



Santa Clara Valley
Habitat Conservation Plan/Natural Community Conservation Plan

For those attending the June 14th Liaison Group meeting, a light meal will be provided at 5:00 pm in the meeting area.



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Habitat Conservation Plan/Natural Community Conservation Plan

SANTA CLARA VALLEY HCP/NCCP
LIAISON GROUP MEETING
THURSDAY, JUNE 14, 2007
SANTA CLARA VALLEY WATER DISTRICT
5700 ALMADEN EXPRESSWAY, SAN JOSE
HEADQUARTERS BUILDING, BOARD MEETING ROOM
DIRECTIONS IN PACKET

5:30 PM

Note new meeting location

1. Welcome/introductions (5 minutes)---Supervisor Don Gage
2. Project Task and Budget Status Report (15 minutes)---David Zippin and Ken Schreiber
Desired Outcome: Provide an overview of and answer questions regarding the status of the HCP/NCCP work schedule and budget
3. Workshop on Biological Goals and Objectives and Conservation Actions and Alternative Conservation Strategies (115 minutes)---David Zippin, Ken Schreiber and Local Agency Staff
 - a. Overview Presentation---David Zippin
 - b. Liaison Group DiscussionDesired Outcome: Provide an overview of, answer question about and have Liaison Group discussion of draft biological goals and objectives and emerging conservation strategy alternatives.
4. Information Items (10 minutes)---Ken Schreiber
 - a. Stakeholder Group Activities
 - b. Environmental Review
 - c. Section 6 Planning Grants
 - d. Local Attorney Meetings
 - Assumptions regarding Staff attorney work
 - Outside Legal Resources
 - e. Liaison Group Meeting ScheduleDesired Outcome: Receive and discuss information regarding the status of HCP/NCCP activities. Take action regarding the scheduling and timing of Liaison Group meetings in the second half of 2007 and all of 2008.

5. Discussion with Wildlife Agency staff (5 minutes)
Desired Outcome: Share information and, when appropriate, reach common understanding regarding issues of interest
6. Public Comments (5 minutes)
Desired Outcome: Receive comments from members of the public

Next Liaison Group meeting is on Thursday, August 16, 2007 with the time (see agenda item 4e) and location to be determined.



Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan

Date: June 14, 2007

AGENDA ITEM 3

TO: Governing Body Liaison Group

FROM: Management Team

SUBJECT: Workshop on Biological Goals and Objectives and Conservation Actions and Alternative Conservation Strategies

PREPARED BY: Kenneth Schreiber, Program Manager

Purpose of this Staff Report: Provide background material for the workshop including transmitting draft Biological Goals and Objectives and Conservation Actions. Information on emerging conservation strategy alternatives will be presented at the meeting.

Next Steps After Liaison Group Review: The process for developing the Habitat Plan is targeting an October 2007 release by the Liaison Group of integrated key Habitat Plan policy information including the biological goals and objectives, conservation actions, three alternative conservation strategies, cost information, funding concepts, conditions on public and private sector covered activities and the length of the permit term. Each Local Partner's elected decision makers would be asked to review and comment on this set of policy information. The Liaison Group would then, in early 2008, provide guidance to staff and consultants regarding preparation of the Habitat Plan.

Recommendation: It is recommended that the Liaison Group review and discuss the information in this staff report and information presented at the June meeting. Liaison Group comments will be used in formulating the goals, objectives, actions and alternative conservation strategies that will return to the Liaison Group for further review prior to review by each Local Partner's elected decision makers.

Discussion (note that the following discussion is adapted from draft text being prepared for Habitat Plan Chapter 5, Conservation Strategy):

Frame Work

The emerging conservation strategy is being designed using a multi-scale approach in accordance with principles of conservation biology. At the largest scale, biological goals and objectives were developed to encompass ecological processes, environmental gradients, biological diversity, and regional wildlife linkages. Conservation actions were developed to implement these goals and objectives. These conservation actions occur at the landscape scale or *landscape level*, generally at the scale of miles or tens of miles. At the middle scale, conservation actions were developed to address natural communities primarily through the enhancement, restoration, and management of vegetation types (i.e., land cover types). This medium scale is called the *natural community level*. The final scale addresses the specific needs of covered species for protection and enhancement of individuals,

populations, and groups of populations. *Species-level* conservation actions were developed to supplement and focus actions developed at the broader scales and to ensure that all the needs of particular species are addressed.

The conservation actions are divided into land acquisition actions and actions at the natural community and species levels. All conservation actions are designed to have enough detail and specificity to allow implementation. Because of the large scale of the Habitat Plan and its long timeframe, actions are also designed to be flexible. For example, natural community-level actions provide broad management guidelines and principles such that future land managers can implement specific techniques on the ground that are best suited to site conditions. Preserving this flexibility is an important part of the conservation strategy.

Implementation of many actions will require the preparation of site-specific implementation documents (e.g., reserve management plans, restoration plans). These plans will be prepared during Plan implementation after land is acquired and specific restoration and management needs are determined. Reserve management plans are intended to guide activities within individual reserves. In some cases, management documents will be prepared for the entire Reserve System (e.g., recreation management, invasive plant management). Reserve management plans will be completed within 1 year of acquisition of individual reserve sites.

Biological Goals and Objectives

The conservation strategy is designed to achieve landscape, natural community, and species-level goals and objectives. Goals are broad, guiding principles based on the conservation needs of the resources. Biological objectives are expressed as conservation targets or desired conditions. Objectives are measurable and quantitative when possible; they clearly state a desired result and will collectively achieve the biological goals.

All the biological goals and objectives are presented in attached Tables 5-1a through 5-1d. The conservation actions contain detailed information on all aspects of reserve acquisition and management. They provide a strategy for how the goals and objectives will be achieved. It is expected that many of the details of the conservation actions will be modified during Plan implementation through the monitoring and adaptive management program, while goals and objectives will remain relatively static.

The biological goals and objectives and conservation actions in Table 5-1 are organized by scale: landscape level (Table 5-1a), natural community level (Table 5-1b) and species level (Tables 5-1c and d). At the species level, wildlife and plants are separated in order to make the tables more accessible. The conservation actions that were designed to achieve each objective are shown in Tables 5-2a and 5-2b along with the species that each action targets. Table 5-2a lists sequentially all land acquisition actions; Table 5-2b lists all management actions, broadly defined. One conservation action may contribute to the same objective.

In tables 5-1 and 5-2, the placeholders for land acquisition and stream miles (acquire ___ acres or miles) will be identified as part of determining the specific features of the preferred conservation strategy. Three alternative conservation strategies will be forwarded to the Local Partners for review in late 2007 and early 2008. Components of three strategy alternatives will be presented at the June Liaison Group meeting.

Process of Developing Biological Goals and Objectives and Conservation Actions

The biological goals and objectives and conservation actions were initially developed through a series of six workshops composed of key technical staff from Jones & Stokes, representatives of the Wildlife Agencies, species experts from the Wildlife Agencies, biologists and species experts from SCVWD, and outside species experts.

The purpose of each workshop was to collaboratively develop working draft biological goals and objectives. Each workshop began with an overview of the relevant natural communities and species, including key threats, ecological needs, and issues for the conservation strategy (e.g., potential conflicts with other species) by technical experts. Participants then worked through a set of preliminary draft goals and objectives developed by Jones & Stokes and provided to participants prior to the workshop. Follow-up web-based conference calls or meetings were held at least once for every workshop to refine the goals and objectives to a point where all meeting participants were satisfied.

Every effort was made to create biological objectives that were quantitative as well as measurable. Workshop participants acknowledged that quantitative biological objectives may be somewhat subjective, but at least these quantitative objectives are explicit, clear, and transparent, and they serve as a starting point for conservation actions in the study area

Goals and objectives were frequently refined and updated as new analysis or new information was developed. In some cases, several possible quantitative targets emerged for an objective. These were carried forward as alternative approaches to meeting the same goal, and formed the basis for the alternative conservation strategies that preceded the selected conservation strategy. Biological goals and objectives were developed using the primary sources listed below.

- Ecological data from species accounts (Appendix D) and natural community descriptions (Chapter 3).
- Existing conservation targets for covered species in federal recovery plans or status review.
- Other sources with conservation targets or conservation recommendations that address the covered species or the study area.
- Critical habitat maps and data in published critical habitat rules for covered species.
- Habitat distribution models developed for 20 covered species.
- Results of the conservation gap analysis.
- Input from resource specialists including staff from the Wildlife Agencies.

Most of the biological goals and objectives are designed at least to maintain current populations of covered and other native species in the study area. In some cases, populations of covered species are expected to increase as a result of land preservation, improved water management, habitat enhancement, habitat restoration, and habitat creation.

When developing quantitative objectives, workshop participants recognized that conservation encompasses both mitigation and the need to contribute to species recovery. The level of this contribution to recovery was based, in part, on the proportion of the species' range within the study area. Quantitative biological objectives were established on the basis of relevant species-specific data.

