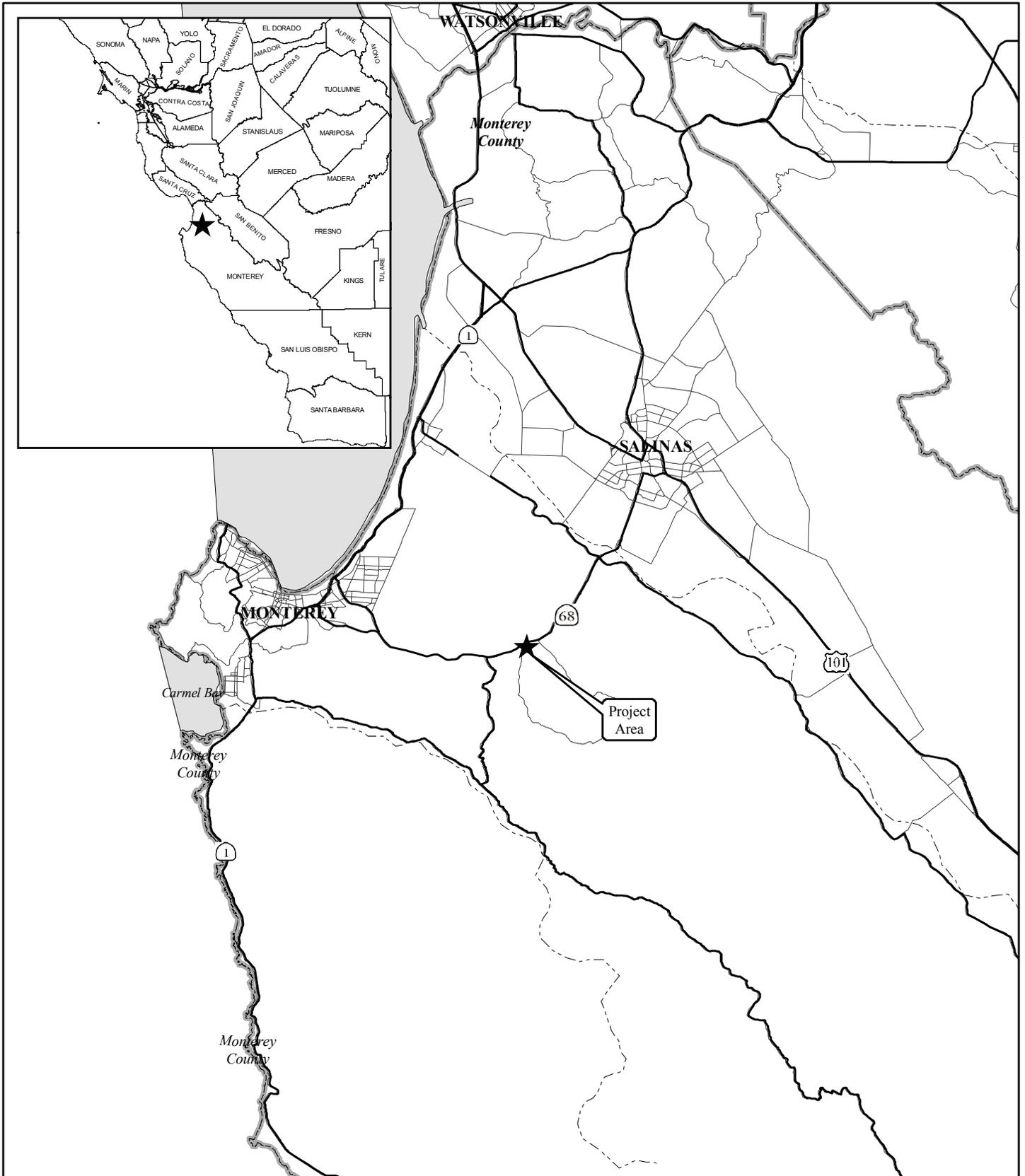
Adult CTS inhabit rodent burrows or other natural crevices located in grassland, coastal sage scrub, or deciduous oak woodland communities (Shaffer et. al., 1993). These communities must have seasonal or fishless natural ponds, vernal pools, intermittent streams, or stock ponds, for breeding and the survival of larvae, in order to support a viable population of CTS (Twitty, 1941; Anderson, 1968; Feaver, 1971; Shaffer et. al., 1993). The species is not usually found in an area unless there is this combination of ponded water and surrounding upland, with a predominant ground cover of grazed or sparse grasses (LSA observation).

Salamander larvae occur in natural ponds, vernal pools, intermittent streams, or stock ponds in grassland habitats during the winter, spring, and early summer (Twitty, 1941; Anderson, 1968; Feaver, 1971; Shaffer et. al., 1993). Suitable larval habitat generally has little to no current and lacks fish species (Twitty, 1941; Anderson, 1968; Feaver, 1971; Shaffer et. al., 1993). Larvae may occur in either clear or turbid water and in pools that are both devoid of vegetation and contain dense aquatic growth (Shaffer et. al., 1993). The adults occasionally breed in locations that are not suitable for the survival of larvae (LSA observation).

