Alameda County Resource Conservation District

Voluntary Local Program

July 6, 2012

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1. Introduction

This Voluntary Local Program (VLP or Program) is entered into between the Alameda County Resource Conservation District (ACRCD), working as the Program Administrator, and the Department of Fish and Game (Department) as authorized by the Department's Voluntary Local Program regulations (Cal. Code Regs., tit. 14, § 786), which implements Article 3.5. Incidental Take Associated with Routine and Ongoing Activities section 2086 *et. seq*. of the California Endangered Species Act (CESA).

This is a voluntary program that recognizes the unique and important role that private landowners in California play in wildlife and habitat enhancement. The purpose of this Program "is to encourage farmers and ranchers engaged in agricultural activities to establish locally designed programs to voluntarily enhance and maintain habitat for endangered and threatened species." (Cal. Code Regs., tit. 14, § 786.0 (a).). These activities are to be carried out on public and private lands while providing take authorization as a result of conservation efforts to increase numbers of, and habitat for, special status species on their lands.

Under the VLP, take of State endangered, threatened, or candidate[1] species covered by the VLP and incidental to routine and ongoing agricultural activities is not prohibited by Division 3, Chapter 1.5 of the Fish and Game Code, as long as the take arises from routine and ongoing agricultural activities incorporating management practices covered under the Program. In no case will authorized take include take of fish species that are a member of the class Osteichthyes. The ACRCD and the Department recognize that these management practices when successful will increase the number of individuals of candidate, threatened and endangered species in proximity to farms and ranches.

This Program is intended to protect farmers and ranchers from legal liability for take that may result from their voluntary participation in this VLP. This Program specifically addresses liability for take under the California Endangered Species Act and does not necessarily satisfy any other legal requirements. For example, entities proposing projects or practices that are subject to Fish and Game Code Section 1602 must still notify the Department in accordance with Section 1600 of the California Fish and Game Code; the components of an agreement entered into pursuant to the VLP may or may not coincide with any conditions of any required Lake or Streambed Alteration Agreement.

The VLP will assist landowners who wish to restore and enhance the condition of the natural resources on their property by providing technical assistance to these landowners. This Program will help achieve important water quality and habitat conservation goals in Alameda County. Many of these projects will focus on erosion control and habitat restoration. The ACRCD will review potential projects submitted for

[1] The species status may change following the decision of the Fish and Game Commission to designate the species as threatened or endangered but if there is such a designation, the species will remain a Covered Species. However, if the Commission does not opt to designate a candidate as endangered or threatened, take of that species is not authorized by this program. Take coverage under this program would terminate at the time candidacy ends.

the Program and determine whether or not these projects are appropriate to be implemented under the VLP.

The ACRCD, working with the Natural Resources Conservation Service (NRCS), will determine on an annual basis if conservation projects are the size, scale, and scope to qualify for coverage under the VLP. The NRCS will provide technical assistance on projects covered under the VLP that are funded by the Farm Bill through oversight, planning, installation, and monitoring of the projects. NRCS may also be involved in ACRCD programs that do not utilize the Farm Bill programs as a contractor through the ACRCD. Together, the ACRCD and the NRCS have the expertise and funding to oversee the implementation of the restoration practices and have state and federal mandates to protect our natural resources by working with private landowners.

This Program was developed with input and participation by local landowners through community meetings and representation from the following agencies/organizations:

Alameda County Ag Commissioner

California Cattleman's Association

California Department of Food and Agriculture

California Department of Fish and Game

California Farm Bureau Federation

California Rangeland Conservation Coalition (see below)

Contra Costa Water District

East Bay Municipal Utilities District

East Bay Regional Park District

Mule Deer Foundation

Natural Resources Conservation Service

San Francisco Public Utilities Commission

University of California Davis Cooperative Extension

A representative from the California Rangeland Conservation Coalition (CRCC) attended community meetings and provided input to the development of this Program. The CRCC is a coalition of ranchers, environmentalists, researchers and agencies that are working together to conserve rangeland encircling the Central Valley. While CRCC representatives did provide input to this Program, it is not necessarily endorsed by all members of the CRCC.

Under the VLP, the Program Administrator and a Cooperator will sign a Cooperative Agreement, in which the Cooperator agrees to voluntarily carry out habitat improvements described in the Program and their Cooperative Agreement and to abide by the terms and conditions set forth in the VLP and the take authorizations described below. Through participation in this VLP, as evidenced by a Cooperative Agreement, any taking of the Covered Species (as defined herein) incidental to routine and ongoing agricultural activities is not prohibited for Program participants if the take occurs while the management practices required by this VLP and the Cooperative Agreement are being followed.

2. Area Description

a. Geographic Boundaries

The VLP would cover the entire county but primarily serves persons conducting routine and on-going agricultural activities in the eastern, rural portion of Alameda County and within properties adjoining or encompassing creeks in rural-urban interface areas (Figure 1). Alameda County encompasses an area of 469,400 acres situated in the greater San Francisco East Bay region. The majority of the county's population lives in the highly urbanized area along the easternmost portion of San Francisco Bay. This western portion of Alameda County includes the cities of Alameda, Berkeley, Fremont, Hayward, Oakland, and San Leandro. The more rural, eastern portion supports ranching, with an urban/suburban center located in the Tri-Valley region of Dublin, Livermore, and Pleasanton (Figure 2). The county is approximately 50% agricultural land and 50% urban lands.

Agricultural lands dominate the eastern portion of the county; most are within the Alameda Creek Watershed (Figure 2). Grazing on 200,000 acres of rangeland is the predominant agricultural land use followed by viticulture, which covers approximately 4,000 acres. Other significant land uses include field and vegetable crops and nursery products. Wind farms are situated in the vicinity of Altamont Pass mostly on privately owned rangelands near the eastern edge of Alameda County. These rangelands are currently grazed and play an important role in managing most of the wind farms for fuel loads and maintaining valuable grassland habitat.

b. Excluded Areas and Habitats

The Program would not include projects in any of the following habitats or areas:

- Salt marsh and estuary projects in the Alameda County's bayfront area. This excluded bayfront area includes all land and waterways under the jurisdiction of the Bay Conservation and Development Commission.
- Serpentine soils or alkali-sink habitat
- Known pallid manzanita occurrences

Consequently, projects in the habitats and specific locations identified above would be excluded from the Program. Persons working with the ACRCD on proposed projects in these particular areas and habitats would need to seek individual permits on a project-by-project basis.

c. Alameda County Watersheds

The major watersheds are Alameda Creek, San Leandro Creek, and San Lorenzo Creek watersheds. Some smaller watersheds in Alameda County are Arroyo Viejo; East Creek Watershed; Estudillo Canal; Ettie Pump Station; Laguna Creek; Lion Creek; Mowry Slough; San Antonio Creek (or Oakland Estuary); Sausal Creek; Strawberry Creek; and Temescal Creek watersheds. These smaller watersheds are predominately located in urbanized areas.

Associated waterways and land uses for three major watersheds within Alameda County are described below and are shown in Figure 1. The majority of projects under the VLP would occur within these three watersheds.

Alameda Creek (Alameda County portion)
The watershed spans 140,000 acres, from Contra Costa County, south past Mt. Hamilton and far into Santa Clara County with the majority located in Alameda County. It includes cities such as San Ramon, Dublin, Pleasanton, Livermore, Union City, Fremont, Newark, and Sunol. The land use in the area has been primarily grazing for generations.

The following are tributaries of Alameda Creek with smaller creeks in parentheses: Stonybrook Creek, Sinbad Creek, Arroyo de la Laguna, (Valecitos Channel, Arroyo Del Valle, Dry Creek, Arroyo Mocho, Dublin Creek, San Ramon Creek, Alamo Creek, Tassajara Creek, Cottonwood Creek, Collier Canyon Creek, Cayetano Creek, Altamont Creek, and Arroyo Seco), San Antonio Creek (Indian Creek), and Hetch Hetchy Aqueduct. Del Valle Reservoir, San Antonio Reservoir, and Calaveras Reservoir, are also part of the Alameda Creek Watershed. Arroyo Hondo, Calaveras Creek, Isabel Creek, and Smith Creek are located in Santa Clara County and stem from the Calaveras Reservoir. This large network of creeks eventually drains to San Francisco Bay.

San Leandro Creek
San Leandro Creek is located on the eastern side of the Berkeley-San Leandro Hills and western slopes of Rocky Ridge near Moraga, in Contra Costa County. The entire watershed encompasses 44 square miles including areas drained by Moraga, Indian, Redwood, Buckhorn, and Grass Valley creeks. Chabot Reservoir was constructed in 1874-1875 and Upper San Leandro Reservoir in 1926. Below Chabot Reservoir, San Leandro Creek passes through the highly urbanized city of San Leandro, entering Central San Francisco Bay at the southern end of the Oakland Estuary.

San Lorenzo Creek
Located in western Alameda County, the San Lorenzo Creek Watershed encompasses about 48 square miles. San Lorenzo Creek flows generally west, entering central San Francisco Bay near Roberts Landing, west of the city of San Lorenzo. Eight major sub-watersheds drain into San Lorenzo Creek: Cull, Crow, Eden Canyon, Hollis Canyon, Norris, Palomares, Castro Valley, and Chabot creeks.