When data were not available, general guidelines or conservation “rules of thumb” were used to help establish quantitative biological objectives on the basis of the proportion of the species’ current range within the study area.

Summary List of Biological Goals

Goals are listed below by scale (see Tables 5-1a through 5-1d): landscape level, natural community level, and species level.

Landscape-Level Goals (Table 5-1a)

- **Goal 1.** Protect and maintain natural and seminatural landscapes that are large enough to accommodate natural processes beneficial to populations of covered species.
- **Goal 2.** Sustain and enhance the effective movement and genetic exchange of native organisms within and between natural communities inside and outside the study area.
- **Goal 3.** Enhance or restore representative natural and seminatural landscapes to maintain or increase native biological diversity.

Natural Community–Level Goals (Table 5-1b)

- **Goal 4.** Maintain and enhance functional grassland communities that benefit covered species and promote native biodiversity.
- **Goal 5.** Maintain and enhance chaparral and northern coastal scrub communities to benefit covered and promote native biodiversity.
- **Goal 6.** Maintain and enhance functional oak woodland communities to benefit covered species and promote native biodiversity.
- **Goal 7.** Maintain and enhance functional conifer woodland communities to benefit covered species and promote native biodiversity.
- **Goal 8.** Improve the quality of streams and the hydrologic and geomorphic processes that support them to maintain a functional aquatic and riparian community to benefit covered species and promote native biodiversity.
- **Goal 9.** Maintain a functional riparian forest and scrub community at a variety of successional stages and improve these communities to benefit covered species and promote native biodiversity.
- **Goal 10.** Maintain, enhance, and create or restore pond, freshwater perennial wetland, and seasonal wetland habitats that benefit covered species and promote native biodiversity.

Species-Level Goals (Tables 5-1c and 5-1d)

- **Goal 11.** Maintain or improve viability of existing Bay checkerspot butterfly populations, increase the number of populations, and expand the geographic distribution to ensure the long-term persistence of the species in the study area.
- **Goal 12.** Maintain or increase the breeding population of golden eagles.
- **Goal 13.** Maintain or increase the size and sustainability of the breeding population and increase the distribution of breeding and wintering burrowing owls.
- **Goal 14.** Increase the ability of San Joaquin kit fox to move through and use the study area.

- **Goal 15.** Expand the distribution and enhance the reproductive success and survival of all life stages of Central California Coastal steelhead, Central Valley fall-run Chinook salmon, and Pacific lamprey in the Coyote and Guadalupe watersheds.
- **Goal 16.** Expand the distribution and enhance the reproductive success and survival of all life stages of South Central California Coastal steelhead and Pacific lamprey in the Uvas and Pacheco Creek Watersheds, and maintain distribution and reproductive success of all life stages in the Llagas and Pescadero Watersheds.
- **Goal 17.** Facilitate the expansion of a breeding population of least Bell's vireos into the study area and increase reproductive success of least Bell's vireo.
- **Goal 18.** Maintain and, where appropriate, increase the foothill yellow-legged frog population in the study area.
- **Goal 19.** Maintain and, where appropriate, increase the number of individuals and expand the distribution of California red-legged frog, California tiger salamander, and western pond turtle within the Reserve System to maintain viable populations and contribute to the regional recovery of these species.
- **Goal 20.** Increase the population size of tricolored blackbird to enhance the viability of the species in the study area.
- **Goal 21.** Maintain viability, protect, and increase the size and number of populations of Coyote ceanothus, Santa Clara Valley dudleya, Metcalf Canyon jewelflower, most beautiful jewelflower, smooth lessingia, fragrant fritillary, Mt. Hamilton thistle, Loma Prieta hoita (i.e., covered serpentine plants) within the study area.
- **Goal 22.** Protect and increase the size and number of plant populations to maintain viability of big scale balsamroot, chaparral harebell, San Francisco collinsia, Loma Prieta hoita, robust monardella, rock sanicle, and Hall's bush mallow within the study area.

Attachments:

Tables 5-1a, b, c and d
 Tables 5-2a and 5-2b

Copies: Stakeholder Group

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Goal 1. Protect and maintain natural and semi-natural landscapes that are large enough to accommodate natural processes beneficial to populations of covered species. ¹</p>		
<p>Objective 1.1. Establish a reserve system over ___ acres and ___ stream miles.</p>	<p>LAND-L1. Acquire in fee title or obtain easements on ___ acres and ___ stream miles within the study area.</p>	
<p>Objective 1.2. Protect a range of environmental gradients (such as slope, elevation, aspect, rainfall) across a diversity of natural communities within the reserve system.</p>	<p>LAND-L2. Acquire in fee title or obtain easements on land for the Reserve System that includes the full range of topographic and geographic diversity in the study area.</p>	
<p>Objective 1.3. Protect river systems and hydrologic function within and outside the reserve system.</p>	<p>LAND-L3. Acquire in fee title or obtain easements on ___ acres in the Coyote Watershed, ___ acres in the Guadalupe Watershed, ___ acres in the Llagas Watershed, ___ acres in the Uvas Watershed, ___ acres in the Pescadero Watershed and ___ acres in the Pacheco Watershed.</p>	
	<p>LAND-L4. Acquire in fee title or obtain easements on ___ stream miles, ___ acres of ponds, ___ acres of freshwater wetlands, including ___ acres of seasonal wetlands in both the Northern and Southern watersheds of the study area.</p>	
	<p>STREAM-1. Regulate flow to improve passage during critical migratory periods for aquatic species in areas where partial or seasonal barriers prevent them from completing their life cycle.</p>	
	<p>LAND-L5. Acquire in fee title or obtain easements ___ stream miles in Pescadero watershed.</p>	
<p>Goal 2. Sustain and enhance the effective movement and genetic exchange of native organisms within and between natural communities inside and outside of the study aea.</p>		
<p>[1]</p>		

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Objective 2.1. Protect and enhance habitat linkages within the study area and protect connections to habitat outside the study area.	LAND-L6. Acquire and, where appropriate, enhance natural and semi-natural landscapes between the Santa Theresa Hills and Metcalf Canyon that will provide a wildlife corridor between the Santa Cruz Mountains and the Diablo Range that can accommodate the movement of covered and other native species at many spatial scales.	
	LAND-L7. Acquire in fee title or obtain easements on ___ acres of serpentine grassland along Coyote Ridge to link existing protected areas and to create a large core reserve for <u>serpentine grassland species to move within.</u>	
	LAND-L8. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities south of Henry Coe State Park to link this core reserve with extensive wetlands surrounding San Felipe Lake in San Benito County.	
	LAND-L9. Acquire in fee title or obtain easements on ___ acres of Oak Woodland and Chaparral & Coastal Scrub natural communities east of Henry Coe State Park to link this core reserve with the large protected area of Romero Ranch.	
	LAND- L10. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities in the NE corner of the study area to link the core reserve that includes Joseph Grant County Park with SFPUC lands and other protected lands in <u>Alameda County.</u>	
	LAND – L11. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities to connect Almaden Quicksilver County Park with protected open space to the east near Calero Lake.	

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	<p>LAND-L12. Acquire in fee title or obtain easements on ___ acres of Conifer Woodland, Riparian Forest & Scrub, Oak Woodland, and Grassland natural communities, in the portion of the Pescadero Watershed that is in the study area and along the Pajaro River, to help maintain wildlife connections between the Santa Cruz Mountains and the Gabilan Range outside the study area.</p>	
<p>Objective 2.2. Increase the permeability of Highway 152 for species movement across the highway from the Highway 152/156 interchange east to the Santa Clara/Merced county line at locations and with structures that have the potential to most benefit movement of a variety of native species.</p>	<p>STREAM-1. Regulate flow to improve passage during critical migratory periods for aquatic species in areas where partial or seasonal barriers prevent them from completing their life cycle.</p> <p>LM-1. Remove fences and roads, where feasible.</p> <p>LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).</p> <p>LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.</p> <p>LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.</p> <p>LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.</p>	