While this species is typically considered a vernal pool species, the species also extensively uses stock ponds for breeding and, in many areas, rely on these artificial habitats as their primary breeding/larval habitat. The adults and juveniles inhabit upland habitats, primarily non-native grasslands, for the majority of their life. Adult and juvenile salamanders can be found up to 1.3 miles from a breeding pond. In Solano County, recent studies have demonstrated that about 95 percent of the adult and juvenile population occurs within about 2,200 feet (0.4 mile) of their breeding sites; therefore, habitat for the CTS extends well beyond the aquatic breeding habitat.

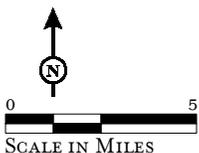
3. PROJECT DESCRIPTION

The proposed intersection improvements will extend along State Route 68 (SR-68) approximately 925 feet west of Corral de Tierra Road and 1,435 feet east of Corral de Tierra Road (Figures 1 and 2). The proposed project would widen the SR-68/Corral de Tierra Intersection to the north of the existing alignment to accommodate the construction of a second (additional) left turn lane from westbound SR-68 onto southbound Corral de Tierra Road. Both of the left turn lanes (in the median of SR-68)



LSA

FIGURE 1



SOURCE: U.S. CENSUS BUREAU TIGER 2K (2002)
 F:\Wrs0605\gis\2081_fig1-cts_loc_map.mxd (9/23/09)

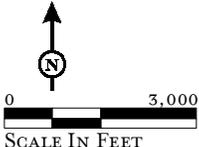
*SR-68/Corral De Tierra Road
 Intersection Improvements
 05-MON-68 PM 12.95
 Regional Location Map*



LSA

FIGURE 2

Legend
 Project Area



*SR-68/Corral De Tierra Road
 Intersection Improvements
 05-MON-68 PM 12.95
 USGS Location Map*

would have sufficient length to accommodate deceleration from 53 miles per hour. An additional receiving lane would also be constructed on southbound Corral de Tierra Road.

Approximately 475 feet of Hilfiker "Welded Wire Wall" (or equivalent) will be constructed west of Corral de Tierra Road along the north embankment of SR-68. The retaining wall will minimize the footprint of the embankment needed to accommodate the widened road section.

A left turn lane would also be constructed from westbound SR-68 into the golf and tennis club driveway located east of Corral de Tierra Road on the south side of SR-68. No provision for left turns to or from the residential driveway on the north side of SR-68 would be made. A separate project will realign the driveway to the Cypress Community Church as the north leg of the Corral de Tierra Road intersection.

The proposed project is shown in the Design Plans in Appendix A.

All of the work will be constructed within existing State and County right-of-ways, and staging areas will be required in a few locations within these areas.

Temporary staging areas will be located in those areas of the temporary construction easements that are not designated as Environmentally Sensitive Areas (ESA).

Construction is expected to be completed in a single season, approximately June 2011 through October 2011.

Project Impacts

Figure 3 shows the limits of work. The only permanent impacts/disturbance resulting from the project will be to ruderal/disturbed vegetation on the existing SR-68 fill slope, totaling 0.16 ac. The project will also result in temporary impacts/disturbance to 0.56 acre of ruderal/disturbed vegetation due to minor grading along the road shoulders.

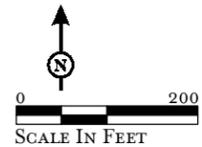
4. PROJECT LOCATION

The proposed project includes operational improvements at the SR-68 and Corral de Tierra Road intersection in an unincorporated area of northern Monterey County. The proposed project is located approximately 9 miles west of the City of Salinas and 13 miles east of the City of Monterey (Figures 1 and 2).



LSA

FIGURE 3



Legend

-  Project Area
-  Limits of Impact to CTS Upland Habitat (0.16 ac)
-  ESA Fencing

Approximate Work Limits

-  Permanent
-  Temporary

5. TAKE ANALYSIS

Status of CTS in the Project Area and Vicinity

The site is within the historic range of CTS and within the area designated as the Central Coast Range population. There are no known occurrences within the project area. There are 12 known occurrences within 3.1 miles of the project area with the closest occurrence approximately 0.9 mile to the north (Figure 4).

The closest critical habitat is Unit 3 – Central Coast Region, located approximately 14 miles southeast of the project area (Figure 5).

There is no suitable aquatic habitat for CTS in the project area, but suitable aquatic habitat (i.e., a seasonal pond) is known to be used by CTS occurs approximately 0.9 mile north of the project area. In addition, a second seasonal pond occurs approximately 0.3 mile northeast of the project area, though it is not known if CTS utilize this pond (Figure 6). No suitable habitat was identified south of SR-68.