The lower and middle watershed areas are highly urbanized, flowing through Castro Valley, Hayward, and San Lorenzo. A 4.6-mile concrete channel runs from the mouth upstream. The upper watershed, including areas tributary to Crow and Palomares creeks, is less urbanized. The Cull Creek and Don Castro dams constructed in the early 1960s created complete barriers to anadromous fish migration into large portions of the upper watershed.

d. Number of Acres Covered

The Program will cover approximately 200,000 acres of agricultural lands in Alameda County. It is estimated that over the life of the Program, approximately 50,000 acres of annual grassland, wetland, and riparian habitats will be maintained and enhanced as a result of the implementation of the management practices.

e. Habitat Enhancement Opportunities and Constraints

Enhancement Opportunities

Habitat loss, fragmentation, and introduction of invasive species present the largest threats to many native species throughout Alameda County[2]. Private ranches hold the majority of the County's remaining habitat along with public landowners such as the East Bay Regional Park District and the San Francisco Public Utilities Commission. This remaining valuable habitat for species such as the American badger, western burrowing owl, golden eagle and other raptors, migratory and grassland birds as well as reptiles and amphibians such as the Alameda whipsnake and California tiger salamander occurs mostly on ranches and grazed public lands. Constructed stock ponds are important breeding habitat for aquatic species such as the California red-legged frog, California tiger salamander and western pond turtle, as natural habitats such as slow-moving creeks and vernal pools continue to be altered or lost. In Alameda County, these species mostly occur in grazed grassland habitat and reproduce in the associated stock ponds. Appropriate grazing practices are an essential tool to management of these stock ponds that the California red-legged frog and California tiger salamander utilize for reproduction.

The recovery of these species and enhancement of these habitats on private lands requires voluntary participation in conservation projects by private landowners[2]. The VLP will streamline the regulatory process and encourage implementation of these enhancement and restoration projects by providing CESA take authorization.

Management practices covered by the proposed Program would result in the enhancement and/or restoration of suitable aquatic non-fish habitat, riparian habitat, and upland habitat for listed plant and animal species, resulting in net environmental benefits to listed animal species as well as species of special concern and non-listed native species (see Table 1 for a full listing of species likely to benefit). The proposed management practices are designed to control erosion, reduce sedimentation, restore native vegetation, restore pond habitat, and improve the quality of riparian habitat. All of these actions would benefit listed species and their habitat in the long-term. The improvements to riparian habitats and water quality would benefit all listed and non-listed species that utilize riparian corridors for breeding, foraging, or dispersal. State listed species covered by this Program may benefit by better livestock distribution through spring development and other off stream water developments. Listed plant and animal species will both benefit from the removal of non-native or invasive vegetation in aquatic and upland habitat. Removal of non-native vegetation will result in the decreased spread of these species and less competition between non-native invasive species and native plants. Habitat conditions will improve over the long-term, resulting in improved breeding, foraging, and dispersal habitat. The presence of additional native vegetation may increase the diversity and abundance of other wildlife species (invertebrate and vertebrate species), thus improving prey availability for native species.

[2] McCamman, J. *State of California Natural Resources Agency Department of Fish and Game REPORT TO THE FISH AND GAME COMMISSION A STATUS REVIEW OF THE CALIFORNIA TIGER SALAMANDER (Ambystoma californiense) January 11, 2010*

Constraints
Several hurdles stand in the way of conservation projects for these species. For example, permitting can be a lengthy and confusing process for landowners. Some landowners also fear they will face more regulatory restrictions if they voluntarily enhance habitat for listed species.

f. Covered Species

This Program provides take authorization for Alameda whipsnake[3] (*Masticophis lateralis euryxanthus)* and California tiger salamander[4] (*Ambystoma californiense)*, both species are designated as threatened pursuant to the California Endangered Species Act (CESA) (Fish and Game Code, § 2050 et seq.), hereafter referred to as the "Covered Species."

g. Federal and State Special Status Species Likely to Benefit

Table 1 includes species that are likely to benefit from the habitat improvements associated with the implementation of the management practices. No take coverage is afforded as part of participation in this Program for species other than the Covered Species.

Table 1. Special Status Species That May Benefit from Project Activities

Common Name	Scientific Name	VLP Covered Species	Federal Status [a]	State Status [b]	CNPS Status [c]
Plants					
Congdon's tarplant	*Centromadia parryi spp. congdonii*	No			1B
Invertebrates					
Calippe silverspot butterfly	*Speyeria callippe callippe*	No	E		
Amphibians and Reptiles					
Alameda whipsnake	*Masticophis lateralis euryxanthus*	Yes	T	T	
California horned lizard	*Phrynosoma coronatum (frontale)*	No		CSC	
California red-legged frog	*Rana aurora draytonii*	No	T	CSC	
California tiger salamander	*Ambystoma californiense*	Yes	T	T	
San Joaquin	*Masticophis*	No		CSC	

[3] See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(4)(D).
[4] See *Id.*, subd. (b)(3)(G).

whipsnake	*flagellum ruddocki*				
Southwestern pond turtle	*Clemmys marmorata pallida*	No		CSC	
Western pond turtle	*Clemmys marmorata*	No		CSC	
Western spadefoot	*Spea hammondii*	No		CSC	
Birds					
Burrowing owl	*Athene cunicularia*	No		CSC	
California horned lark	*Eremophila alpestris actia*	No		CSC	
Golden eagle	*Aquila chrysaetos*	No		FPS	
Loggerhead shrike	*Lanius ludovicianus*	No		CSC	
Northern harrier	*Circus cyaneus*	No		CSC	
Prairie falcon	*Falco mexicanus*	No		CSC	
Swainson's hawk	*Buteo swainsoni*	No		T	
Tri-colored blackbird	*Agelaius tricolor*	No		CSC	
White-tailed kite	*Elanus leucurus*	No		FPS	
Mammals					
American badger	*Taxidea taxus*	No		CSC	
Pallid bat	*Antrozous pallidus*	No		CSC	
Greater western mastiff bat	*Eumops perotis californicus*	No		CSC	
Hoary bat	*Lasiurus cinereus*	No			
San Francisco dusky footed woodrat	*Neotoma fuscipes annectens*	No		CSC	
San Joaquin kit fox	*Vulpes macrotis mutica*	No	E	T	
Silver-haired bat	*Lasionycteris noctivagans*	No		CSC	

* based on CNDDB records for the Program area and adjacent areas with similar habitat

[a] E = federally listed as endangered, T = federally listed as threatened

[b] E = state listed as endangered, T = state listed as threatened, CSC = California special concern species, FPS = state fully protected species

[c] 1B = rare, threatened, or endangered in California and elsewhere

h. Reasonably attainable interim targets and long range goals for increasing the quantity and quality of habitat through the Program area

Annual interim targets for the Program will be identified as part of the annual reporting process. Long range voluntary restoration goals that the VLP will support include:

1. Continued support for the sustainability of grazing and agricultural operations that contribute to maintaining valuable open space lands
2. Increased participation in voluntary restoration projects
3. Increased enrollment in Farm Bill programs and use of available funding towards wildlife friendly restoration projects. Increased enrollment has a secondary effect of increasing the amount of Farm Bill funding that is available in Alameda County.
4. Increased on-the-ground conservation
5. Increased outreach for opportunities for voluntary restoration. In the past outreach of voluntary restoration programs to landowners has been limited due to the constraints on permitting habitat restoration projects.

3. Designated Representative

The Alameda County Resource Conservation District will be the designated representative and Voluntary Local Program Administrator.

The Alameda County Resource Conservation District (ACRCD)
The mission of the ACRCD is to provide leadership in Alameda County and the region about natural resources conservation and agricultural issues through education, outreach, resource services, partnerships, and funding. The fundamental principles of natural resources conservation, the working landscape, and agricultural heritage guide the ACRCD's programs and activities. Since 1972, ACRCD has administered government and private foundation grants for watershed-wide planning, erosion control, and restoration projects. The ACRCD continues to bring together state, federal, and local agencies with private landowners to conserve soil and water resources, with projects focusing on the following topics:

- Control of soil erosion
- Riparian habitat restoration
- Protection and improvement of water quality
- Education and outreach
- Conservation of rangeland and cropland
- Active support of the district's agricultural economy and heritage

The California Public Resources Code (PRC) specifically empowers Resource Conservation Districts (RCD) to manage soil conservation, water conservation, erosion control, erosion prevention, or erosion stabilization projects (PRC § 9415). The code also allows an RCD, with the consent of affected private property owners, to make

improvements or conduct operations that will further water conservation and the prevention and control of soil erosion (PRC § 9415).

Contact
Alameda County Resource Conservation District
Voluntary Local Program Administrator
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Livermore, CA 94550
(925) 371-0154

4. Management Practices and Routine and Ongoing Agriculture Activities

a. Management Practices

Pursuant to California Fish and Game Code section 2086 and California Code of Regulations section 786.1(a), a VLP must include measures to avoid and/or minimize impacts to candidate, threatened, and endangered species. These measures take the form of “management practices” that provide standard measures for avoidance of take of the Covered Species, but do not cover all possible measures that may be used. As set forth in section 786.1(a), "management practices" are practical, achievable agricultural practices that, to the maximum extent practicable, avoid and minimize the take of candidate, threatened or endangered species while encouraging enhancement of wildlife habitat without compromising the economics of agricultural operations when undertaken by a farmer or rancher. Examples of management practices include, but are not limited to, establishing brood ponds, installing artificial nesting structures, reducing harvester speed, integrated pest management techniques, planting fallow fields, delaying fall tillage, flooding harvested fields, and establishing wildlife refugia at margins of fields.

The management practices described herein were developed using the NRCS conservation practices specific standards and specifications in consultation with the US Fish and Wildlife Service (USFWS), the Department, ACRCD and NRCS biologists, and species experts using the best scientific information available. Each practice will be implemented to meet the minimum standards and specifications for the NRCS and will be tailored at the local level for project specific requirements based on the natural resource need at each site. More specifically, the conservation practices that were selected from this program were developed from The NRCS California Handbook of Conservation Practices which establishes standards for the design of measures commonly used to treat natural resource problems. These practice standards are based on research, conservation field trials, and accumulated knowledge and experience of agency employees. The practice standard represents the minimum details or factors that must be considered in the design of a site-specific practice or combination of practices. NRCS Standards and/or Specifications for each conservation practice are available on the web in NRCS' electronic Field Office Technical Guide, Section IV (http://efotg.sc.egov.usda.gov//efotg_locator.aspx).