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 2.3. Increase the permeability for species movement across Santa Clara Valley between San Jose and Morgan Hill at locations and with structures that have the potential to most benefit movement of a variety of covered and other native species.</p>	LM-1. Remove fences and roads, where feasible.	
	LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).	
	LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	
	LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	
	LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	
<p>Objective 2.4. Increase the permeability for species movement across Santa Clara Valley from the southern edge of urban development in Morgan Hill south to the northern edge of urban development in Gilroy at locations and with structures that have the potential to most benefit movement of a variety of covered and other native species.</p>	LM-1. Remove fences and roads, where feasible.	
	LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).	
	LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	
	LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	
	LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 2.5. Increase the permeability for species movement across Santa Clara Valley from the southern edge of urban development in Gilroy to the county line at locations and with structures that have the potential to most benefit movement of a variety of covered and other native species.</p>	LM-1. Remove fences and roads, where feasible.	
	LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).	
	LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	
	LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	
	LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	
<p>Objective 2.7. Increase the permeability for species movement across Highway 152 from urban Gilroy west to the Santa Cruz County line at locations and with structures that have the potential to most benefit movement of a variety of covered and other native species.</p>	LM-1. Remove fences and roads, where feasible.	
	LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).	
	LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	
	LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	
	LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Goal 3. Enhance or restore representative natural and semi-natural landscapes to maintain or increase native biological diversity.		
Objective 3.1. Enhance or restore terrestrial and aquatic land-cover types within the Reserve System to increase the total area of quality habitat for covered and other native species and to improve hydrologic function.	LM-6. Enhance or restore an estimated __ acres of grassland, __ acres of chaparral and northern coastal scrub, __ acres of oak woodland, and __ acres of conifer woodland within the Reserve System.	
	LM-7. Enhance or restore an estimated ___ miles of stream, ___ acres of riparian woodland and forest, ___ acres of freshwater marsh, ___ acres of seasonal wetlands, and ___ acres of ponds to maintain and when necessary improve hydrologic functions in the study area.	
Objective 3.2. Allow natural disturbance regimes such as fire and flooding to occur within the Reserve System or implement management actions that mimic those natural disturbances.	LM-8. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.	
	LM-9. In identified “No Burn” areas implement the appropriate management actions that mimic the natural effects of fire (e.g., mowing, grazing, hand pulling) and subsequently improve habitat for native vegetation.	
	LM-10. <i>TBD: Specific action for natural flood protection (integrate with District Policy)§ Natural flood protection.</i>	
Objective 3.3. Eradicate or reduce the cover, biomass, and distribution of existing target, non-native invasive plants and reduce the number and distribution of non-native, invasive animals, where possible.	LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.	

Table 5-1a. Biological Goals, Objectives and Conservation Actions: Landscape Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.	
	LM-13. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish, feral cats) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.	
	RESEARCH-2. Experimentally manage oak woodlands to reduce seedling mortality, increase seedling and sapling survival and determine factors relevant to regeneration, including browsing by mammals, birds, and insects.	
	LM-14. Selectively apply herbicides or other treatments.	
Notes: 1. Excerpted from NCCP Act and revised for the Plan		