Impacts to CTS

In the project area, the coyote brush community and the ruderal/disturbed vegetation on existing SR-68 fill slope could provide suitable upland habitat for CTS due to the presence of ground squirrel and other rodent burrows that could be used as refugia during estivation. Impacts to CTS habitat from project construction will be limited to the existing fill slope (Figure 3).

The potential CTS upland that will be impacted by the project is low quality since the habitat consists of an existing road fill slope for SR-68 and due to the location adjacent to a major roadway (i.e., SR-68). The fill slope was constructed in 1993 so there has been a relatively short period of time (i.e., 17 years) for CTS to become established.

The project will only result in permanent impacts to the existing ruderal vegetation on the fill slope, totaling 0.16 ac; improvements will not extend into the adjacent coyote brush community. Although the upland habitat on the fill slope is low quality, since suitable burrows are present, CTS could potentially occur in this area and be impacted by project construction. Widening of SR-68 to the north onto the existing fill slope could injure or kill CTS if any individuals are present in burrows during construction. It is expected that few, if any, CTS are likely to utilize the fill slope due to the low quality habitat; as a result, take of CTS, if any, would be minimal.

A Status Review of the California Tiger Salamander (*Ambystoma Californiense*), prepared by CDFG and dated January 11, 2010, states that estimating population sizes for CTS is difficult and no standard exists for conducting such a measurement. Available data suggests that most populations consist of relatively small numbers of breeding adults, typically ranging from a few breeding pairs to a few dozen breeding pairs (Shaffer et al. 1993, Jennings and Hayes 1994).

The number of CTS to be taken during project construction was estimated based on the quantity of suitable habitat that will be lost compared to the quantity of suitable habitat present, and also the proximity of the impacted habitat to the nearest known breeding pond.

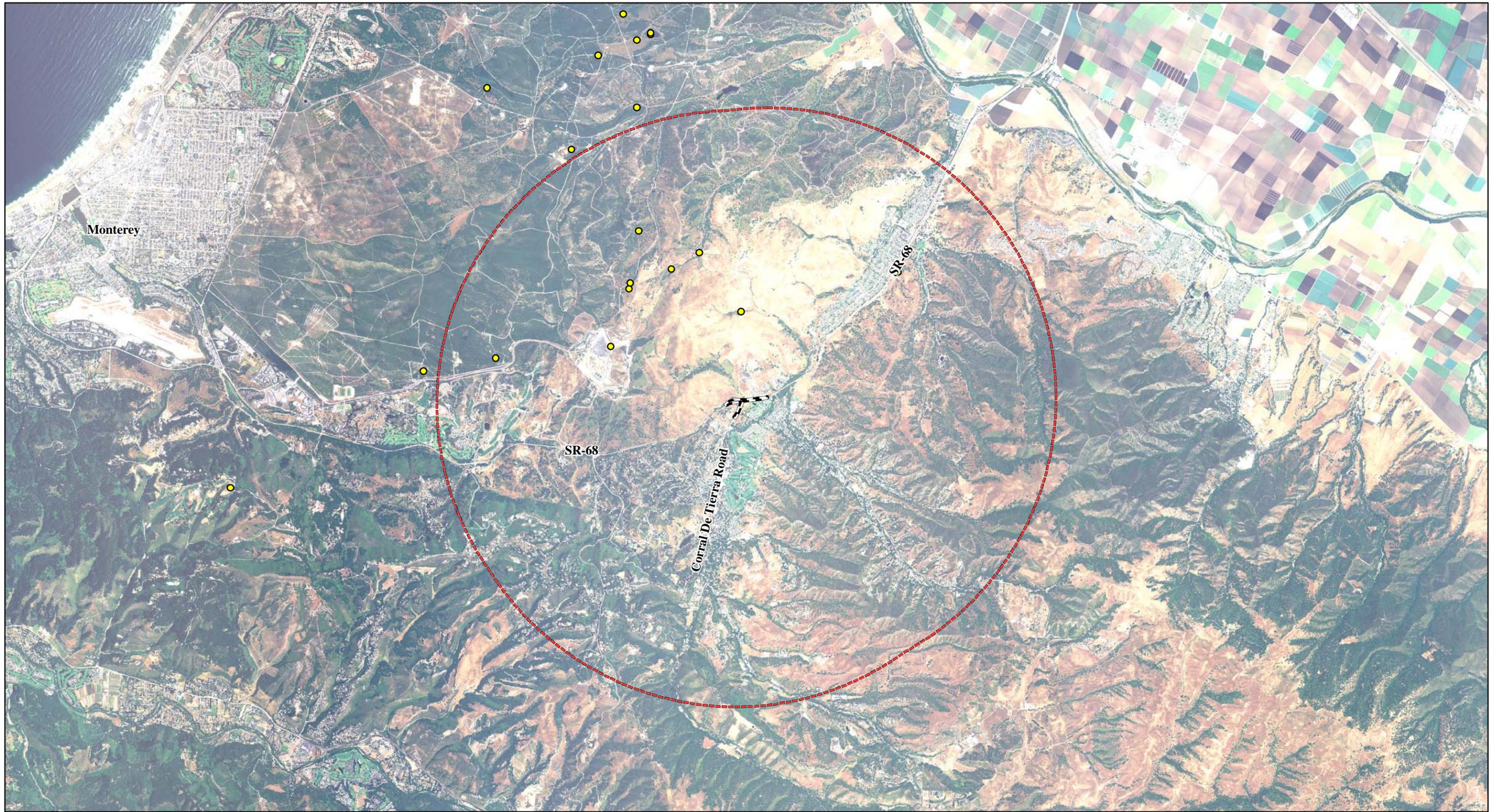
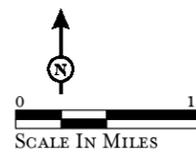