The list below summarizes the Management Practices that will be included and covered under the VLP. Appendix A describes these practices more fully so that take of candidate, threatened and endangered species can be avoided or minimized. Incorporating these management practices into routine and on-going agricultural activities will provide the opportunity to control erosion and sedimentation, stabilize eroding stream channels, improve water quality, maintain and ultimately enhance annual

grassland, rangeland, scrub habitat, oak woodland, riparian areas, aquatic non-fish breeding and associated upland habitats.

1. Pond Restoration Activities
    a. Control predator species
    b. Establish native vegetation
    c. Structural components repair
    d. Obstruction removal
    e. Pond desiltation
2. Stream Restoration Activities
    a. Native riparian habitat restoration
    b. In-stream channel stabilization
    c. Obstruction removal
3. Livestock and Wildlife Water Distribution
    a. Spring development
    b. Off stream water facilities
    c. Pipeline installation
4. Erosion Control
    a. Access road improvements
    b. Vegetation establishment
    c. Water control structures

b. Routine and Ongoing Agricultural Activities

Enrollment in the Program authorizes take of the Covered Species incidental to routine and ongoing agricultural activities provided that the take occurs while implementing selected management practices and in accordance with the approved Cooperative Agreement.

The Department defines routine and ongoing agricultural activities practices in section 786.1(b) of the California Code of Regulations as:

> "Routine and ongoing agricultural activities" shall include the cultivation and tillage of the soil; crop rotation; fallowing; dairying; the production, cultivation, growing, replanting and harvesting of any agricultural commodity including viticulture, vermiculture, apiculture, or horticulture; the raising of livestock, fur bearing animals, fish, or poultry; any practices performed by a farmer on a farm as incident to or in conjunction with those farming operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market, including any such activities recognized as compatible uses pursuant to the Williamson Act (Government Code sections 51200 et seq.) provided such activities are consistent with the economics of agricultural operations; and other similar agricultural activities. Routine and ongoing agricultural activities do not include conversion of agricultural land to nonagricultural use, timber harvesting activities governed by the State Board of

Forestry or activities that intentionally reduce habitat and wildlife to facilitate conversion to non- agricultural use.

Appendix A includes a detailed list of routine and ongoing activities associated with ranching and agriculture that are provided take coverage under the VLP. This list of routine activities is not exhaustive and serves merely to provide guidance to Cooperators as to the type of activities that are anticipated to be covered under the VLP. Activities that are not listed in Appendix A will be reviewed by the Program Administrator and the Department to determine if the activities are appropriate for coverage under the VLP. For the purposes of this Program the conversion of rangeland to more intensive agricultural uses, such as permanent crops, is not considered a routine and ongoing agricultural activity. Ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management are considered routine and ongoing agricultural activities. Routine activities may vary from one ranching operation to another, and vary with changing environmental and economic conditions.

5. Environmental Analysis

CEQA will be conducted on the VLP with the ACRCD acting as the lead agency and the Department as a responsible agency.

6. Administrative Plan

a. Process for Persons to enter into a Cooperative Agreement

Persons within the VLP area (see Figure 1) who are working cooperatively with the ACRCD and/or the NRCS and who are interested in voluntarily implementing conservation projects will enter into a Cooperative Agreement with the ACRCD that will outline the management activities that will be covered.

The specific management practices that a Cooperator is covered for under the VLP will be included in the Cooperative Agreement by ACRCD. The Cooperative Agreement will be submitted to the Department prior to the Cooperator signing the Agreement. The Department will review the Cooperative Agreement and provide any applicable edits or approve the Cooperative Agreement within 30 days of receiving it.

b. Lands Eligible for Enrollment

All public and private lands are eligible for enrollment in the VLP.

c. Persons Eligible for Participation in the VLP

- Private landowners
    - Lessees of public or private lands who provide proof of lease or other control of land required. Take authorization can only be applied to activities implemented by the lessee for the duration of the lease AND only on lands that are covered under the lease.

- Any Cooperator that is participating in restoration work that falls within the definition of “routing and ongoing agricultural activities” that is defined in Title 14 can enroll in the VLP

d. Record Keeping Process to ensure participant confidentiality:

i. ACRCD will work with the person who is voluntarily entering into the Program.

ii. ACRCD will work with the person, the NRCS, and/or other partners to complete a Cooperative Agreement that details:

a. The management practices that will be covered under the Agreement and

b. Provisions for implementation of the appropriate management practices

iii. All information generated by the VLP or Cooperator in the course of participation in the local Program that identifies or indicates the existence of endangered, threatened or otherwise protected species or their habitat on a particular farm or ranch, including but not limited to observations, records, correspondence and communications, shall be confidential to the extent permitted by the Public Records Act and other applicable laws. Confidential information may only be used or shared as necessary for the administration, approval or denial of a local Program, or as otherwise required by law unless the release of information is authorized in writing by an individual landowner specifically for that purpose.

iv. All records and Cooperative Agreements will be kept in a secure, locked cabinet at the ACRCD office.

v. The Department may request access to records by scheduling a visit with the Program Administrator to view files and information generated by the VLP. The Department will not be authorized to take any information from the files unless otherwise authorized in writing by an individual landowner specifically for that purpose.

e. Developing, Reviewing and Revising Management Activities:

Development of the management practices and routine and ongoing agricultural activities associated with rangeland management that are covered under the VLP will, to the maximum extent practicable, avoid and minimize take of Covered Species, while encouraging the enhancement of habitat.

The VLP will be assessed on an as needed basis to verify the practices and activities listed as implemented are meeting the intent of the Program. Assessments will be completed at the request of the Department or as determined necessary by the ACRCD.

As part of the assessments completed, ACRCD and Department staff will assess the effectiveness of the program by evaluating the number of Cooperators participating, the number and acres of habitat restoration projects implemented and the effectiveness of the practices on improving habitat while avoiding impacts to the Covered Species. Assessments will be included in the annual report and any necessary review and/or revisions will be completed in accordance with the Amendment process.

f. Annual Process

i. ACRCD will complete an annual report that will include:
   a. Summary of the acreage benefiting from the local Program
   b. Summary of the management practices included in the Cooperative Agreements
   c. Summary of the success of the management practices listed
   d. Summary of species encountered during construction activities
      i. Total numbers of and types of species encountered
      ii. Locations of species encountered on a sub-watershed level
   e. Recommendations, if any, on how to further improve voluntary participation by farmers and ranchers and further improve benefits to wildlife
   f. Assessment by RCD and NRCS staff will be conducted, if any, that the practices and activities being utilized for the Program are meeting the intent to avoid and minimize take and enhance habitat.
   g. Annual report will be submitted to the Department by December 31 of each year

ii. The annual report <u>shall not</u> include information generated by the VLP or an individual landowner that identifies or indicates the existence of Covered Species or their habitat on a particular farm or ranch unless the release of information is authorized in writing by an individual landowner specifically for that purpose.

g. Cooperative Agreement Monitoring/Revocation/Termination:

As the designated representative, ACRCD has the responsibility to assure compliance by all Cooperators enrolled in the Program. The procedure for monitoring Cooperators' compliance and revoking Cooperative Agreements in the event Cooperators do not comply is set forth below:

- Within one month of becoming aware that a Cooperator or their agents (e.g., contractors, labor) are not carrying out work consistent with the VLP management practices' design, installation, and monitoring and maintenance specifications, the ACRCD shall notify the Cooperator in writing (Initial Contact) and work directly with the Cooperator to resolve the noncompliance.
- If the Cooperator has not complied within two months of the Initial Contact, the ACRCD will contact the Cooperator's partners (e.g. NRCS, others) to seek assistance regarding the Cooperator's failure to comply.

- If the Cooperator has not complied within three months of the Initial Contact, the ACRCD shall notify the Cooperator in writing regarding the non-compliance and shall indicate that revocation of the Cooperative Agreement will commence if the Cooperator does not come into compliance within four months of the Initial Contact.
- If the Cooperator has not complied within four months of the Initial Contact, the Department will be notified of the lack of compliance. The Department then has the opportunity to notify the ACRCD what additional measures, if any, may be taken to bring the Cooperator into compliance prior to proceeding with revocation.
- If the Department revokes the Cooperative Agreement, the Department will issue, in writing to the ACRCD, a request to revoke the subject Cooperative Agreement. The ACRCD will then notify the Cooperator in writing, with a copy to the Department, that the Cooperator's activities are inconsistent with the procedures contained in the Cooperative Agreement, The Cooperative Agreement is thereby terminated, and the Cooperator's actions are no longer covered by the VLP. ACRCD shall have no further responsibility to enforce the conditions and shall not be held responsible for their implementation. The Cooperator shall be held directly liable for all violations and will have to individually obtain all necessary permits, approvals, and/or rights from the agency(ies), and to comply with all laws and ordinances.

7. Take Authorization

Cooperators, through enrollment in the VLP, authorized by Cal. Code Regs., tit. 14, section 786, and execution of a Cooperative Agreement, are allowed take of Covered Species incidental to routine and ongoing agricultural activities if the take occurs on lands covered by the VLP during implementation of the management practices. The ACRCD and the Department recognize that implementation of the management practices under the VLP may increase the number of individual Covered Species in proximity to farms and ranches as a result of management practices. Cooperators are authorized take of the selected Covered Species incidental to otherwise lawful activities under the following circumstances:

1. Take occurs while implementing the management practices identified in the Cooperative Agreement
2. Take occurs while conducting the routine and ongoing agricultural activities on the Enrolled Property after the management practices identified in the Cooperative Agreement, have been initiated

Take authorization of Covered Species will be defined in the Cooperative Agreement and coverage will be limited to the species that directly benefit from the implementation of the selected management practices. Determination of the species authorized for take in each Cooperative Agreement will be developed with the Cooperator, the Program Administrator, and the Department, but will be limited to the Covered Species in this VLP.