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Grassland		
Goal 4. Maintain and enhance functional grassland communities that benefit covered species and promote native biodiversity.		
Objective 4.1. Protect approximately 6,000 acres of serpentine grassland containing the full range of serpentine grassland associations and species including serpentine seeps and serpentine rock outcrops as part of the Reserve System. [1]	LAND-G1. Acquire 6,000 acres of serpentine grassland by fee title or conservation easement with the full range of serpentine grassland associations and vegetation diversity found throughout the study area.	
Objective 4.2. Protect ___ acres of annual grassland in a diversity of soils types and other environmental gradients including areas suitable for enhancing native species.	LAND-G2. Acquire__ acres of annual grassland by fee title or conservation easement as part of the Reserve System.	
Objective 4.3. Protect native grassland stands in a diversity of soils types and other environmental gradients with areas suitable for enhancing native species.	LAND-G3. Acquire areas of native perennial grasslands by fee title or conservation easement as part of the Reserve System.	
Objective 4.4. Enhance grasslands by reducing cover and biomass of non-native plants and by increasing the diversity of native plants.	GRASS-1. Continue or introduce livestock and native herbivore (e.g., elk) grazing in a variety of grazing regimes.	
	GRASS-2. Conduct prescribed burns, where possible.	
	GRASS-3. Conduct mowing in selected areas to mimic grazing where use of livestock is impractical.	
	GRASS-4. Conduct selected seeding of native forbs and grasses.	
	LM-8. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM-9. In identified “No Burn” areas implement the appropriate management actions that mimic the natural effects of fire (e.g., mowing, grazing, hand pulling) and subsequently improve habitat for native vegetation.	
	LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.	
	LM-14. Selectively apply herbicides or other treatments.	
<p>Objective 4.5. Increase the distribution and availability of California ground squirrels to increase the prey base for San Joaquin kit fox and golden eagle and to increase burrow availability within grassland for California tiger salamander, California red-legged frog, western burrowing owl, San Joaquin kit fox, and other native species.</p>	<p>GRASS-5. Cease using rodenticides within the Reserve System and when possible outside of the Reserve System except when needed to protect the integrity of structures such as levees, stock pond dams or to prevent nuisance² populations on adjacent private lands.</p>	
	<p>GRASS-6. Encourage colonization of new areas within the Reserve System where conflicts with covered activities are minimized.</p>	
<p>Chaparral and Northern Coastal Scrub</p>		
<p>Goal 5. Maintain and enhance chaparral and northern coastal scrub communities to benefit covered species and promote native biodiversity.</p>		
<p>Objective 5.1. Protect __ acres of chaparral and northern coastal scrub containing the full range of chaparral and northern coastal scrub community associations and manage it as part of the Reserve System.</p>	<p>LAND-C1. Acquire ___ acres of northern mixed chaparral/chamise chaparral by fee title or conservation easement.</p> <p>LAND-C2. Acquire ___ acres of mixed serpentine chaparral by fee title or conservation easement.</p> <p>LAND-C3. Acquire ___ acres of northern coastal scrub/Diablan sage scrub by fee title or conservation easement.</p>	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 5.2. Enhance chaparral and northern coastal scrub land cover types by promoting regeneration and succession to sustain the natural processes and native species diversity found in these communities.</p>	<p>RESEARCH-1. Determine factors relevant to the health and regeneration of native chaparral/scrub species.</p>	
	<p>CHAP-1. If feasible and desirable, conduct prescribed burns in chaparral and northern coastal scrub to maintain canopy gaps and promote regeneration.</p>	
	<p>CHAP-2. If appropriate, mechanically thin chaparral and northern coastal scrub to promote structural diversity where fires are infeasible.</p>	
	<p>LM-8. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.</p>	
	<p>CHAP-3. Identify areas in the Santa Cruz Mountains, eastern mountains, and in Henry Coe State Park where Douglas fir is encroaching on</p>	
<p>Oak and Conifer Woodland</p>		
<p>Goal 6. Maintain and enhance functional oak woodland communities to benefit covered species and promote native biodiversity.</p>		
<p>Objective 6.1. Protect ___ acres of valley oak woodland, ___ acres of mixed oak woodland and forest, ___ acres of coast live oak woodland and forest, ___ acres of blue oak woodland, ___ acres of foothill pine-oak woodland, and ___ acres of mixed evergreen forest, containing the full range of oak woodland associations and species as part of the Reserve System.</p>	<p>LAND-OC1. Acquire in fee title or obtain conservation easements on ___ acres of mixed oak woodland, including land in both the Santa Cruz Mountains and the Diablo Range.</p>	
	<p>LAND-OC2. Acquire ___ acres of coast live oak woodland and forest by fee title or conservation easement, including land in both the Santa Cruz Mountains and the Diablo Range.</p>	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LAND-OC3. Acquire ___ acres of blue oak woodland and ___ acres of valley oak woodland by fee title or conservation easement in both the Santa Cruz Mountains and the Diablo Range.	
	LAND-OC4. Acquire ___ acres of foothill pine-oak woodland and forest by fee title or conservation easement.	
	LAND-OC5. Acquire ___ acres of mixed evergreen forest by fee title or conservation easement.	
<p>Objective 6.2. Enhance oak woodland land cover types by promoting regeneration and recruitment of coarse woody debris to sustain the natural processes and native species diversity found in these communities.</p>	LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.	
	OAK-1. Conduct prescribed burns in low-density oak woodlands to enhance the community and to reduce non-native, invasive grass cover beneath oaks and encourage growth of a native understory and oak seedlings.	
	RESEARCH-2. Experimentally manage oak woodlands to reduce seedling mortality, increase seedling and sapling survival and determine factors relevant to regeneration, including browsing by mammals, birds, and insects.	
	GRASS-1. Continue or introduce livestock and native herbivore (e.g., elk) grazing in a variety of grazing regimes.	
	LM-14. Selectively apply herbicides or other treatments.	
<p>Objective 6.3. Restore ___ acres of valley oak woodland in the Reserve System.</p>	OAK-2. Restore __ acres of valley oak woodland within the Reserve System in <i>[add general locations when conservation strategy is developed]</i> .	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	OAK-3. Plant valley oaks in the Reserve System in areas where they have been removed, where they are not regenerating naturally, or where densities are low relative to reference stands due to past land uses.	
Goal 7. Maintain and enhance functional conifer woodland communities to benefit covered species and promote native biodiversity.		
Objective 7.1. Protect ___ acres of redwood forest, ___ acres of ponderosa pine woodland, and ___ acres of knobcone pine woodland containing the full range of conifer woodland and forest associations and species as part of the Reserve System.	LAND-OC6. Acquire ___ acres of redwood forest by fee title or conservation easement. LAND-OC7. Acquire ___ acres of ponderosa pine woodland by fee title or conservation easement. LAND-OC8. Acquire ___ acres of knobcone pine woodland by fee title or conservation ³	
Objective 7.2. Enhance conifer woodland communities by promoting ecologically appropriate structure, density, and species composition to preserve and sustain the natural processes and native species diversity found in these communities.	RESEARCH-3. Experimentally manage redwood forest, ponderosa pine woodland, and knobcone pine woodland to determine factors relevant to regeneration and maintenance; possibly including prescribed burning, selective thinning, and other management actions to meet this objective. OAK-6. If feasible and desirable, conduct prescribed burns in redwood forest, ponderosa pine woodland, and knobcone pine woodland to maintain and where possible enhance native species diversity in the mid-canopy and understory.	
	OAK-7. If appropriate, mechanically thin the understory of redwood forest, ponderosa pine woodland, and knobcone pine woodland in target areas to promote a healthy understory/canopy.	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Riverine and Riparian Forest and Scrub		
Goal 8. Improve the quality of streams and the hydrologic and geomorphic processes that support them to maintain a functional aquatic and riparian community to benefit covered species and promote native biodiversity.		
Objective 8.1. Protect ___ stream miles below dams to promote habitat function, wildlife movement, and stream temperature moderation. ⁴	LAND-R1. Acquire through fee title or conservation easement lands that protect existing riverine habitat or stream segments that provide key connectivity between spawning/natal habitats and the ocean.	
	STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.	
Objective 8.2. Protect ___ miles of stream habitat in upper tributaries of fish-bearing streams to protect beneficial sediment transport processes and flow attenuation provided by these reaches to downstream.	LAND-R2. Acquire __ miles of stream along upper tributaries of fish-bearing streams that have high sediment load or other functional shortfalls that limit fish productivity such as Bodfish Creek, Little Arthur Creek, and Penetencia Creek.	
	STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.	
Objective 8.3. Protect__ stream miles accessible to native fish downstream of existing permanent barriers or reaches of 20 percent gradient or more.	LAND-R3. Acquire by fee title or conservation easement targeted stream segments such as Alamos Creek in Almaden Valley not currently under the ownership of SCVWD or other HCP/NCCP partners.	
Objective 8.4. Restore __ stream miles on Class 1 and 2 streams.	STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	STREAM-3. Plant and/or seed in native understory and overstory riparian vegetation within 15 feet of the edge of the low-flow channel to create structural diversity, provide overhead cover, and moderate water temperature.	
	STREAM-4. Plant and/or seed in native riparian vegetation in gaps in existing riparian corridors to promote continuity.	
	STREAM-5. Mimic natural disturbance in the absence of scouring flood flows using techniques such as moving gravel, altering the channel, or removing vegetation to manage physical process and vegetation to ensure a variety of successional stages of riparian forest and scrub land-cover types.	
Objective 8.5. Enhance __ miles of streams to promote natural community functions, and habitat heterogeneity and connectivity.	STREAM-6. Replace XX miles of concrete, earthen or other engineered channels where feasible.	
	STREAM-7. Replace XX miles of confined channels, where feasible, to restore floodplain connectivity and commensurate functions.	
	STREAM-8. Stabilize XX feet of streambank that qualify as chronic anthropogenic sources of sediment within stream reaches that are currently on the Clean Water Act Section 303(d) list for impairment.	
	STREAM-9. [In progress...action will address aquatic exotic species problem, Arundo controls and removal guidelines consistent with SCVWD SMP Program and encouraging stewardship on private land].	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	<p>STREAM-10. If new Pacheco Reservoir is built, acquire control of Pacheco Dam to influence the flow and function of Pacheco Creek downstream of Pacheco Dam for the benefit of covered fish. If new Pacheco Reservoir not built, reach agreement with operator to manage dam in ways that benefit native fish.</p>	
<p>Goal 9. Maintain a functional riparian forest and scrub community at a variety of successional stages and improve these communities to benefit covered species and promote native biodiversity.</p>		
<p>Objective 9.1. Protect ___ acres of large, (at least ___ acres) contiguous stands of riparian forest and scrub and within the 100-year floodplain to maximize the width of native vegetation below dams to promote habitat function, wildlife movement, and stream temperature moderation.⁴</p>	<p>LAND-R4. Acquire through fee title or conservation easement lands that protect existing riparian habitat or riparian areas that provide key connectivity between existing riparian habitats.</p> <hr/> <p>STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.</p>	
<p>Objective 9.2. Protect ___ acres of large (at least ___ acres), contiguous stands of riparian woodland and forest within the study area below dams for every acre of impact from covered activities (estimated to be ___ acres of impact and ___ acres of restoration).</p>	<p>LAND-R4. Acquire through fee title or conservation easement lands that protect existing riparian habitat or riparian areas that provide key connectivity between existing riparian habitats.</p> <hr/> <p>STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.</p>	
<p>Objective 9.3. Restore 1 acre of high-quality riparian forest and scrub at a variety of successional stages for every acre removed by covered activities (estimated to be ___ acres and ___ acres of restoration).</p>	<p>STREAM-3. Plant and/or seed in native understory and overstory riparian vegetation within 15 feet of the edge of the low-flow channel to create structural diversity, provide overhead cover, and moderate water temperature.</p>	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	STREAM-4. Plant and/or seed in native riparian vegetation in gaps in existing riparian corridors to promote continuity.	
Objective 9.4. Enhance __ acres of riparian forest and scrub at a variety of successional stages.	STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.	
	STREAM-5. Mimic natural disturbance in the absence of scouring flood flows using techniques such as moving gravel, altering the channel, or removing vegetation to manage physical process and vegetation to ensure a variety of successional stages of riparian forest and scrub land-cover types.	
Wetland and Pond		
Goal 10. Maintain, enhance, and create or restore pond, freshwater perennial and seasonal wetland wetland habitats that benefit covered species and promote native biodiversity.		
Objective 10.1. Protect grassland and oak and conifer woodland with a high concentration of ponds as part of the Reserve System.	LAND-WP1. Acquire in fee title or conservation easement grassland, oak and conifer woodland habitat <u>east</u> of Highway 101 with ponds occupied by covered or native species and/or other ponds capable of being restored.	
	LAND-WP2. Acquire in fee title or conservation easement grassland, oak and conifer woodland habitat <u>west</u> of Highway 101 in the Santa Cruz Mountains with ponds occupied by covered or native species and/or other ponds capable of being restored	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 10.2. Protect ___ acres of perennial wetlands, ___ acres of seasonal wetlands, and ___ acres of ponds as part of the Reserve System.</p>	<p>LAND-WP3. Acquire in fee title or conservation easement ___ acres of perennial freshwater wetlands suitable for covered or native species or other freshwater wetlands capable of being enhanced or restored to support covered species in. [3]</p>	
	<p>LAND-WP4. Acquire in fee title or conservation easement ___ acres of seasonal freshwater wetlands suitable for covered or native species and/or other seasonal wetlands capable of being enhanced or restored to support covered species in _____. [3]</p>	
	<p>LAND-WP5. Acquire in fee title or conservation easement ___ acres of ponds suitable for covered or native species or capable of being enhanced or restored to support covered species in _____. [3]</p>	
<p>Objective 10.3. Protect contiguous tracts of natural land cover between ponds and wetlands that provide upland habitat and allow native species to move between these water sources.</p>	<p>LAND-WP6. Acquire land between existing ponds and wetlands that provide a linked matrix of pond, wetland, and upland habitat as part of the Reserve System.</p>	
<p>Objective 10.4. When appropriate for particular covered and native species, enhance freshwater and seasonal wetlands and ponds by increasing native vegetative cover, biomass, and structural diversity in and around the margins within five years of pond or wetland acquisition within the Reserve System.</p>	<p>POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.</p>	
	<p>LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.</p>	
	<p>POND-2. Install woody debris around perimeter and in submerged bank of ponds and wetlands to create basking habitat and cover for native juvenile amphibians and turtles.</p>	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	POND-3. Plant native emergent vegetation around the perimeter and in ponds and wetlands.	
	POND-4. Periodically clear vegetation or remove sediment, as necessary, in a way that minimizes negative effects on species.	
Objective 10.5. Enhance ponds by reducing the cover and biomass of non-native, invasive plants in the adjacent uplands between the functional perimeter of the pond and within 0.5 miles.	LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.	
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	POND-5. If appropriate, graze or mechanically thin around pond perimeter to mimic grazing and promote native species.	
	LM-14. Selectively apply herbicides or other treatments.	
	POND-3. Plant native emergent vegetation around the perimeter and in ponds and wetlands.	
Objective 10.6. Enhance ponds and wetlands by eradicating or reducing exotic species that are detrimental to native pond and wetland biodiversity.	LM-13. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish, feral cats) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.	
	POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.	