FIGURE 4

LSA



Legend

-  Project Area
-  3.1-Mile Radius
-  *Ambystoma californiense*

*SR-68/Corral De Tierra Road
Intersection Improvements
05-MON-68 PM 12.95*

CTS CNDDDB Occurrences - 3.1-Mile Radius

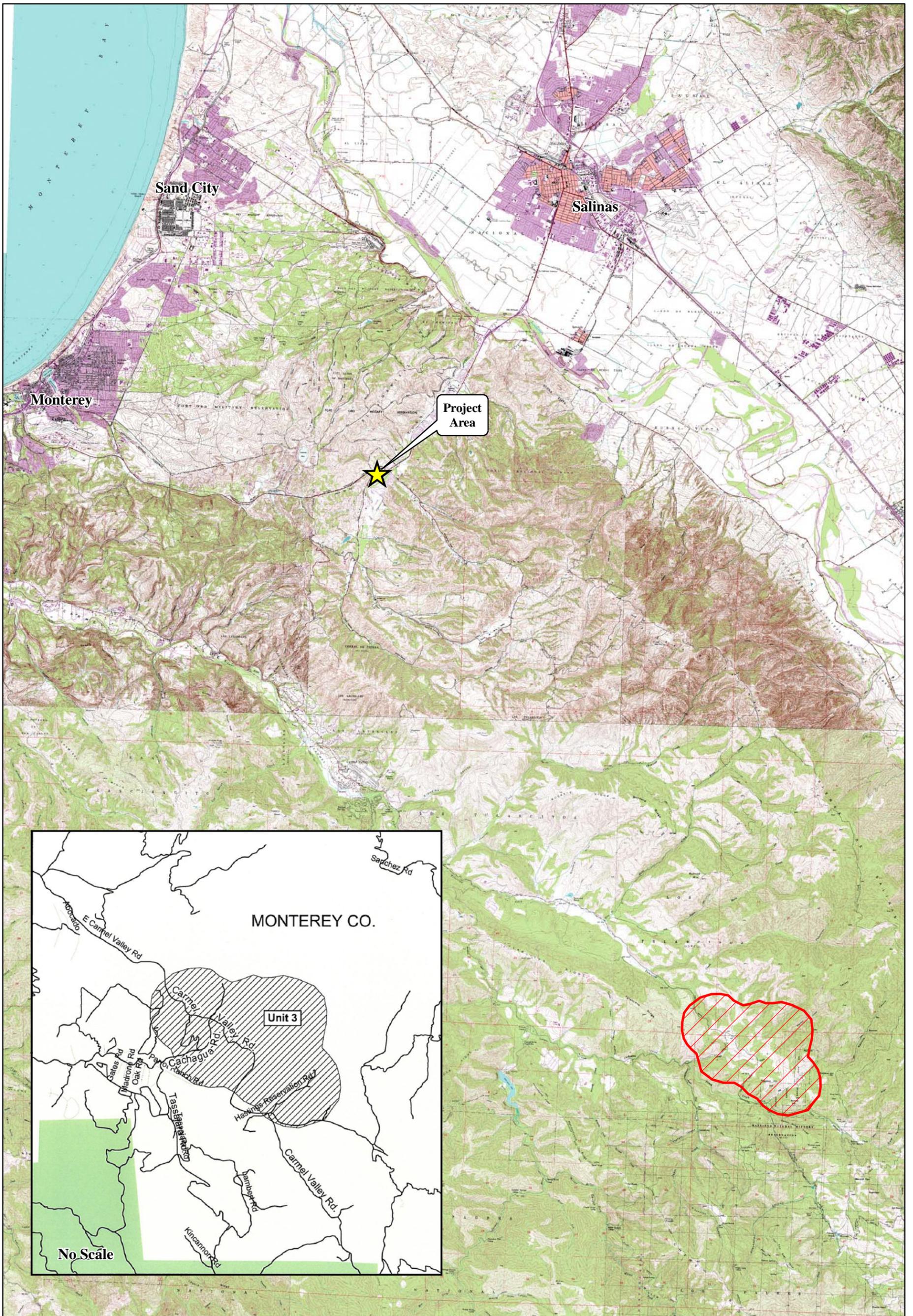
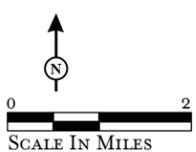