8. Program and Take Authorization Duration

The VLP becomes effective upon approval and shall be in effect for 10 years. Notwithstanding any expiration of the VLP, Cooperative Agreements developed pursuant to this Agreement will remain in effect for a term of at least 10 years. Prior to approving a Cooperative Agreement, the Department will ensure that the duration of the Cooperative Agreements is long enough to achieve a net conservation benefit for the species covered under the Cooperative Agreement. Authorization of take of Covered Species pursuant to a Cooperative Agreement begins upon initiation of the management practices specified in the subject agreement. Cooperators may opt out of their Cooperative Agreement at any time without penalty if they are adhering to withdrawal procedures. After 10-years, the Program will be reviewed and may be extended by mutual consent of ACRCD and the Department.

9. Program Amendments

The Program Administrator or the Department may propose amendments to this Program by providing written notice to, and obtaining the written concurrence of, the other party. Such notice shall include a statement of the proposed amendment, the reason for it, and its expected results. The Parties will respond to proposed amendments as indicated below. Proposed amendments will become effective upon the other parties written concurrence and completion of appropriate environmental analysis.

a. Amendment proposed by the Program Administrator: The Program Administrator may initiate an amendment by providing the Department with the necessary information for review.

    i. Minor Amendments. The Department Director shall approve and incorporate or deny minor amendments (as defined in Cal. Code Regs., tit. 14, § 786.4(a)(1)) initiated by the Program Administrator within 30 days of submission.

    ii. Major Amendments. The Department will respond to major amendments (as defined in Cal. Code Regs., tit. 14, § 786.4(a)(2)) initiated by the Program Administrator according to the process established in this article for a new local program, except that the information and analysis provided in support of an application for a major amendment may rely on supplemental information to the analysis used in the initial submittal for the Program Administrator.

b. Amendment proposed by the Department: The Department may initiate an amendment to the Alameda County VLP if it believes that an amendment is necessary to bring the Program into compliance with section 2086(b) of the Fish and Game Code or any other relevant provision of law.

    i. Minor Amendments. The Department shall notify the Program Administrator in writing of the proposed minor amendment and give the Alameda County VLP participants 60 days to accept or decline the proposed minor amendment. If the Program Administrator declines the amendment the Department may initiate steps to terminate the program

or allow individuals to withdraw. If the Program Administrator accepts the amendment or fails to respond within the 60 days the Department may approve the minor amendments with no further consultation.

ii. Major amendments. The Department must make a finding that the Alameda County VLP is not in compliance with section 2086(b) of the Fish and Game Code and state its rationale. The Program Administrator shall be notified in writing of the findings and rationale and be given 60 days to respond to deficiencies outlined by the Department. If the Program Administrator fails to amend the program, as directed by the Department, the Department may initiate steps necessary to terminate the Alameda County VLP and allow individuals to withdraw from the Alameda County VLP.

10. Termination of Agreements

a. Cooperative Agreement:

i. A Cooperator may withdraw his/her Cooperative Agreement from the Program for any reasons by giving written notice not less than 90 days in advance to the Program Administrator and adhering to the applicable withdrawal procedures.

ii. Withdrawal shall not become effective prior to completion of any enrolled management practices. Cooperator shall continue to be responsible for complying with measures of other agreements or permits (i.e., Streambed Alteration Agreement, Clean Water Act section 401 water quality certifications of U.S. Army Corps section 404, grading permits, etc.) required as part of the regulatory permitting process.

iii. A withdrawing Cooperator shall acknowledge, in writing, that they understand that by withdrawing from the Program that take of Covered Species for routine and ongoing agricultural activities is no longer authorized by the Program.

b. Voluntary Local Program:

i. The Program Administrator may terminate the VLP for any circumstances by giving written notice of not less than 120 days in advance to the Department. The Program Administrator shall give advance notice of not less than 120 days to enrolled Cooperators. Enrolled Cooperators shall continue to receive take authorization until withdrawal has been completed.

ii. If the Department terminates the VLP because it no longer complies with section 2086(b) of the Fish and Game Code, termination shall be conducted consistently with the terms and conditions detailed in section 786.2(d)(9). Enrolled Cooperators following the terms and conditions of withdrawal shall continue to receive take authorization until withdrawal has been completed.

iii. If the Program Administrator is unable to perform its obligations under this Program, the Program Administrator will give written notice to Department at least 120 days prior to ceasing to perform its obligations under the Agreement. Upon receiving such notice, the Department may, at their discretion after consultation with Cooperators, either amend this Program and the associated take authorizations to substitute a new Program Administrator, or, if the Department agrees and a Cooperator prefers, convert any previously approved Cooperative Agreement into an individual Program between the Cooperator and the Department under the same terms. Such an amendment shall follow the procedures described in Section 9 above.

11. New Listings of Species

In the event that a rangeland and/or agricultural land associated species not authorized for take in association with this Agreement is subsequently listed as candidate or threatened or endangered under the California Endangered Species Act, the Program Administrator and the Department may consider amending the Program to add the candidate or newly-listed species as a Covered Species. Previously approved Cooperative Agreements may be amended to include newly listed species as Covered Species, subject to approval by the Department.

12. Other Measures

a. Remedies. No party shall be liable in monetary damages for any breach of this Program, any performance or failure to perform an obligation under this Agreement or any other cause of action arising from this Agreement.

b. Dispute Resolution. The Parties agree to work together in good faith to resolve any disputes. Amendment to the Program shall follow the procedures detailed in Section 9 above.

c. Succession and Transfer. If a Cooperator transfers his or her interest in the Enrolled Property to another non-Federal entity, the Department will regard the new owner or manager as having the same rights and responsibilities with respect to the Enrolled Property as the original Cooperator, if the new owner or manager agrees to become a party to the Cooperative Agreement in place of the original Cooperator.

d. No Third-Party Beneficiaries. This Program does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this Program to maintain a suit for personal injuries or damages pursuant to the provisions of this Program. The duties, obligations, and responsibilities of the Parties to this Program with respect to third parties shall remain as imposed under existing law.

e. Other Laws. This Program and activities conducted under it are subject to all applicable federal, state, and local laws and regulations.

13. Notices and Reports.

Any notices and reports, including monitoring and annual reports will be delivered to the persons listed below, as appropriate:

Voluntary Local Program Coordinator
Alameda County Resource Conservation District
3585 Greenville Road, Suite #2
Livermore, CA 94550
(925) 371-0154

Voluntary Local Program Coordinator
Department of Fish and Game
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this Voluntary Local Program to be in effect as of the date that the Department approves the VLP and issues the Take Authorization.

_____ _____

Board President Date
Alameda County Resource Conservation District

_____ _____

Deputy Director, Ecosystem Conservation Division Date
California Department of Fish and Game