Table 5-1b. Biological Goals, Objectives, and Conservation Actions: Natural Community Level
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.	
<p>Objective 10.7. Restore at least __ acres of freshwater and seasonal wetlands to increase available habitat and enhance connectivity among existing ponds and wetlands within the Reserve System.</p>	<p>POND-6. Restore __ acres of freshwater marsh within the Reserve System in ____ . [3]</p>	
<p>Objective 10.8. In addition to the restoration of wetlands (Objective 5.7), restore freshwater and seasonal wetlands in-kind within the Reserve System at a ratio of 1 acre of conservation to 1 acre of impact (1:1) and 2 acres of conservation to 1 acre of impact (2:1), respectively.</p>	<p>POND-8. Restore freshwater marsh at a ratio of 1:1 (estimated at __ acres) within the Reserve System in ____ . [3]</p> <p>POND-9. Restore seasonal wetlands at a ratio of 2:1 (estimated at X acres) within the Reserve System in ____ . [3]</p>	
<p>Objective 10.9. Create at least __ acres [and __ number] of ponds to increase available habitat and enhance connectivity among existing ponds and wetlands within the Reserve System.</p>	<p>POND-10. Create at least __ acres [and __ number] of ponds in ____ . [3]</p>	
<p>Objective 10.10. In addition to the creation of ponds (Objective 5.9), create ponds lost to covered activities, in-kind within the Reserve System, at a ratio of 1 acre of conservation to 1 acre of impact (1:1).</p>	<p>POND-11. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in ____.[3]</p>	
<p>Notes:</p> <p>[1] This target will change because the habitat model for Bay checkerspot butterfly will be updated</p> <p>[2] Nuisance defined in the Fish & Game Code Sections 4150 and 4152</p> <p>[3] These conservation actions will be made more specific to each land cover type as they are developed.</p> <p>[4] This requirement would be independent of the level of impacts (contribution to recovery). Preservation linked to impacts would be in addition to this (Objective 3.2.)</p>		

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Goal 11. Maintain or improve viability of existing Bay checkerspot butterfly populations, increase the number of populations, and expand the geographic distribution to ensure the long-term persistence of the species in the study area.</p>		
<p>Objective 11.1. Protect __ acres of serpentine grasslands in core populations to protect a range of slopes, aspects, and microhabitats.</p>	<p>LAND-G4. Acquire __ acres of suitable habitat for Bay checkerspot butterfly on Silver Creek Hills, Coyote Ridge, Pigeon Point, Tulare Hill, Santa Theresa Hills, areas west of Calero Reservoir, and the Kalanas, and Hale/Falcon Crest. Prioritize sites according to threat, patch size, current occupancy and prevalence of cool microsites for Bay checkerspot butterflies.</p>	
<p>Objective 11.2. Within the Reserve System on sites with degraded serpentine grassland, improve management to enhance populations of larval host plants and adult nectar sources and reestablish Bay checkerspot butterfly.</p>	<p>GRASS-1. Continue or introduce livestock and native herbivore (e.g., elk) grazing in a variety of grazing regimes.</p>	
	<p>GRASS-2. Conduct prescribed burns, where possible.</p>	
	<p>GRASS-3. Conduct mowing in selected areas to mimic grazing where use of livestock is impractical.</p>	
	<p>GRASS-4. Conduct selected seeding of native forbs and grasses.</p>	
	<p>GRASS-8. Translocate Bay checkerspot butterflies (eggs, larvae, or adults) from core populations into suitable but unoccupied sites if natural dispersal fails to reestablish population.</p>	
	<p>LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Goal 12. Maintain or increase the breeding population of golden eagles.		
Objective 12.1. Protect ___ acres of annual grassland and ___ acres of oak woodland in areas suitable for nesting and foraging golden eagles in the Diablo Range and Santa Cruz Mountains.	LAND-G5. Acquire or obtain easements on sites with secluded rock outcrops or large trees overlooking open grassland in the Diablo Range and Santa Cruz Mountains.	
	LAND-G6. Acquire grassland and woodland in fee title or with easements that contains recently occupied (within last 10 years) golden eagle nest sites plus a 0.5-mile buffer.	
	LAND-G7. Acquire or obtain easements on grasslands with existing ground squirrel colonies in the Diablo Range and Santa Cruz Mountains.	
Objective 12.2. Enhance golden eagle foraging habitat by promoting ground squirrel populations [in progress].	GRASS-5. Cease using rodenticides within the Reserve System and when possible outside of the Reserve System except when needed to protect the integrity of structures such as levees, stock pond dams or to prevent nuisance2 populations on adjacent private lands.	
	GRASS-6. Encourage colonization of new areas within the Reserve System where conflicts with covered activities are minimized.	
Goal 13. Maintain or increase the size and sustainability of the breeding population and increase the distribution of breeding and wintering burrowing owls.		
Objective 13.1. Protect ___ acres of grassland or barren land on the valley floor and in the Diablo Range that provides suitable overwintering and breeding sites for burrowing owls.	LAND-G8. Obtain conservation easements on ___ acres of occupied burrowing owl breeding sites at the San Jose Water Pollution Control Plan Bufferlands, north of Highway 237.	Note: Currently investigating the feasibility of this action.

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LAND-G9. Acquire or obtain easements that protect suitable burrowing owl breeding habitat within __ miles of the San Jose International Airport or other important northern San Jose breeding sites.	Note: Action LAND-G9 may be infeasible due to limited available sites and cost. Currently investigating.
	LAND-G10. Acquire or obtain easements on __ acres of suitable overwintering habitat in the Diablo Range that support ground squirrel populations or could support them with improved management.	
Objective 13.2. Enhance __ acres of suitable habitat in northern San Jose breeding sites to encourage use by burrowing owls.	GRASS-9. Implement vegetation management that reduces the height of all vegetation to less than 12 inches (i.e., graze/mow).	
	GRASS-10. Create artificial burrows to encourage colonization of sites where ground squirrel establishment is not feasible or during the interim before ground squirrel colonies can be established.	
	GRASS-5. Cease using rodenticides within the Reserve System and when possible outside of the Reserve System except when needed to protect the integrity of structures such as levees, stock pond dams or to prevent nuisance2 populations on adjacent private lands.	
	GRASS-6. Encourage colonization of new areas within the Reserve System where conflicts with covered activities are minimized.	
Goal 14. Increase the ability of San Joaquin kit fox to move through and use the study area.		

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 14.1. Protect ___ acres of annual grassland and suitable oak woodland land cover types in a diversity of soils types and other environmental gradients to enhance movement, foraging, and resting habitat.</p>	<p>LAND-G11. Acquire in fee title or obtain easements on ___ acres of annual grassland and suitable oak woodland types (e.g., oak savanna and oak woodland within 500 feet of annual grassland) north and south of Highway 152 in suitable modeled San Joaquin kit fox movement habitat.</p>	
<p>Objective 14.2. Enhance grassland with in the Reserve System to provide a larger prey base for San Joaquin kit fox.</p>	<p>GRASS-5. Cease using rodenticides within the Reserve System and when possible outside of the Reserve System except when needed to protect the integrity of structures such as levees, stock pond dams or to prevent nuisance2 populations on adjacent private lands.</p> <p>GRASS-6. Encourage colonization of new areas within the Reserve System where conflicts with covered activities are minimized.</p>	
<p>Objective 14.3. Improve land-use compatibility in areas suitable for kit fox movement.</p>	<p>GRASS-11. Conduct a public education campaign in the southeastern portion of the study area to provide landowners with information about management and land use techniques the are more compatible with movement and use by San Joaquin kit fox.</p>	
<p>Objective 14.4. Allow safer passage of San Joaquin kit fox across Highway 152 between the Highway 152/156 interchange and the Santa Clara/Merced County line.</p>	<p>LM-1. Remove fences and roads, where feasible.</p> <p>LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	
	LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	
	LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	
<p>Goal 15. Expand the distribution and enhance the reproductive success and survival of all life stages of Central California Coastal steelhead, Central Valley fall-run Chinook salmon, and Pacific lamprey in the Coyote and Guadalupe Watersheds.</p>		
<p>Objective 15.1. Protect ___ miles of streams below dams that currently provide or could provide high-quality spawning and/or rearing habitat.¹</p>	<p>LAND-R5. Acquire stream segments below dams or permanent natural barriers that currently provide or could provide high quality spawning and/or rearing habitat, focusing on the Uvas Creek, Pescadero Creek, Pacheco Creek, and Pajaro River watersheds.</p>	
<p>Objective 15.2. Improve passage of salmon, steelhead, and Pacific lamprey.</p>	<p>STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.</p>	
	<p>STREAM-12. Create more stable winter base flows from November 1 through April 30 below dams to reduce stranding and provide minimum depths for upstream passage of adults, using dam operation rule curves developed for the FAHCE program. (Source: FAHCE HCP)</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	STREAM-13. Release winter/spring (Feb. 1 to April 30) pulse flows of 50 cfs from Anderson, Calero, Almaden, and Guadalupe Reservoirs to attract adults moving upstream. (Source: FAHCE HCP)	
	STREAM-14. Provide sufficient flow to maintain a minimum depth over riffles of 0.8 feet to allow upstream passage for adult Chinook salmon and steelhead trout. (Source: FAHCE HCP)	
	STREAM-15. Isolate Ogier Pond and Metcalf Pond to off-channel structures to eliminate temperature and predation "traps" within the channel.	
<p>Objective 15.3. In appropriate degraded stream reaches, enhance or restore __ square feet of spawning habitat within __ miles of stream habitat. [2]</p>	STREAM-16. Release cold water and sufficient flows to enhance spawning habitat for covered fish.	
	STREAM-17. Manage watershed-wide fine sediment inputs through controls on runoff from development sites (see Condition 4 in Chapter 6) to improve habitat functions for covered fish.	
	STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.	
	STREAM-18. Install large woody debris and other in-stream structural elements and promote woody debris recruitment to enhance winter rearing habitat. [3]	
	STREAM-19. Place gravel to enhance existing spawning habitat (i.e., Gravel augmentation) and consider fine-sediment cleaning. [3]	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 15.4. In appropriate degraded stream reaches, enhance or restore __ square feet of summer rearing habitat within __ miles of stream habitat.</p>	<p>STREAM-20. Release cold water from Guadalupe, Almaden, Anderson, and Coyote Reservoirs to maintain water temperatures of 18° C within Cold Water Management Zones below dams to enhance viability of spring and summer incubation and rearing habitats.</p>	
	<p>STREAM-21. Release sufficient flow to provide xx square feet of fast water feeding habitat in Coyote Creek and Guadalupe River for summer rearing.</p>	
	<p>STREAM-22. Operate Cherry Flat Reservoir (City of San Jose) to improve continuity of flows on Upper Penetencia Creek to benefit summer rearing native fish.</p>	<p>Note: Currently investigating the feasibility of this action with City of San Jose.</p>
	<p>STREAM 23. Improve flows on lower Upper Penetencia Creek using South Bay Aqueduct water.</p>	<p>Note: Currently investigating the feasibility of this action with SCVWD.</p>
<p>Objective 15.5. In appropriate degraded stream reaches, enhance or restore __ square feet of winter rearing habitat within __ miles of stream habitat where it may be limiting. [2]</p>	<p>STREAM-18. Install large woody debris and other in-stream structural elements and promote woody debris recruitment to enhance winter rearing habitat. [3]</p>	
	<p>STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.</p>	
<p>Goal 16. For South Central California Coastal steelhead and Pacific lamprey, expand the distribution and enhance the reproductive success and survival of all life stages of in the Uvas and Pacheco Creek Watersheds, and maintain distribution and reproductive success of all life stages in the Llagas and Pescadero Watersheds.</p>		