FIGURE 5

LSA



Legend

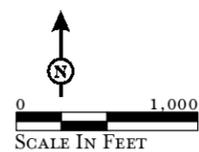
 CTS Final Critical Habitat Unit 3 (8/09/05)

SR-68/Corral De Tierra Road
Intersection Improvements
05-MON-68 PM 12.95

CTS Critical Habitat Unit 3 - Central Coast Region



LSA



Legend

-  Project Area
-  Stock Ponds

FIGURE 6

SR-68/Corral De Tierra Road
Intersection Improvements
05-MON-68 PM 12.95
Stock Pond Locations

The CTS status review (CDFG 2010) states that using a 1.3 mile radius around a known breeding pond is an accepted method of estimating the area of CTS upland habitat. Using this approach, approximately 3,391 ac of upland habitat can be present around a breeding site. Considering that the project will impact 0.16 ac of marginal upland habitat, this equates to less than 1 percent of the total upland habitat potentially available. Furthermore, the project is located approximately 0.9 mile from the nearest known breeding pond, which is at the outer limits of the known migration distance for CTS. Considering this information and the low quality of the habitat, it is unlikely that more than 1 or 2 individual would be present on the fill slope and thus be taken during project construction.

Temporary impacts to ruderal/disturbed vegetation, totaling 0.56 ac, on the road shoulders will not affect CTS as these areas do not provide suitable habitat for this species due to the extreme disturbance and lack of burrows.

6. ANALYSIS OF PROPOSED TAKE ON CALIFORNIA TIGER SALAMANDER

The primary threat to CTS include:

- Widespread habitat loss and habitat fragmentation
- Non-native invasive species (i.e., bullfrogs (*Rana catesbeiana*), Louisiana red swamp crayfish (*Procambarus clarkii*), and non-native fishes)
- Burrowing-mammal control programs
- Vehicular related mortality
- Hybridization between CTS and an introduced congener, *Ambystoma tigrinum* (introduced as fishing bait)

The project only constitutes a potential threat to CTS as a result of habitat loss. None of the other threats are relevant to the proposed project. The project, while resulting in the loss of potential CTS habitat, will not fragment habitat since the impacts will be located adjacent to an existing roadway. Although it would appear the project could increase vehicular related mortality of CTS, the project will improve the efficiency of vehicle use on SR-68 but will not increase the capacity to allow a greater number of vehicle to use on SR-68. In addition, there are currently no records of CTS road kill along SR-68 in the vicinity of the project, indicating a strong likelihood that CTS do not regularly cross SR-68.

Theobald (2005), in the CTS status review (CDFG 2010), estimated the potential loss of CTS habitat from urban/suburban and exurban growth through 2020 to be 30 percent, or 388,243 ac of 1,279,048 ac of CTS habitat currently available. As noted above, the project will impact 0.16 ac, less than 1/10,000 of a percent of the estimated loss of CTS habitat over the next 10 years.

Based on this information, the take of CTS associated with this project is minimal compared to the take of CTS across its range.

7. JEOPARDY ANALYSIS

Common causes of amphibian population declines include habitat destruction and alteration, global environmental change, disease, contaminants and introduced species (Sparling et al. 2003). For CTS in particular, declines are strongly associated with surrounding urban and agricultural habitat use (Davidson et al. 2002). Accordingly, the loss of habitat for CTS, in addition to these other factors, will result in reductions in the CTS population.

In addition to the common types of development that result in loss or fragmentation of CTS habitat, such as residential and commercial development, roadway construction, and agricultural practices, the CTS status review (2010) notes that several new reservoirs, or expansion of existing reservoirs, are planned that will eliminate a number of CTS localities.

As noted above, the project would only impact CTS as a result of habitat loss; it would not contribute to other identified causes for CTS decline. Furthermore, the amount of habitat loss is minimal and of low quality.

Based on the information provided herein, implementation of the project will not jeopardize the continued existence of CTS.

8. MITIGATION

Proposed Minimization Measures

Fencing shall be installed around the perimeter of the work area in CTS habitat to prevent encroachment into adjacent lands.

Prior to construction, measures shall be implemented to survey suitable burrows and relocate any CTS present to avoid direct mortality. Surveys shall be limited to the CTS habitat on the existing fill slope that will be impacted during project construction.