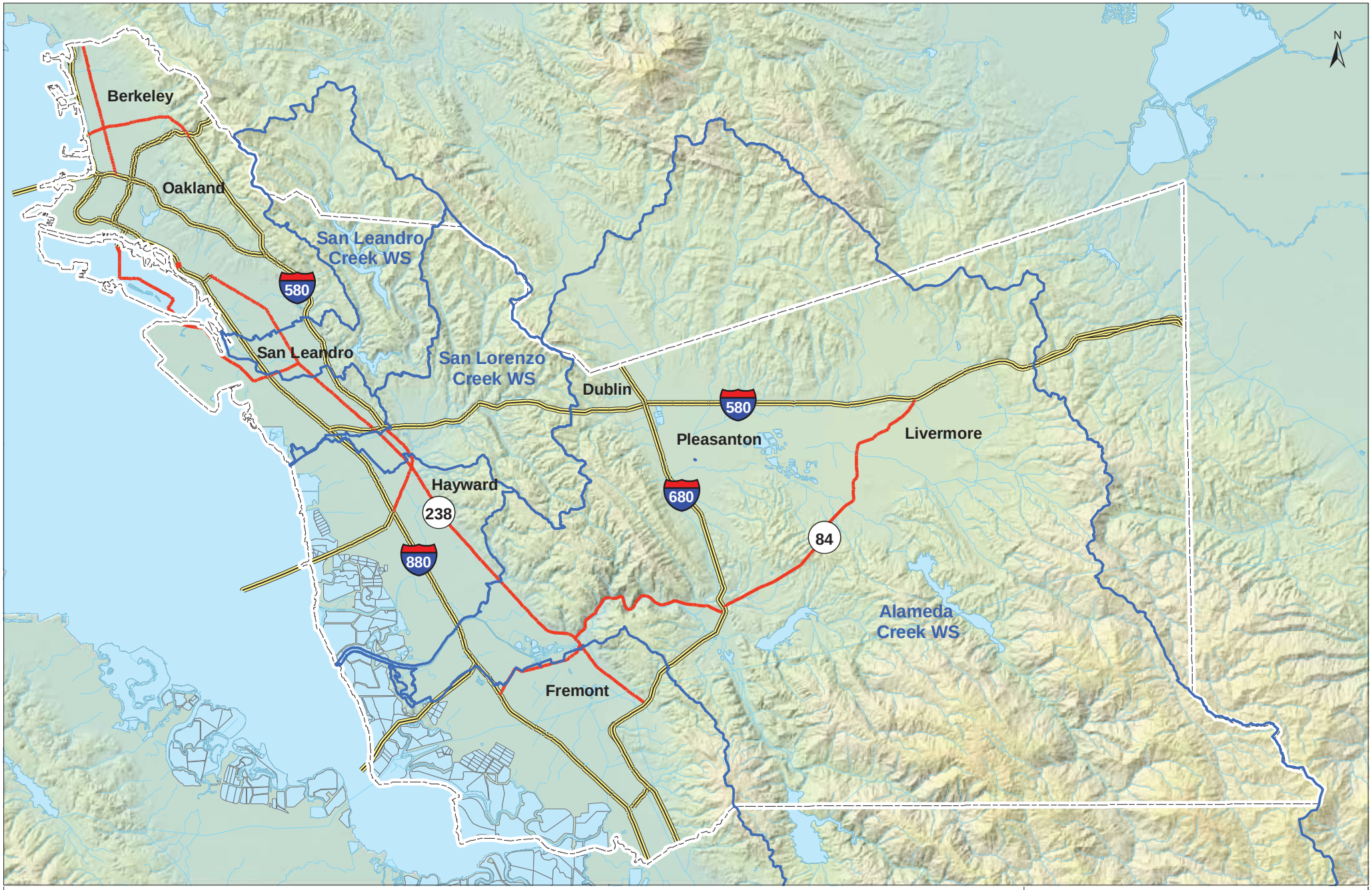

Figure 1 Project Area

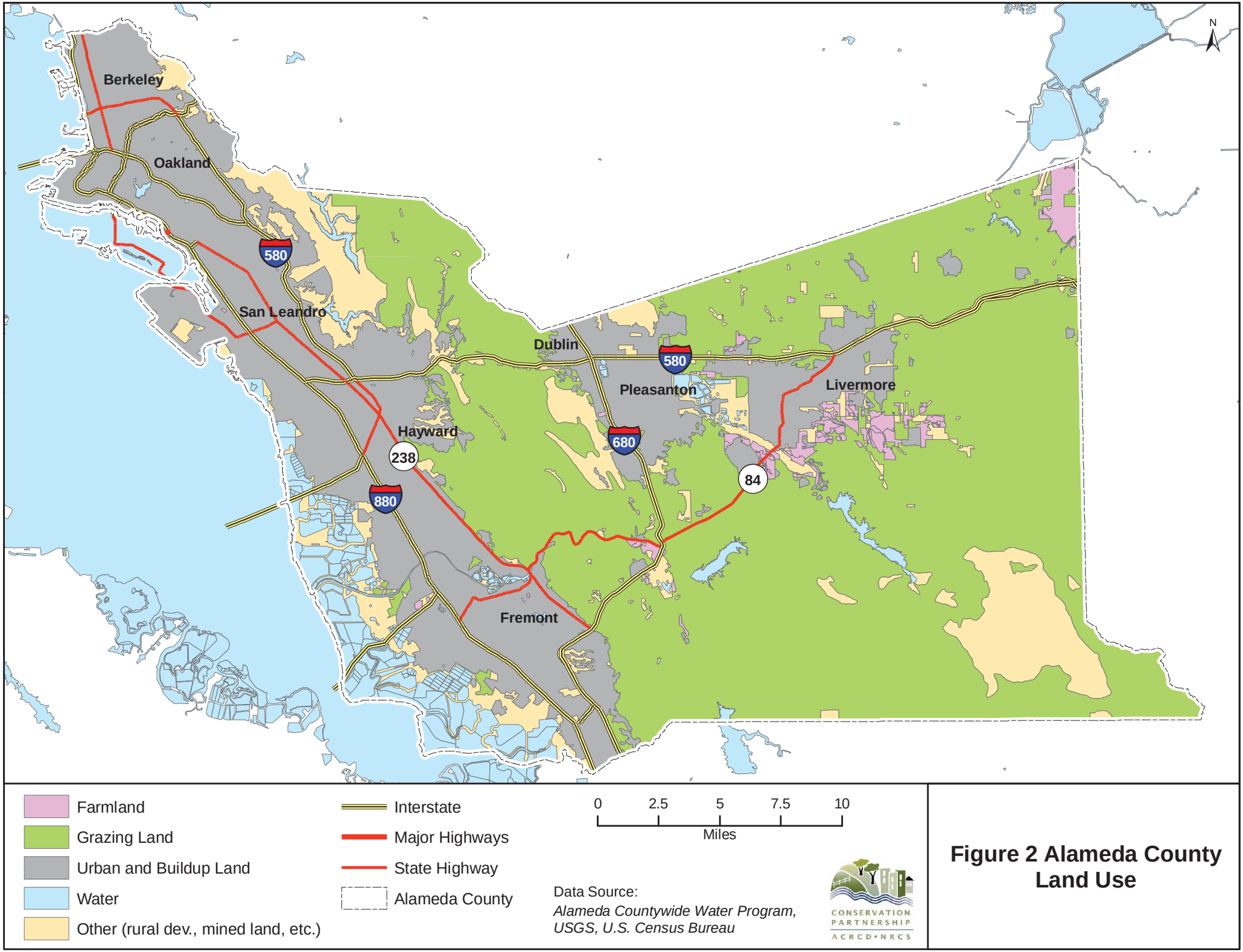

Figure 2 Alameda County Land Use

Alameda County
Resource Conservation District

Voluntary Local Program

Appendix A

List of Management Practices and Routine and Ongoing Agricultural Activities

July 6, 2012

Table of Contents

Introduction

California Fish and Game Code section 2086 requires that voluntary local programs include measures to avoid and/or minimize impacts to candidate, threatened, and endangered species. These management practices are designed with avoidance and minimization measures that provide standard measures for avoidance of take of Covered Species (Alameda whipsnake and California tiger salamander) but do not cover all possible measures that may be used. As described in more detail below, the management practices were developed in consultation with the US Fish and Wildlife Service (USFWS), Department of Fish and Game (Department), Alameda County Resource Conservation District (ACRCD) and Natural Resources Conservation Service (NRCS) biologists, and species experts using the best scientific information available. The management practices are intended to be flexible, avoid or minimize take of listed species, and maximize wildlife benefits without compromising the economics of the Cooperators' agricultural operations.

The voluntary local program (Program) includes practicable and achievable management practices that minimize take of candidate, threatened and endangered species while also encouraging the enhancement of habitat. These management practices have been developed using the NRCS conservation practices specific standards and specifications and in consultation with the Department, and ACRCD and NRCS biologists. NRCS conservation practice standards provide guidance for applying conservation technology on the land and set the minimum acceptable level for application of the technology. The conservation practices that were selected for the Program were developed from The NRCS California Handbook of Conservation Practices which establishes standards for the design of measures commonly used to treat natural resource problems. These conservation practice standards are based on research, conservation field trials, and accumulated knowledge and experience of agency employees. The conservation practice standard represents the minimum details or factors that must be considered in the design of a site-specific practice or combination of practices. NRCS Standards and/or Specifications for each conservation practice are available on the web in NRCS' electronic Field Office Technical Guide, Section IV (http://efotg.sc.egov.usda.gov//efotg_locator.aspx).

Each management practice will be implemented to meet the minimum standards and specifications for the NRCS and will be tailored at the local level for project specific requirements based on the natural resource need at each site.

During the planning process for an individual project, ACRCD staff and/or its contractors will assess each proposed project site to determine if suitable habitat for the Covered Species occurs on site and, if present, determine its quality and function for the Covered Species under the Program. Implementation of the management practices will incorporate the best available scientific information into the site conditions to ensure that the projects are being implemented to maximize wildlife and habitat benefits without compromising the economics of the Cooperators' agricultural operations.

Management Practices

Cooperators will implement the appropriate management practices associated with each activity covered under the Program. Each Cooperative Agreement will specify the management practices that will be carried out on the enrolled property and include a timetable for implementing the identified activities.

This Program specifically addresses liability for take under the California Endangered Species Act and does not necessarily satisfy any other legal requirements. For example, Cooperators proposing projects or practices that are subject to Fish and Game Code section 1602 must still provide a separate notification to the Department.

Pond Restoration

The activities covered under this section are associated with the repair, maintenance and restoration of breeding and refugia habitat present in livestock ponds for the California tiger salamander and other native aquatic species.

The USFWS (2005) determined that standing bodies of freshwater including ponds, both natural and artificial provide critical habitat for the breeding of California tiger salamander. As natural habitats such as vernal pools continue to be altered or lost, man-made livestock ponds have become the remaining vital breeding habitat for California tiger salamanders in Alameda County. For example, California tiger salamanders breed primarily in seasonal and perennial stock ponds in the East Bay Regional Park District (EBPRD) throughout Alameda County (Bobzien and Didonato, 2007). These EBRPD ponds are maintained for habitat values and to provide water to livestock. USFWS recognizes the importance of the management of livestock ponds as habitat by private landowners, and USFWS authorizes take coverage under the federal Endangered Species Act through the 4d ruling that exempts routine and ongoing ranching activities (USFWS, 2004). The Department also recognizes the importance of continued enhancement and maintenance of these livestock ponds to the recovery of the California tiger salamander (McCamman, 2010).

The Department identified pond restoration activities in the *Status Review of the California Tiger Salamander* (McCamman, 2010) as some of the management and recovery measures that may provide population-level benefits for California tiger salamanders. These include:

1. Active management of California tiger salamander habitats, including maintenance of appropriate vegetation condition as appropriate; removal and/or control of non-native predators,

2. Restoration of ephemeral ponds to enhance existing California tiger salamander populations,

3. Encouragement of public and private stock pond management practices consistent with California tiger salamander conservation as described in the Special Rule Exempting Routine Ranching Activities (USFWS 2004).