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 16.1. Protect __ miles of stream that currently provide or could provide high quality steelhead spawning and/or rearing habitat in the Uvas, Pescadero, South Santa Clara Valley (Check this watershed), and Pacheco-Santa Ana Watersheds.</p>	<p>LAND-R6. Acquire stream segments along Uvas Creek and its tributaries below Uvas Dam, and along Pacheco Creek below Pacheco Dam that currently provide or could provide high quality spawning and/or rearing habitat.</p> <hr/> <p>STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.</p>	
<p>Objective 16.2. Improve passage of salmon, steelhead, and Pacific lamprey.</p>	<p>STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.</p> <hr/> <p>STREAM-24. Implement and monitor flow rule curves developed under FAHCE for Uvas and Chesbro Dams to improve flow in Uvas Creek.</p>	
<p>Objective 16.3. In appropriate degraded stream reaches, enhance or restore __ square feet of spawning habitat within __ miles of stream habitat. <i>[NOTE: “Appropriate degraded stream reaches” will be further refined to specific reaches downstream of existing permanent barriers and upstream of reaches that only provide migratory function.]</i></p>	<p>STREAM-24. Implement and monitor flow rule curves developed under FAHCE for Uvas and Chesbro Dams to improve flow in Uvas Creek.</p> <hr/> <p>STREAM-17. Manage watershed-wide fine sediment inputs through controls on runoff from development sites (see Condition 4 in Chapter 6) to improve habitat functions for covered fish.</p> <hr/> <p>STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.</p> <hr/> <p>STREAM-18. Install large woody debris and other in-stream structural elements and promote woody debris recruitment to enhance winter rearing habitat. [3]</p> <hr/> <p>STREAM-19. Place gravel to enhance existing spawning habitat (i.e., Gravel augmentation) and consider fine-sediment cleaning. [3]</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 16.4. In appropriate degraded stream reaches, enhance or restore __ square feet of summer rearing habitat within __ miles of stream habitat. <i>[NOTE: “Appropriate degraded stream reaches” will be further refined to specific reaches downstream of existing permanent barriers and upstream of reaches that commonly dry out during the summer months.]</i></p>	<p>STREAM-24. Implement and monitor flow rule curves developed under FAHCE for Uvas and Chesbro Dams to improve flow in Uvas Creek.</p>	
	<p>STREAM-25. Release sufficient flow to provide head of pool, run, and riffle habitat in target stream reaches for summer rearing.</p>	
	<p>STREAM-26. Increase dissolved oxygen using an oxygenation system in Uvas Reservoir to (perhaps) reduce turbidity in flow releases.</p>	
<p>Objective 16.5. In appropriate degraded stream reaches, enhance or restore __ square feet of winter rearing habitat within __ miles of stream habitat. <i>[NOTE: “Appropriate degraded stream reaches” will be further refined to specific reaches downstream of existing permanent barriers and upstream of reaches that are tidally influenced.]</i></p>	<p>STREAM-18. Install large woody debris and other in-stream structural elements and promote woody debris recruitment to enhance winter rearing habitat. [3]</p>	
	<p>STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.</p>	
<p>Goal 17. Facilitate the expansion of a breeding population of least Bell’s vireos into the study area and increase reproductive success of the least Bell’s vireo.</p>		
<p>Objective 17.1. Protect __ acres of riparian woodland or forest with a dense understory (< 3m tall) in the Uvas, Llagas, or Pacheco Watersheds.</p>	<p>LAND-R7. Acquire or obtain easements along the Pajaro River between the Santa Clara/Santa Cruz/San Benito County lines (just west of Sargent Creek) and up to Miller Canal.</p>	
	<p>LAND-R8. Acquire or obtain easements along Uvas/Carnadero Creek and Llagas Creek between Highway 152 and its confluence with the Pajaro River.</p>	
	<p>LAND-R9. Acquire or obtain easements along the portions of Pacheco Creek that are in Santa Clara County between Pacheco Lake and San Felipe Lake.</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 17.2. Restore __ acre of riparian woodland and forest in the Uvas, Llagas, or Pacheco Watersheds for every acre removed by covered activities (estimated to be __ acres of impact and __ acres of restoration in these watersheds).</p>	<p>LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.</p>	
	<p>STREAM-3. Plant and/or seed in native understory and overstory riparian vegetation within 15 feet of the edge of the low-flow channel to create structural diversity, provide overhead cover, and moderate water temperature.</p>	
	<p>STREAM-4. Plant and/or seed in native riparian vegetation in gaps in existing riparian corridors to promote continuity.</p>	
	<p>STREAM-6. Replace XX miles of concrete, earthen or other engineered channels where feasible.</p>	
	<p>STREAM-7. Replace XX miles of confined channels, where feasible, to restore floodplain connectivity and commensurate functions.</p>	
<p>Objective 17.3. Increase reproductive success of least Bell's vireo in riparian areas within the Reserve System.</p>	<p>STREAM-27. Where appropriate and likely to benefit least Bell's vireo over the long-term, implement a brown-headed cowbird control program to reduce the impact of brood parasitism on least Bell's vireo.</p>	
<p>Goal 18. Maintain and where appropriate increase the foothill yellow-legged frog population in the study area.</p>		