Proposed Compensatory Measures

As noted above, the potential CTS upland habitat that will be impacted by project construction is low quality since it consists of an existing road fill slope for SR-68 (built in 1993) and due to the location adjacent to a major roadway (i.e., SR-68). Since the habitat quality is low, CDFG concurred that a 1:1 mitigation ratio would be adequate to compensate for the loss of habitat (Petersen-Diaz, CDFG, pers. comm.).

In order to compensate for the loss of 0.16 acre of CTS upland habitat, a total of 0.16 acre of mitigation credits shall be purchased from the Ohlone Preserve Conservation Bank. The project is not located within the service area for the Ohlone Preserve Conservation Bank; the project is approximately 20 miles west of the service area boundary (Figure 7). However, the service area boundary for the Ohlone Preserve Conservation Bank encompasses the eastern portion of the Central Coast Range population of CTS and the boundaries of this population encompass the project area. Consequently, this compensatory mitigation will benefit the same CTS population that will be impacted by the project.

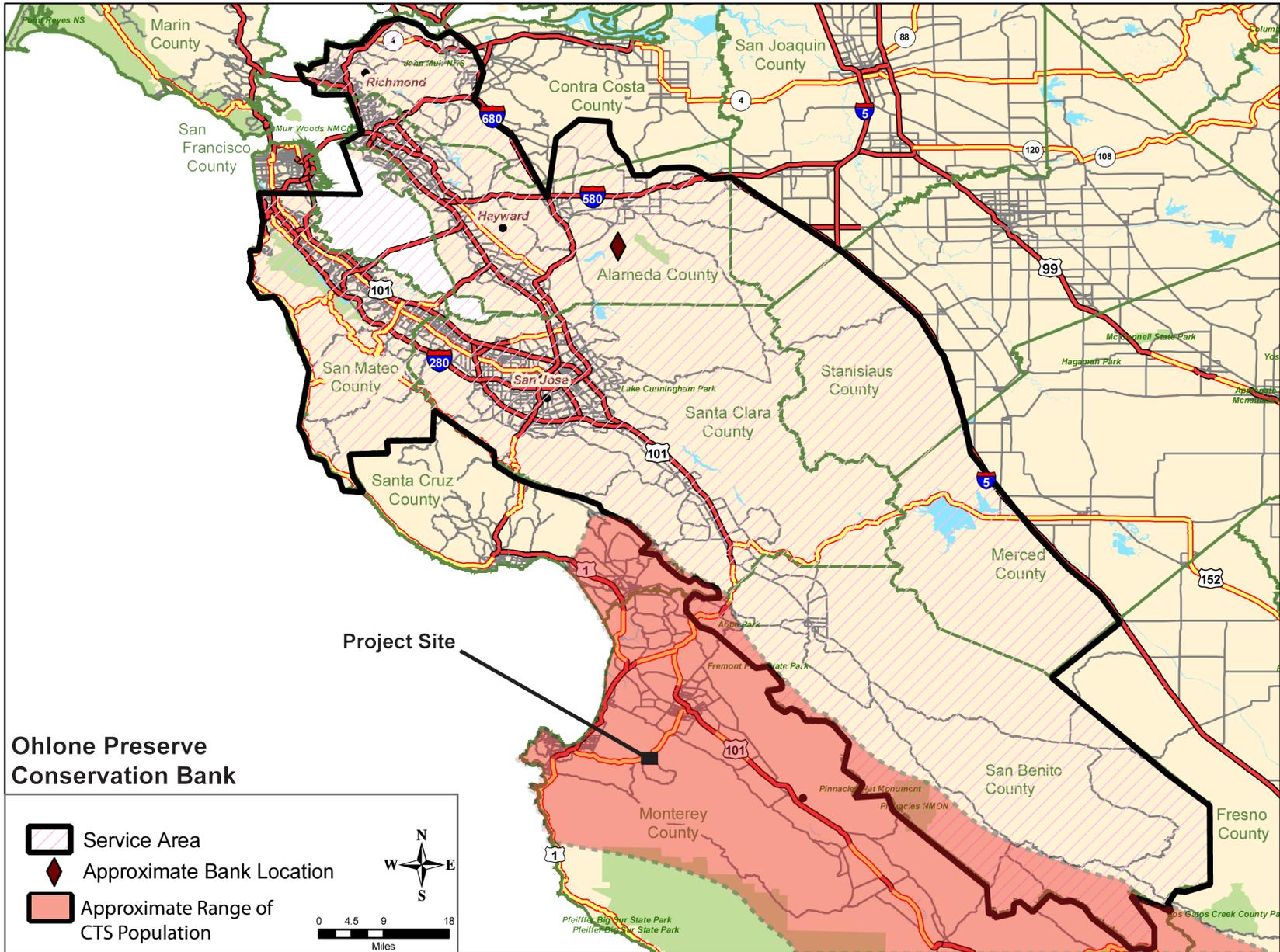


FIGURE 7

SR-68/Corral De Tierra Road
 Intersection Improvements
 05-MON-68 PM 12.95

Ohlone Preserve Conservation Bank Service Area

Considering the small area of low quality CTS upland habitat that will be impacted by the project, 0.16 ac, the purchase of credits at the Ohlone Preserve Conservation Bank will be substantially more ecologically valuable than the habitat that will be impacted.