Implementation of the activities below will result in the enhancement and/or restoration of California tiger salamander habitat by restoring critical breeding habitat, decreasing predatory species populations in suitable habitat, reducing soil erosion and sedimentation, improving and providing long-term habitat protection, and improving livestock and wildlife water availability. All pond restoration activities must be constructed to NRCS standards and specifications. Take coverage for California tiger salamander will be provided for pond restoration activities that are covered under the Program. Pond Restoration activities may include one or more of the following management practices:

1. <u>Control predator species</u>
   Drain ponds to remove predators such as bullfrogs and non-native fish species such as bass, catfish, sunfish, and mosquito fish. Predation and competition from non-native

fishes and amphibians are considered important factors in the decline of California tiger salamander (McCamman, 2010, Bobzien and Didonanto, 2007). A predator control and dewatering plan will be developed for pond restoration activities that involve predator control. This management practice incorporates the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

b. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

c. Restoration activities at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. California tiger salamanders use ponds to breed and lay eggs primarily following rains in November to February (CDFG, 1997). Metamorphosis usually occurs from May to July, with a peak in June (Trenham et al. 2000). Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.

d. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

2. Establish native vegetation

Plant native vegetation around ponds and control non-native invasive plant species. Control and management of noxious weeds with the use of herbicides shall occur according to labeled directions and local, state, and federal regulations and guidelines. This management practice incorporates the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when constructing beneficial activities that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. California tiger salamanders have been found up to approximately 6,500 feet from any known breeding pond, although California tiger salamander adults remain more concentrated within approximately 650 feet of the pond. Trenham and Shaffer (2005) estimate that in optimal habitat 95 percent of California tiger salamanders remain within 2,100 feet of breeding ponds. Alameda whipsnake use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known Covered Species occurrences, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Holes shall be checked every morning prior to construction activity. If a Covered Species is present in the hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. Restoration activities at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. California tiger salamanders use ponds to breed and lay eggs primarily following rains in November to February (CDFG, 1997). Metamorphosis usually occurs from May to July, with a peak in June (Trenham et al. 2000). Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.

3. Structural components repair

Improve and repair spillways, provide alternative pipe outlets for water flow, and repair embankments as deemed necessary. Practices must meet NRCS standards and specifications for pond repair and be approved by the project engineer in order to meet Federal standards. Management practices that involve structural components repair include spillway repair, installation of alternative pipe outlets and embankment repair.

i) *Spillway repair*

Design and repair of the emergency earthen spillways utilizing grade stabilization structures to address potential gully erosion associated with spillways. This activity can be used to improve the size of a spillway to adequately address the hydrology of the watershed and/or repair a spillway that is actively eroding and contributing sediment downstream. This activity is especially important where the emergency spillway will also act as the primary spillway in pond restoration.

ii) *Alternative pipe outlets for water flow*

Installation of corrugated metal pipe to act as a primary or emergency spillway in pond restoration. The activity includes pipe sizing based on the hydrology of the watershed; required appurtenances, such as anti-seep collars and inlet and outlet

structures; and installation requirements, such as fill materials, compaction, and depth of cover.

iii) *Embankment repair*
Includes repairs to embankments that are leaking or other embankment repairs as deemed necessary. All dam repairs will be analyzed using geologists, soil scientists and other experts as necessary to determine the efficacy of such improvements.

These management practices incorporate the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when constructing beneficial activities that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. California tiger salamanders have been found up to approximately 6,500 feet from any known breeding pond, although California tiger salamander adults remain more concentrated within approximately 650 feet of the pond. Trenham and Shaffer (2005) estimate that in optimal habitat 95 percent of California tiger salamanders remain within 2,100 feet of breeding ponds. Alameda whipsnake use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known Covered Species occurrences, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. Restoration activities at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. California tiger salamanders use ponds to breed and lay eggs primarily following rains in November to February

(CDFG, 1997). Metamorphosis usually occurs from May to July, with a peak in June (Trenham et al. 2000). Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.

g. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

4. Obstruction removal

This activity relates to the removal of concrete rubble, rip-rap, rock, wood, old tires, refuse (such as household trash) and other debris from the pond area and spillway. ACRCD staff and/or its consultant will evaluate removal of debris on a site-by-site basis. All removed material will be properly disposed of off-site at approved locations. This management practice incorporates the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when constructing beneficial activities that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. California tiger salamanders have been found up to approximately 6,500 feet from any known breeding pond, although California tiger salamander adults remain more concentrated within approximately 650 feet of the pond. Trenham and Shaffer (2005) estimate that in optimal habitat 95 percent of California tiger salamanders remain within 2,100 feet of breeding ponds. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known Covered Species occurrences, will prevent impacts to burrows that could contain Covered Species.

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d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for the Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material..

f. Restoration activities at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. California tiger salamanders use ponds to breed and lay eggs primarily following rains in November to February (CDFG, 1997). Metamorphosis usually occurs from May to July, with a peak in June (Trenham et al. 2000). Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.

g. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

h. Any rock or rubble designated for removal shall be inspected for presence of Covered Species prior to moving. If Covered Species are found they should be relocated by a qualified biologist to a suitable location out of the construction area or be allowed to leave the area on their own.

5. Pond desiltation

This activity includes desiltation of existing ponds that are filled in with sediment to increase and improve available breeding habitat. Most of the livestock ponds throughout Alameda County were installed thirty to sixty years ago, and were designed with a twenty-year lifespan. Many are now approaching failure due to siltation, are drying up and no longer providing the critical breeding habitat the California tiger salamanders require. Desiltation of these livestock ponds shall not involve any increase in the original storage capacity of a pond and shall incorporate, to the best extent possible the following design features. These design features were developed in consultation with California tiger salamander expert Pete Trenham and were compiled as part of the NRCS and ACRCD's Draft Pond Restoration Design and Plan (NRCS and ACRCD, 2006).

i. Ponds shall be sized to retain sufficient water for larval development during the entire rearing season (January, or whenever rains commence, through late July or early August in most years); ponds can be allowed to dry during the fall (typically mid-August through early December).[1]

ii. Ponds shall contain a shallow water area for larval and juvenile rearing. This shallow area (approximately 1 foot deep) should be unshaded and contain no or very short

[1] Note that pond management that mimics the natural water cycle, where possible, will be the most beneficial for the California red-legged frog and the California tiger salamander (USFWS 2002).

emergent plants. The shallow area shall be designed so that the water warms quickly in the winter sun but is of sufficient water depth to provide aquatic habitat throughout spring.

iii. Ponds also shall contain a deep-water escape area with portions deeper than approximately 3.5 feet[2]. This deep-water area should contain a mosaic of open water and dense aquatic vegetation, or dense patches of shoreline vegetation adjacent to deep water.

iv. When possible, the areal extent of the shallow and deep portions of the pond should be about equal.

In addition, pond desiltation will adhere to the following avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when constructing beneficial activities that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. California tiger salamanders have been found up to approximately 6,500 feet from any known breeding pond, although California tiger salamander adults remain more concentrated within approximately 650 feet of the pond. Trenham and Shaffer (2005) estimate that in optimal habitat 95 percent of California tiger salamanders remain within 2,100 feet of breeding ponds. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known Covered Species occurrences, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

[2] Including an area deeper than approximately 3.5 feet provides an area where California red-legged frogs can escape predators, and including an area deeper than approximately 5 feet discourages uniformly thick growth of emergent plants that might shade the entire area (which would provide poor habitat for both California red-legged frogs and California tiger salamanders).

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. Restoration activities at ponds shall take place between August 31 and October 31 (or the first rainfall of the season depositing more than 0.25 inch) when larval development of California tiger salamanders and other amphibians is likely to be complete and ponds have less water present. California tiger salamanders use ponds to breed and lay eggs primarily following rains in November to February (CDFG, 1997). Metamorphosis usually occurs from May to July, with a peak in June (Trenham et al. 2000). Applying temporal limitations to when pond activities are occurring provides the best avoidance measure to limit impacts on in-pond and surrounding upland populations.

g. Sediment removal during pond maintenance/restoration shall be placed where it shall not pass into California tiger salamander breeding pools; nor shall it pass into any other waters of the state as per Fish and Game Code section 5650. Sediment shall not be placed over areas with ground squirrel burrows.

h. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

Stream Restoration

The activities covered under the Stream Restoration set of management practices includes activities that are associated with the repair, maintenance and restoration of suitable aquatic and riparian corridor habitat for the Covered Species. These activities are designed to provide erosion control measures, reduce sedimentation, improve water quality and restore and improve the overall quality of riparian habitat.

Many stream courses throughout Alameda County have been severely modified by urban development, increased and modified runoff, flood control management activities, and infrastructure encroachment. In addition, many streams continue to be degraded due to illegal dumping, filling, encroachment (structures), and unsuitable stream stabilization practices. Sometimes these activities are done without an understanding of the effects on the natural resources. The result is an unhealthy stream system and a downward spiral of continued degradation.

Stream restoration activities have the potential to benefit habitat for many local wildlife species. While not the primary habitat for the Covered Species under this Program, these species can benefit from restoration efforts in riparian areas. Riparian habitat is one of the vegetation types adjacent to the scrub habitat that the Alameda whipsnake needs for foraging, dispersal, and population interactions (*e.g.*, stream corridors) (USFWS, 2006). California tiger salamanders are also uncommonly found in stream courses in valley-foothill riparian habitats (CDFG, 2005). Stream restoration can benefit the Alameda whipsnake and California tiger salamander by

providing adequate cover for them in these corridors, especially along stream courses where adequate upland habitat exists for each species.

Take coverage for the California tiger salamander and/or the Alameda whipsnake will be provided for stream restoration activities that are covered under the Program. Which species are covered under this activity will be detailed in the Cooperative Agreement and in consultation with the Program Administrator and the Department when enrolling in this Program.

Restoration activities in or near aquatic habitat shall conform to temporal limitations as well as sediment avoidance and other minimization measures as described below. Implementation of these practices may require temporary dewatering of the project site.

Stream restoration activities may include one or more of the following management practices.

1. Native Riparian Habitat Restoration
   This activity relates to planting, maintenance and establishment of native vegetation along riparian corridors to enhance and improve habitat. The establishment of riparian buffers and control of invasive plants reduces sediment, nutrient, and other contaminant loading to streams and water bodies and improves wildlife habitat. Non-native plants can out-compete and ultimately replace native plants resulting in a loss of native plant species diversity and wildlife habitat.

   i. *Riparian Plantings*
      Plantings applied on stable areas adjacent to water bodies and shall consist of native vegetative plantings ultimately resulting in forest canopy and understory development. This practice can be used to create shade to lower water temperatures, provide a source of detritus and large woody debris for fish and other aquatic organisms, and provide riparian habitat and corridors for wildlife.

   ii. *Invasive and Non-native Plant Removal*
      Restoration and conservation of rare or declining native vegetation communities and associated wildlife species along riparian corridors in Alameda County. This practice may be used to remove invasive plant species in riparian areas, including but not limited to Giant Cane (*Arundo donax)*, Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*) and other non-native, invasive plant species. Any necessary use of herbicides shall occur according to labeled directions and local, State, and Federal regulations and guidelines.