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Objective 18.1. Protect __ stream miles that currently have, or historically had, perennial flows	LAND-R10. Acquire or obtain easements along perennial streams located above Uvas, Calero, Chesbro, Anderson, or Coyote Reservoirs or in Uvas Creek below Uvas Reservoir, Upper Penitencia Creek, Alamitos Creek or Guadalupe Creek that have or could be restored to have cobblestone substrate and consistent, gentle flows from late March to late May.	
Objective 18.2. Restore or enhance __ stream miles of perennial streams located above Uvas, Calero, Chesbro, Anderson, or Coyote Reservoirs or in Uvas Creek below Uvas Reservoir, Upper Penitencia Creek, Alamitos Creek or Guadalupe Creek.	<i>Enhancement action specific for yellow-legged frog</i> TBD	
	LM-14. Selectively apply herbicides or other treatments.	
	STREAM-3. Plant and/or seed in native understory and overstory riparian vegetation within 15 feet of the edge of the low-flow channel to create structural diversity, provide overhead cover, and moderate water temperature.	
	STREAM-6. Replace XX miles of concrete, earthen or other engineered channels where feasible.	
	STREAM-7. Replace XX miles of confined channels, where feasible, to restore floodplain connectivity and commensurate functions.	
	STREAM-28. Increase the amount of cobblestone substrate suitable to support breeding foothill yellow-legged frogs to __ acres/__ stream mile.	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	<p>STREAM-29. Below Uvas Reservoir manage flow regime to mimic a natural condition of high flow events during the winter months and into late March followed by gentle, consistent flow through the end of May.</p>	
<p>Goal 19: Maintain, and where appropriate, increase the number of individuals and expand the distribution of California red-legged frog, California tiger salamander, and western pond turtle within the Reserve System to maintain viable populations and contribute to the regional recovery of these species.</p>		
<p>Objective 19.1. Protect (___ acres) of ponds, (___ acres) of wetlands, (___ miles) of streams, and (___ acres) of grassland, oak woodland, riparian, or chaparral in core areas to support California red-legged frog, California tiger salamander, and western pond turtles.</p>	<p>LAND-WP7. Acquire ___ acres of land in the East San Francisco Bay Recovery Unit for red-legged frog (<i>USFWS 2002</i>) (Coyote Creek, Pacheco, and Santa Cruz Mountain Watersheds).</p> <p>LAND-WP8. Acquire habitat adjacent to Joseph D. Grant County Park, Palassou Ridge Open Space Preserve, southeast of Henry Coe State Park, Santa Cruz Mountain foothills, and Calero County Park in areas where dense forest is absent to reduce competition with other native amphibians (e.g., California newts).</p> <p>LAND-WP9. Acquire stream segments or ponds that currently provide or could provide high quality basking, breeding, and nesting habitat (vegetated banks and at least 150 feet of adjacent upland habitat) for western pond turtle.</p>	
<p>Objective 19.2. Protect corridors between existing protected areas to ensure genetic exchange within species and movement between populations of covered amphibians and aquatic reptiles.</p>	<p>LAND-WP10. Acquire habitat near Santa Teresa Hills and Tulare Hill to provide connectivity between populations in the Diablo Range and the Santa Cruz foothills.</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LAND-WP6. Acquire land between existing ponds and wetlands that provide a linked matrix of pond, wetland, and upland habitat as part of the Reserve System.	
Objective 19.3. Enhance ponds and wetlands by eradicating or reducing exotic species and competitor species (such as nonnative pet-store turtles) that are detrimental to covered amphibians, aquatic reptiles, and native pond biodiversity.	LM-13. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish, feral cats) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.	
	LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.	
Objective 19.4. Restore (___ acres) of wetlands, or maintain or enhance (___ acres) of ponds and (___ miles) of streams for the California red-legged frog, California tiger salamander, and western pond turtle to maintain or increase breeding populations of covered amphibians and reptiles.	POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.	
	POND-2. Install woody debris around perimeter and in submerged bank of ponds and wetlands to create basking habitat and cover for native juvenile amphibians and turtles.	
	POND-3. Plant native emergent vegetation around the perimeter and in ponds and wetlands.	
	RESEARCH 4. In the case of ponds, wetlands, and/or amphibian populations becoming infected with chytrid fungus or other diseases, use the best scientific information available to manage and stop spread of epidemic.	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	<p>RESEARCH-5. Identify the extent of distribution and risk to existing indigenous populations of covered amphibians and reptiles from hybridization (e.g., California tiger salamander hybridizing with Texas salamander) and develop management plan based on results of targeted research.</p>	
	<p>POND-4. Periodically clear vegetation or remove sediment, as necessary, in a way that minimizes negative effects on species.</p>	
	<p>POND-12. Excavate sections of ponds to provide deeper pools that will be utilized by California red-legged frog adults and sub-adults and western pond turtles, while maintaining shallow areas to provide rearing habitat for CRLF tadpoles, CTS larvae, and WPT hatchlings.</p>	
	<p>RESEARCH-6. Identify and maintain upland breeding sites for western pond turtle because of the high fidelity of their use from year to year (even if sites are not “natural”).</p>	
	<p>POND-13. Offer incentives to private landowners to enhance pond and wetland habitat to suit breeding California red-legged frog, California tiger salamander, and western pond turtle.</p>	
	<p>GRASS-1. Continue or introduce livestock and native herbivore (e.g., elk) grazing in a variety of grazing regimes.</p>	
	<p>GRASS-2. Conduct prescribed burns, where possible.</p>	
	<p>LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.</p>	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM-14. Selectively apply herbicides or other treatments.	
Objective 19.5. Create ponds to provide new breeding sites for California red-legged frog, California tiger salamander, and western pond turtle.	POND-14. Create at least __ acres [and __ number] of ponds in <i>[add specific locations that will increase connectivity]</i> .	
	POND-15. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in <i>[add general location]</i> .	
Goal 20: Increase the population size of tricolored blackbird to enhance the viability of the species in the study area.		
Objective 20.1. Protect at least 4 breeding sites that support or could support tricolored blackbird colonies each with at least 2-acres of breeding (marsh) habitat and that have foraging habitat within 2 miles.	LAND-WP11. Acquire __ acres of suitable breeding habitat for tricolored blackbird within dry land farming or ranching complexes in Santa Clara Valley and the Diablo Hills; put high priority on protection of occupied sites or on historic breeding sites that could be restored.	
	POND-16. Offer incentives to private landowners to enhance pond and marsh habitat to suit breeding tricolored blackbirds, and to ensure that dry-land farming and ranching activities support breeding tricolored blackbirds.	
Objective 20.2. Protect suitable foraging habitat to ensure that 200 acres occur within 2 miles of protected and occupied breeding sites.	LAND-WP12. Acquire 200 acres of foraging habitat for tricolored blackbird in areas where there is sufficient breeding habitat within 2 miles.	
	POND-17. Offer incentives to private landowners to ensure that dry-land farming and ranching activities support foraging tricolored blackbirds.	
Objective 20.3. Enhance or restore [__acres] of suitable breeding habitat in historically/currently occupied areas within the Reserve System.	POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.	

Table 5-1c. Biological Goals, Objectives and Conservation Actions: Wildlife
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	POND-18. Encourage marsh habitat that will support dense reed-like vegetation (cattails) or other native vegetation that will attract nesting tricolored blackbirds.	
	POND-19. In areas with non-native vegetation (e.g., Himalayan blackberry) that supports existing tricolored blackbird colonies, initiate a gradual (3-4 year) transition from non-native vegetation to native vegetation that is structurally similar.	
	STREAM-6. Replace XX miles of concrete, earthen or other engineered channels where feasible.	
Objective 20.4. Create __ acres of freshwater wetland suitable for breeding tricolored blackbird within 2 miles of suitable and foraging habitat to encourage colonization of new sites.	POND-11. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in ____.[3]	

Notes:

[1] May focus instead on barrier removal in North County because District does not control all sites with barriers. Stream acquisition in the Coyote/Guadalupe systems will be very limited due to urbanization and relatively high levels of existing protection.

[2] Appropriate stream reaches will be further refined and defined in the objective or in the text.

[3] FAHCE criteria will be used.