The cost of CTS upland habitat credits at the Ohlone Preserve Conservation Bank is \$45,000/acre. The cost for 0.16 acre (rounded up to 0.2 acre) will be \$9,000. The bank currently has 0.1 acre of CTS upland habitat credits available with additional credits expected to be available by December 2010.

9. COMPLIANCE MONITORING PLAN

The County has prepared an Initial Study/Mitigated Negative Declaration for this project. A Mitigation Monitoring and Reporting Program (MMRP) has been developed which outlines all of the mitigation measures for the project, including those provided in this permit application. The County will implement the MMRP and ensure all mitigation measures are adhered to.

10. FUNDING SOURCE

To guarantee funding for the compensatory mitigation described above, the County will place \$9,000 in an escrow account until additional CTS upland habitat credits are available at Ohlone Preserve Conservation Bank (expected December 2010), at which time the County will purchase the necessary credits as describe above. The County will provide CDFG with a receipt showing the appropriate funds were deposited into the escrow account.

11. CERTIFICATION

I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.

Yazdan T. Emrani, P.E.
Directory of Public Works

Date Signed

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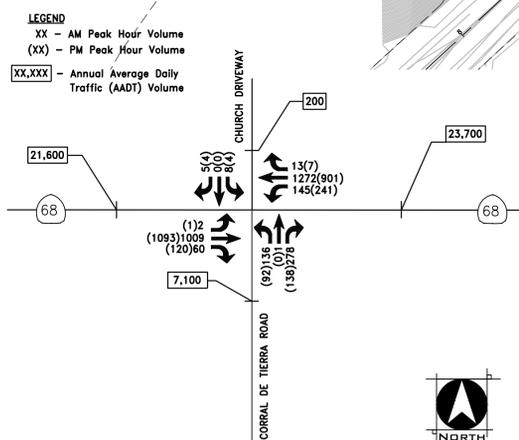
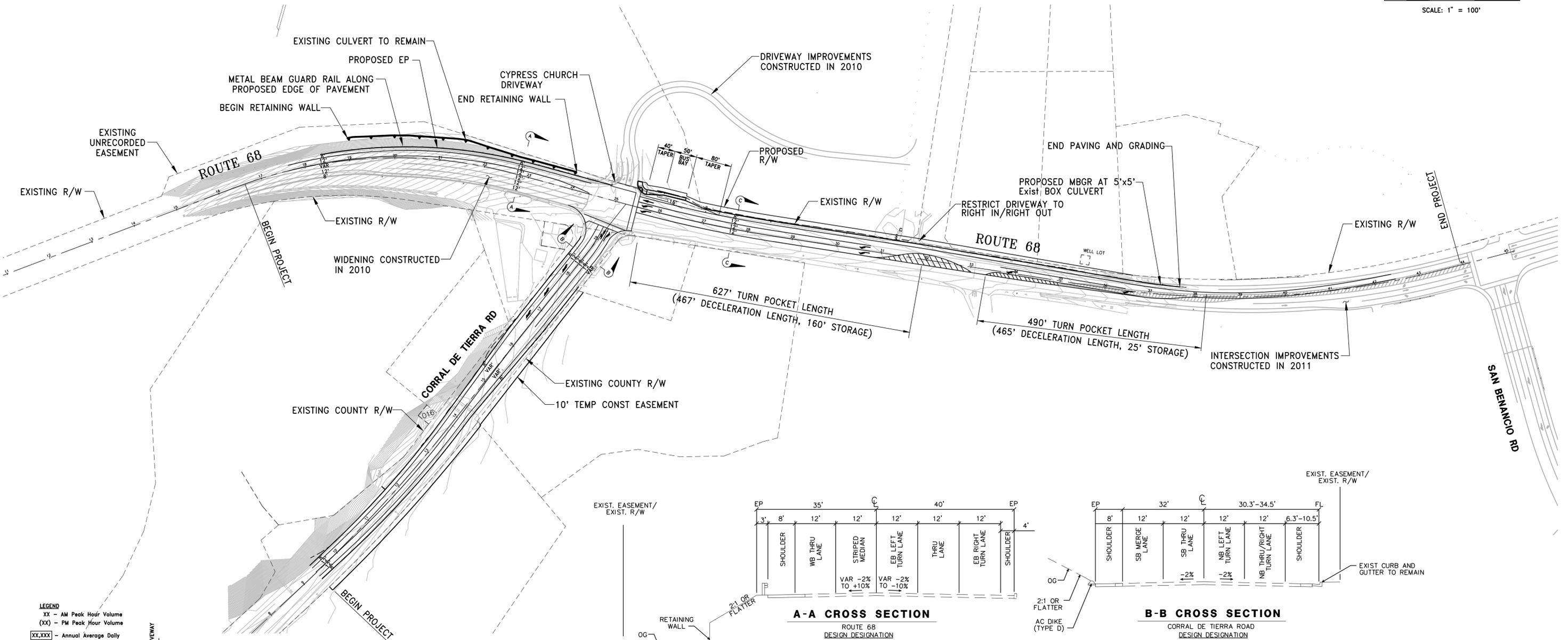
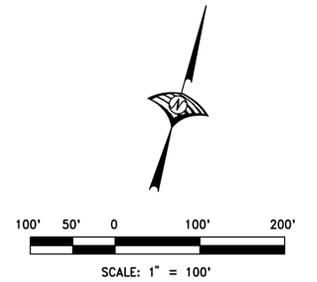
APPENDIX A
DESIGN PLANS