   This management practice incorporates the following avoidance and minimization measures listed below to limit impacts to Covered Species.

   a. Rodent burrows shall be avoided to the maximum extent practicable when constructing conservation practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species.

   b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Native tree removal and disturbance of native shrubs or woody perennials adjacent to the streambank or stream channel shall be avoided or minimized to the fullest extent possible. If riparian vegetation will be disturbed, it shall be replaced with similar species.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for the Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

g. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channels and avoiding areas of concentrated ground squirrel burrows suitable for use by Covered Species. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream or pond shall be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream must be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles must be moved away from the stream prior to refueling and lubrication.

h. For any dewatering activities, water will be diverted by installation of a temporary barrier. All water above the barrier will be diverted downstream at an appropriate rate to maintain downstream flows during construction. A qualified biologist, with all necessary State permits shall relocate Covered Species and other native aquatic species within the project site. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Adequate water depth and channel width will be maintained at all times to allow for fish passage. When construction is completed, the barriers to flow will be removed in a manner that will allow flow to resume with the least disturbance possible to the substrate.

2. <u>In-Stream Channel Stabilization</u>
This activity consists of the use of in-stream structures to provide channel and grade stabilization to reduce erosion and encourage vegetation establishment to reduce sediment loading to streams, improve water quality and improve wildlife habitat. Practices must meet NRCS standards and specifications for stream stabilization

practices and be approved by a certified engineer and qualified geomorphologist in order to meet Federal standards. Management practices that involve in-stream stabilization include installation of in-stream stabilization structures and obstruction removal.

i) *Installation of In-Stream Stabilization Structures*
Installation of suitable structures to stabilize stream channels and will be used for streams that are undergoing damaging aggradation (filling in of) or degradation that cannot be controlled by upstream practices. This activity could include installation of rock, concrete or timber structures that do not control the rate of flow or water level in channels. This activity may also include the removal of accumulated sand or sediment.

ii) *Obstruction Removal*
This activity includes the removal and disposal of unwanted structures from streams. This practice includes removal of cars, large appliances, and garbage (items that are anthropogenic and not natural to the system). Large objects will be removed unless their removal will result in a (net) detrimental effect. For example, if it was discovered that multiple cars were stacked behind one another under a stream bank the cars will not be removed if the action will result in disturbance to a significant area (beyond the scope of this program). Obstructions shall be removed when the stream channel is dry or during the lowest flows to minimize impacts.

These management practices incorporate the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when constructing conservation practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Native tree removal and disturbance of native shrubs or woody perennials adjacent to the streambank or stream channel shall be avoided or minimized to the fullest extent possible. If riparian vegetation will be disturbed, it shall be replaced with similar species.

e. No plastic or monofilament erosion control matting shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for the Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. The general construction season for stream restoration shall be from June 15 to October 31 (or the first rainfall depositing more than 0.25 inch) to avoid impacts to breeding, feeding and sheltering of Covered Species found within the riparian corridor.

g. Excavation and grading activities shall only be conducted during dry weather.

h. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the release of petroleum materials into waters of the state in accordance with Fish and Game Code section 5650.

i. If construction shall occur in a riparian area before August 1, a survey must be conducted for nesting bird activity. If nesting birds are found within the area, staff must consult with the Department to determine appropriate avoidance measures.

j. Sediment removal during stream restoration shall be placed where it shall not pass into any waters of the state as per Fish and Game Code section 5650. Sediment shall not be placed over areas with concentrated ground squirrel burrows.

k. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

l. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channels and avoiding areas of concentrated ground squirrel burrows suitable for use by Covered Species. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream or pond shall be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream must be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles must be moved away from the stream prior to refueling and lubrication.

m. For any dewatering activities, water will be diverted by installation of a temporary barrier. All water above the barrier will be diverted downstream at an appropriate rate to maintain downstream flows during construction. A qualified biologist, with all necessary State permits shall relocate fish, amphibians and other native aquatic species within the project site. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Adequate water depth and channel width will be maintained at all times to allow for fish passage. When construction is completed, the barriers to flow will be removed in a manner that will allow flow to resume with the least disturbance possible to the substrate.

Livestock and Wildlife Water Distribution

The activities covered under the Livestock and Wildlife Water Distribution set of management practices includes activities that provide benefits to habitat and state listed species by improving livestock distribution through spring development and other off stream water developments. These off stream water developments may help reduce pressure on riparian habitats and other aquatic features by decreasing the amount of time livestock spend in streams, enhancing water quality and reducing sedimentation from streambank erosion. Proper placement of off stream developments contributes to proper forage use by livestock which decrease erosion and presence of invasive plants, resulting in improvements to the surrounding upland habitat. In addition to providing additional livestock water to support ongoing grazing management, these facilities also provide clean and readily available water for wildlife such as bats, birds, deer and other mammals. All troughs installed are required to incorporate adequate safe access and escape opportunities such as ramps for small wildlife.

Improved water distribution on rangelands facilitates better management by improving the distribution of water and allows for the limitation of livestock from streams, ponds, and lakes to improve habitat in these areas. Sustainable grazing management is essential to supporting healthy populations of California tiger salamanders, Alameda whipsnakes and other species throughout Alameda County. Both the USFWS and the Department recognize the importance of maintaining sustainable grazing operations to the survival of the California tiger salamander (USFWS, 2004, McCamman, 2010). Maintenance of shorter vegetation improves the ability of California tiger salamanders to move between aquatic and upland habitats and may also make areas more suitable for California ground squirrels whose burrows are essential to California tiger salamanders (USFWS, 2004). One of the factors contributing to the decline of the Alameda whipsnake is the alteration of suitable habitat as a result of fire suppression and the increased likelihood of catastrophic wildfires. Managed grazing can be used as a form of vegetation management to reduce fuel loads and reduce the potential of catastrophic wildfires (Bush, 2006). Developing off-stream water sources on rangelands allows for cattle to be properly managed and distributed. The USFWS believes that livestock grazing, if appropriately managed, can benefit the Alameda whipsnake (USFWS, 1997).

Take coverage for the California tiger salamander and/or the Alameda whipsnake will be provided for water development activities that are covered under the Program. Which species are covered under this activity will be detailed in the Cooperative Agreement and in consultation with the Program Administrator and the Department when enrolling in this Program.

Livestock and Wildlife Water Distribution activities may include one or more of the following management practices

1. Spring Development
   The spring development management practice consists of capping or collecting water at a spring or seep and transporting it through pipelines to tanks or troughs to provide alternative livestock watering facilities. Development will be confined to springs or seep areas that could furnish a dependable supply of water. Water flow from the spring or seep may be temporarily reduced during the construction period. The Program Adminstrator and/or their contractor shall evaluate selection of spring developments and consider the potential impacts on long-term groundwater supply, effects on stream flows in the watershed, and maintaining adequate flow so that the spring development enhances the habitat values of the spring or seep area. This management practice

incorporates the following avoidance and minimization measures to limit impacts to Covered Species.

a. The area around the water source may be fenced to limit livestock access. Fencing shall be wildlife friendly to retain access by smaller species.

b. All troughs associated with the development shall have float valves installed and will be used to control water flow. All troughs shall have escape ramps for wildlife.

c. Sufficient spring flow shall remain in the wetland area to maintain the functions and values of the original wetland area. Water collected from the spring will not be held for more than 30 days. Overflow from the development will be directed back into the wetland area.

d. Native plant species shall be used for revegetation, if necessary, within the disturbed area.

e. Spring development and enhancement shall be constructed in accordance with NRCS Conservation Practice Standards and Specifications for spring development, wetland restoration and associated practices.

f. Rodent burrows shall be avoided to the maximum extent practicable when installing practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species..

g. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

h. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

i. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

j. No plastic mono-filament erosion control matting shall be used for erosion control near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for California tiger salamanders. Amphibians, birds, reptiles and other species can become trapped in plastic matting.

k. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

l. All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.

m. Disturbance in known or potential Alameda whipsnake habitat shall take place between June 15 and October 31, when the Alameda whipsnake is more active, to promote movement when disturbance may occur.

2. Off-stream Water Facilities

This practice can be associated with spring developments, wells, or other off-stream water sources. Installation of watering facilities including tanks and/or troughs provides adequate amounts and quality of drinking water for livestock and wildlife and improves animal distribution to support effective rangeland management. This practice must incorporate adequate safe access and escape opportunities such as ramps in the watering facility design. This management practice includes pipeline installation.

i) *Pipeline Installation*
This practice is used in conjunction with other livestock and wildlife water improvement practices. It includes the installation of pipelines for conveying water from springs or ponds to alternative locations. Occasionally, pipelines may cross streams or other watercourses. Pipeline installation will be used to shift livestock to constructed water sources and away from streams and lake to reduce bank erosion, sediment yield, and manure deposition in watercourses.

This management practice incorporates the following avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when installing practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a

qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for California tiger salamanders. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

g. All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.

h. Disturbance in known or potential Alameda whipsnake habitat shall take place between June 15 and October 31, when the Alameda whipsnake is more active, to promote movement when disturbance may occur.

Erosion Control

The activities covered under this set of management practices includes activities that provide benefits to habitat and state listed species by reducing damage from sediment and runoff to watercourses. Installation of erosion control practices improves water quality by reducing non-point source pollution and improving habitat for aquatic species.

Take coverage for the California tiger salamander and/or the Alameda whipsnake will be provided for erosion control activities that are covered under the Program. Which species are covered under this activity will be detailed in the Cooperative Agreement and in consultation with the Program Administrator and the Department when enrolling in this Program.