ROUTE 68/CORRAL DE TIERRA ROAD INTERSECTION IMPROVEMENTS

BUILD ALTERNATIVE

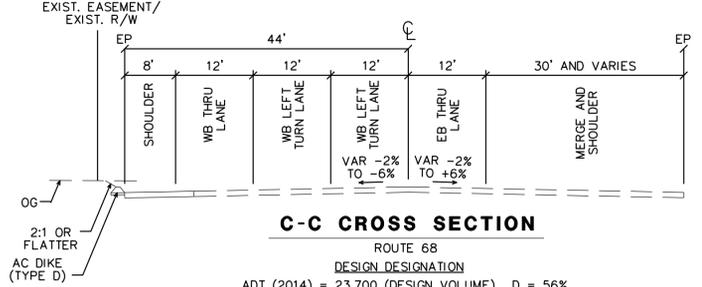
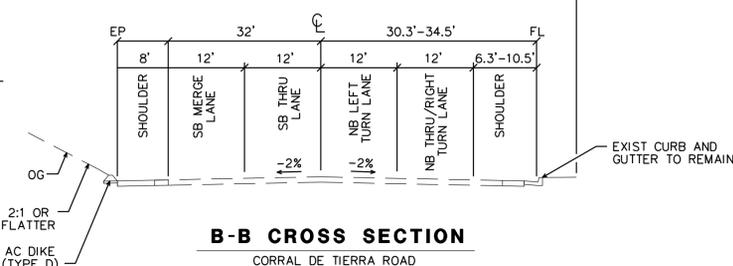
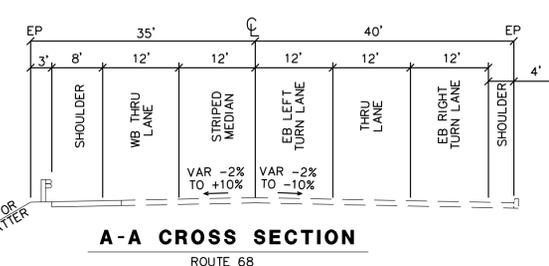
COUNTY OF MONTEREY CALIFORNIA

JANUARY, 2013



*NOTE: This volume scenario does not include traffic volumes from the proposed Shopping Center on the south-east quadrant of the project intersection.

TRAFFIC DESIGN VOLUME YEAR 2014



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Appendix H Revegetation Guidelines

Revegetation Guidelines for the Corral de Tierra Road Intersection Operational Improvement Project

These guidelines have been prepared to outline the revegetation strategy to be implemented by the County of Monterey for impacts native vegetation that will occur during implementation of the SR-68/Corral de Tierra Road Intersection Operational Improvement project.

Hydroseed Mix

Hydroseed shall be applied to all graded or otherwise denuded areas resulting from project construction. The following hydroseed mix is an example of a native species mix that should be used to revegetated these disturbed areas.

Scientific Name	Common Name	Rate (Lbs./Acre)	Minimum Percent Germination
<i>Artemisia douglasiana</i>	Mugwort	2.0	50
<i>Baccharis pilularis</i>	Coyote brush	1.0	40
<i>Bromus carinatus</i>	California brome	4.0	80
<i>Elymus X triticum</i>	Regreen	10.0	80
<i>Eschscholzia californica</i>	California poppy	2.0	70
<i>Lupinus bicolor</i>	Miniature lupine	4.0	80
<i>Lupinus succulentus</i>	Arroyo lupine	4.0	80
<i>Scrophularia californica</i>	Figwort	0.5	40
<i>Stachys bullata</i>	Hedge nettle	0.5	50