Erosion control activities may include one or more of the following management practices

Access Road Improvements

This activity is limited to the improvement of an existing road to prevent erosion and maintain or improve water quality. An example of this practice might include re-grading, outsloping, or the addition of a rolling dip to a road so that water is less erosive as it travels across the road. This practice may also be used for repair, removal, or installation of culverts (water control structures) in non-fish bearing streams associated with access road improvements. In some cases this practice may also be used to decommission improperly placed roads (i.e. road that impacts habitat such as a seep area or a road that is too steep and contributing significant erosion) and re-route a new road to a more appropriate path. Roads contribute significant erosion to watercourses and degradation of upland and aquatic habitat values through improper placement, undersized or oversized culverts, and improper or lack of appropriate maintenance. This

management practice incorporates the following avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when installing practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species..

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

g. All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.

h. Disturbance in known or potential Alameda whipsnake habitat shall only take place between June 15 and October 31, when the Alameda whipsnake is more active and less likely to be impacted.

2. Vegetation Establishment

This activity relates to planting, maintenance and establishment of native or non-persistent, noninvasive vegetation to reduce erosion and non-point source pollution to waterways, while also enhancing habitat. This management practice includes critical area planting, installation of filter strips and grassed waterways. Critical Area Planting Planting of trees, shrubs, grasses, or legumes on highly erosive or critically eroding

areas. The resulting vegetation cover will be expected to reduce the amount of soil nutrients washed into surface waters or leached into ground water. Pesticide use will be limited to the use of herbicides to control established stands of non-native species.

i) *Filter Strips*
Filter strips or areas of vegetation shall be used at the lower edges of fields, pastures, or other areas adjacent to streams, ponds, and lakes to remove sediment, organic matter, and other pollutants from runoff and wastewater. Installation often requires soil manipulation to remove surface irregularities and to properly address water movement through the filter strip. Pesticides and nutrients may be removed from runoff flowing through the vegetated filter strip by infiltration, absorption, adsorption, decomposition, and volatilization thereby protecting water quality downstream.

ii) *Grassed Waterways*
Used to control runoff by shaping or grading natural or constructed channels and planting the area to grass. This practice may reduce erosion in areas of concentrated flow (e.g., gullies or pond spillways) and result in the reduction of sediment and substances delivered to receiving waters. Vegetation may act as a filter in removing some of the sediment delivered to the waterway, although this is not the primary function of a grassed waterway.

These management practices incorporate the following design features and avoidance and minimization measures to limit impacts to Covered Species.

a. Rodent burrows shall be avoided to the maximum extent practicable when installing practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain adult Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered Species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

g. All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.

h. Disturbance in known or potential Alameda whipsnake habitat shall only take place between June 15 and October 31, when the Alameda whipsnake is more active and less likely to be impacted.

3. Water Control Structures

Installation of a structure in a drainage, stream, or gully, that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation, such as culverts, pipe drops or chutes within gullies, debris screens, etc. These structures are used to replace or retrofit existing culverts that are either not functioning properly or are a barrier to fish passage. The placement of new culverts, when environmentally beneficial, is also included in this practice. By controlling the velocity of water running through an area, this practice reduces erosion and prevents down cutting of stream channels. Installation of culverts shall be consistent with the Department's "Culvert Criteria for Fish Passage" (April 2003) and will incorporate the following avoidance and minimization measures to limit impacts to Covered Species..

a. Rodent burrows shall be avoided to the maximum extent practicable when installing practices that involve surface disturbance. Outside of the breeding season, California tiger salamanders live exclusively on land, primarily in the burrows of ground squirrels and gophers. Alameda whipsnake also use small rodent burrows for areas of retreat (EPA, 2010). Avoidance of burrows within the project area, especially with known occurrences of the Covered Species, will prevent impacts to burrows that could contain Covered Species.

b. Construction activities shall be conducted during daylight hours, to the maximum extent practicable. Movement and dispersal of California tiger salamanders occurs mostly at night (CDFG, 1997).

c. All steep-walled trenches and/or holes deeper than 6-inches shall be covered at night or an escape ramp shall be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. If a Covered Species is present in the trench or hole, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

d. Projects shall be designed to minimize disturbance of existing vegetation near and on permanent and seasonal pools of streams, marshes, ponds, and shorelines with extensive emergent vegetation, or weedy vegetation.

e. No plastic or monofilament erosion control material shall be used near riparian habitat, along the perimeter of ponds, or near other aquatic habitat that may provide habitat for Covered species. Amphibians, birds, reptiles and other species can become trapped in plastic material.

f. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is present in the structure, a qualified biologist shall be notified immediately and no construction activity shall take place within 100 feet of the site until the animal is relocated.

g. All rock outcroppings shall be avoided to minimize effects on Alameda whipsnake.

h. Disturbance in known or potential Alameda whipsnake habitat shall only take place between June 15 and October 31, when the Alameda whipsnake is more active and less likely to be impacted.

Routine and Ongoing Agricultural Activities

The following is a list of routine and ongoing activities associated with ranching and agriculture that are afforded take coverage under the Program. This list of routine activities is not exhaustive and serves merely to provide guidance to Cooperators as to the type of activities that are anticipated to be covered under the Program. Activities that are not listed below will be reviewed by the Program Administrator and the Department to determine if the activities are appropriate for coverage under the Program. For the purposes of this Program the conversion of rangeland to more intensive agricultural uses, such as permanent crops, is not considered a routine and ongoing agricultural activity. Ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management are considered routine and ongoing agricultural activities. Routine activities may vary from one ranching operation to another, and vary with changing environmental and economic conditions.

Routine and ongoing agricultural activities that a Cooperator will receive take authorization for under their participation in the Program will be listed in the Cooperative Agreement. The ACRCD and the Department recognize that these are routine and ongoing agricultural activities that cannot be monitored as part of the Program. Cooperators will provide self-certification that they will implement the routine and ongoing agricultural activities as they are described below to prevent impacts to Covered Species as part of the authorization of the Cooperative Agreement.

1. Livestock grazing according to normally acceptable and established levels of intensity for the various plant communities in terms of the number of head of livestock per acre of rangeland.

2. Routine maintenance or construction of fences for grazing management. Rodent burrows will be avoided to the maximum extent practicable when constructing fencing that involves surface disturbance. Impacts to native and existing vegetation will be avoided to the maximum extent possible.

3. Maintenance and construction of livestock management facilities such as corrals, sheds, and other ranch outbuildings outside of the rainy season. Rodent burrows will be avoided to the maximum extent practicable when constructing and/or maintaining facilities that involves surface disturbance. Impacts to native and existing vegetation will be avoided to the maximum extent possible.

4. Repair, maintenance, or de-commissioning of unimproved ranch roads. This activity may include improvement, upgrade, or construction of new roads if approved by the Department. Activities shall be limited to the dry period of the year and shall be restricted to periods of low rainfall (less than 0.25 inch per 24 hour period), time periods with less than a 30 percent chance of rain, or dry weather periods. If rain is predicted based on the above criteria, within 72 hours during project activity, all activities shall cease until no further rain is forecast. Rodent burrows will be avoided to the maximum extent practicable when conducting road maintenance that involves surface disturbance. Impacts to native and existing vegetation will be avoided to the maximum extent possible. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way.

5. Control of ground-burrowing rodents using alternative management tools such as raptor perches, barn owl boxes and/or trapping methods will be encouraged as part of this Program. Use of poisonous grain using broad control methods is not the preferred method of control. Use of this method will be limited to population explosions in targeted areas to prevent negative impacts that can be associated with uncontrolled population growth (i.e. burrows compromising the integrity of a dam, significant forage loss etc.). Use of poisonous grain will occur according to the labeled directions and local, State, and Federal regulations and guidelines. In areas where Covered Species exist, the use of toxic or suffocating gases is prohibited due to their non-target-specific mode of action.

6. Perimeter discing or blading for fire prevention control and other fire prevention activities. Activities shall be limited to the dry period of the year and shall be restricted to periods of low rainfall (less than 0.25 inch per 24-hour period), time periods with less than a 30 percent chance of rain, or dry weather periods. If rain is predicted based on the above criteria, within 72 hours during project activity, all activities shall cease until no further rain is forecast. Rodent burrows will be avoided to the maximum extent practicable when constructing discing activities.

7. Placement of mineral supplements and supplemental feeding.

8. Control and management of noxious weeds. Use of herbicides will occur according to labeled directions and local, State, and Federal regulations and guidelines. Activities shall be limited to the dry period of the year and shall be restricted to periods of low rainfall (less than 0.25 inch per 24-hour period), time periods with less than a 30 percent chance of rain, or dry weather periods. If rain is predicted based on the above criteria, within 72 hours during project activity, all activities shall cease until no further rain is forecast.

9. Riparian area maintenance (e.g., clearing debris not embedded in the stream channel). Rodent burrows will be avoided to the maximum extent practicable when conducting activities that involves surface disturbance. Impacts to native and existing vegetation will be avoided to the maximum extent possible. All construction pipes, culverts, or similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way.

10. Movement of livestock.

11. Use of all-terrain and off-road vehicles in pasture for ranch management activities.

12. Use of horses and horse grazing according to normally accepted conditions.

13. Maintenance of existing off-stream livestock water developments including diversions and springs. Rodent burrows will be avoided to the maximum extent practicable when conducting activities that involve surface disturbance. Impacts to native and existing vegetation will be avoided to the maximum extent possible. All steep-walled trenches and/or holes deeper than 6-inches will be covered at night or an escape ramp will be placed in them to facilitate escape by any wildlife that may fall into the excavated area. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle of no greater than 30 degrees. Trenches and holes shall be checked every morning prior to construction activity. All construction pipes, culverts, or

similar structures that are stored in the project area for one or more overnight periods shall be securely capped prior to storage or thoroughly inspected for animals if the pipe is subsequently buried, capped, or otherwise used or moved in any way.

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