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Goal 21. To maintain viability, protect and increase the size and number of populations of Coyote ceanothus, Santa Clara Valley dudleya, Metcalf Canyon jewelflower, most beautiful jewelflower, smooth lessingia, fragrant fritillary, Mt. Hamilton thistle, (i.e., covered serpentine plants) within the study area.</p>		
<p>Objective 21.1. Protect all four of the known extant populations of Coyote ceanothus with a buffer zone of 150 meters (500 feet) around each population, where possible, to reduce external influences and allow expansion of populations, if appropriate. [3]</p>	<p>LAND-P1. Acquire in fee title or conservation easement sites in the study area that support the remaining two unprotected occurrences of Coyote ceanothus and the remaining unprotected portion of the third occurrence, or provide the necessary buffer between incompatible land uses, focusing first on protection of the largest populations and those under greatest threat of development.</p>	
	<p>RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.</p>	
	<p>RESEARCH-8. Conduct experimental burning where feasible in protected populations of targeted covered plant species to determine the importance of fire for plant regeneration.</p>	
	<p>CHAP-1. If feasible and desirable, conduct prescribed burns in chaparral and northern coastal scrub to maintain canopy gaps and promote regeneration.</p>	
	<p>CHAP-2. If appropriate, graze or mechanically thin chaparral and northern coastal scrub to promote structural diversity.</p>	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	LM13. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.	
<p>Objective 21.2. If biologically feasible, establish two new populations of Coyote ceanothus in the reserve system to reduce risk of extinction.</p>	RESEARCH-9. Identify suitable locations in the Reserve System for establishing new populations of covered plants.	
	RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	
	RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
<p>Objective 21.3. Protect[1] at least __ populations of Santa Clara Valley dudleya with a buffer zone of 150 meters (500 feet) around each population, where possible, to reduce external influences and allow expansion of populations. [3]</p>	LAND-P2. Acquire in fee title or conservation easement sites in the study area that support __ populations of Santa Clara Valley dudleya and stratify protection on both sides of Coyote Valley to ensure geographic diversity in protected populations.	
<p>Objective 21.4. Increase the population sizes of Santa Clara Valley dudleya to ensure each population has at least 2,000 individuals. [3]</p>	GRASS-12. Establish targeted covered plant species on unoccupied but suitable rock outcrops using seeds and transplanted adults from large populations.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the <u>monitoring plan</u> .	
Objective 21.5. Protect at least four currently unprotected populations of Metcalf Canyon jewelflower including a buffer zone of 150 meters (500 feet) around each population, where possible, to reduce external influences and allow expansion of populations. [3]	LAND-P3. Acquire in fee title or conservation easement sites in the study area that support four populations of Metcalf Canyon jewelflower.	
	LAND-P4. [optional] Acquire north side of Tulare Hill to allow for reintroduction of Metcalf Canyon jewelflower on west side of Valley.	
Objective 21.6. Create at least one new populations and expand the population sizes of Metcalf Canyon jewelflower to ensure each population has at least 2,000 individuals [3]	RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	
	RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 21.7. Protect at least five populations of most beautiful jewelflower with a buffer zone of 150 meters (500 feet) around each population, where possible, to reduce external influences and allow expansion of populations. [3]</p>	<p>LAND-P5. Acquire sites in the study area that support five populations of most beautiful jewelflower.</p>	
<p>Objective 21.8. Increase the size of most beautiful jewelflower populations to ensure each population has at least 2,000 individuals [3]</p>	<p>RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.</p>	
	<p>RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.</p>	
<p>Objective 21.9. Protect at least 8 populations of Mount Hamilton thistle outside of currently protected lands with a biologically appropriate buffer zone around each population, where possible, to reduce external influences and allow expansion of populations. [2]</p>	<p>LAND-P6. Acquire sites in the study area that support Mount Hamilton thistle in drainages or spring systems and stratify protection on both sides of Coyote Valley to ensure geographic diversity in protected populations.</p>	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Objective 21.10 If appropriate, increase the size of Mt. Hamilton thistle populations to ensure each population has a viable number of individuals each year.	RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the monitoring plan.	
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	GRASS-13. Manage and maintain the hydrologic systems (springs, streams, ponds, etc.) that provide habitat for Mount Hamilton thistle.	
Objective 21.11. Protect at least 10 populations of smooth lessingia outside of currently protected lands with a buffer zone of 150-meter (500 foot) buffer around each population, where possible, to reduce external influences and allow expansion of populations.[3]	LAND-P7. Acquire sites in the Reserve System that support 10 populations of smooth lessingia	
Objective 21.12. Increase the size of smooth lessingia populations to ensure each population has at least 2,000 individuals. [3]	RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the monitoring plan.	
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Objective 21.13. Protect at least 3 populations of fragrant fritillary.	LAND-P8. Acquire sites along Coyote Ridge that support the three remaining unprotected fragrant fritillary occurrences.	
Objective 21.14. Increase the size of fragrant fritillary populations to ensure each population has a viable number of individuals each year.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the monitoring plan.	
Objective 21.15. Increase the size of the two protected Tiburon Indian paintbrush populations to ensure each population has at least 2,000 individuals.[3]	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the monitoring plan.	
Goal 22. Protect and increase the size and number of plant populations to maintain viability of big scale balsamroot, chaparral harebell, San Francisco collinsia, Loma Prieta hoita, robust monardella, rock sanicle, Hall’s bush mallow within the study		
Objective 22.1. Protect two occurrences of big scale balsamroot within the Reserve System by creating, or discovering and protecting, two new populations. If two populations are not discovered	LAND-P9. Acquire sites in the study area that support new populations and/or identify suitable locations in the Reserve System for establishing new populations.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
and protected by the end of reserve acquisition period, then two must be created at that time.	RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	
	RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
Objective 22.2. Increase the populations size of the two known occurrences of big scale balsamroot that occur on protected open space and the two new occurrences in the Reserve System.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
Objective 22.3. Protect or create four new populations of chaparral harebell from populations within or close to Santa Clara County. If new populations are not located and protected by the end of the reserve acquisition period then they must be created at that time.	LAND-P9. Acquire sites in the study area that support new populations and/or identify suitable locations in the Reserve System for establishing new populations.	
	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
	RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
Objective 22.4. Increase the populations size of new populations of chaparral harebell in the Reserve System.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Objective 22.5. Relocate, protect and enhance the one historic population of San Francisco collinsia within the study area, if still extant.	LAND-P10 Acquire in fee title or conservation easement a site that supports San Francisco collinsia, including a biologically appropriate buffer to protect it from incompatible land uses.	
Objective 22.6. If appropriate, establish two new populations of San Francisco collinsia in the study area from populations within Santa Clara County, or protect two populations if more are discovered.	RESEARCH-9. Identify suitable locations in the Reserve System for establishing new populations of covered plants. RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
Objective 22.7. Protect one currently unprotected occurrence of Loma Prieta hoita in the study area.	LAND-P11. Acquire one site in the study area that supports Loma Prieta hoita, including a biologically appropriate buffer to protect it from incompatible land uses, if needed.	
Objective 22.8. Maintain or, if feasible, increase the size of protected Loma Prieta hoita populations.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
Objective 22.9. Maintain or, if feasible, increase the size of protected robust monardella populations.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
Objective 22.10. If appropriate, establish two new populations of robust monardella in the Reserve System from populations within Santa Clara County, or protect two populations if more are	LAND-P9. Acquire sites in the study area that support new populations and/or identify suitable locations in the Reserve System for establishing new populations.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
discovered.	RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	
Objective 22.11. Maintain or, if feasible, increase the size of protected rock sanicle populations in the Reserve System.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	
Objective 22.12. If appropriate, establish two new populations of rock sanicle in the Reserve System from populations within Santa Clara County, or protect two populations if more are discovered	LAND-P9. Acquire sites in the study area that support new populations and/or identify suitable locations in the Reserve System for establishing new populations.	
	RESEARCH-9. Identify suitable locations in the Reserve System for establishing new populations of covered plants.	
	RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	
	RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	
Objective 22.13. Protect and enhance 12 populations of Hall's bush mallow within the study area.	LAND-P12. Acquire 12 sites in the study area that support Hall's bush mallow, including a biologically appropriate buffer to protect it from incompatible land uses.	
Objective 22.14. Maintain the size or, if feasible, increase the size of protected Hall's bush mallow populations.	RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	

Table 5-1d. Biological Goals, Objectives and Conservation Actions: Plants
 (Note to reader: Numeric targets to be added once preferred alternative selected)

Biological Goals and Objectives	Conservation Actions	Monitoring Action
	CHAP-1. If feasible and desirable, conduct prescribed burns in chaparral and northern coastal scrub to maintain canopy gaps and promote regeneration.	
	CHAP-2. If appropriate, mechanically thin chaparral and northern coastal scrub to promote structural diversity where fires are infeasible.	
	LM-8. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.	

Notes:

[1] Objectives that require protection of plant populations require that those populations be in currently unprotected land.

[2] For Mount Hamilton thistle population on the east side of Coyote Valley are defined as all occurrences in a discrete drainage; while population on the west side of Coyote Valley are defined as each occurrence point.

[3] Source for buffer width and minimum population size: *USFWS Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area (1998)*

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
Landscape (L)	
LAND-L1. Acquire in fee title or obtain easements on ___ acres and stream miles within the study area.	All covered species
LAND-L2. Acquire in fee title or obtain easements on land for the Reserve System that includes the full range of topographic and geographic diversity in the study area.	All covered species
LAND-L3. Acquire in fee title or obtain easements on ___ acres in the Coyote Watershed, ___ acres in the Guadalupe Watershed, ___ acres in the Llagas Watershed, ___ acres in the Uvas Watershed, ___ acres in the Pescadero Watershed and ___ acres in the Pacheco Watershed.	All covered species
LAND-L4. Acquire in fee title or obtain easements on ___ stream miles, ___ acres of ponds, ___ acres of freshwater wetlands, including ___ acres of seasonal wetlands in both the Northern and Southern watersheds of the study area.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, least Bell's vireo,
LAND-L5. Acquire in fee title or obtain easements ___ stream miles in Pescadero watershed.	South-Central Coast steelhead, Pacific lamprey, California red-legged frog, foothill yellow-legged frog
LAND-L6. Acquire and, where appropriate, enhance natural and semi-natural landscapes between the Santa Theresa Hills and Metcalf Canyon that will provide a wildlife corridor between the Santa Cruz Mountains and the Diablo Range that can accommodate the movement of covered and other native species at many spatial scales.	Bay checkerspot butterfly, covered serpentine plants
LAND-L7. Acquire in fee title or obtain easements on ___ acres of serpentine grassland along Coyote Ridge to link existing protected areas and to create a large core reserve for serpentine grassland species to move within.	Bay checkerspot butterfly, covered serpentine plants, western burrowing owl, golden eagle
LAND-L8. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities south of Henry Coe State Park to link this core reserve with extensive wetlands surrounding San Felipe Lake in San Benito County.	San Joaquin kit fox, California tiger salamander, California red-legged frog
LAND-L9. Acquire in fee title or obtain easements on ___ acres of Oak Woodland and Chaparral & Coastal Scrub natural communities east of Henry Coe State Park to link this core reserve with the large protected area of Romero Ranch.	San Joaquin kit fox, California tiger salamander, California red-legged frog

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND- L10. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities in the NE corner of the study area to link the core reserve that includes Joseph Grant County Park with SFPUC lands and other protected lands in Alameda County.	California tiger salamander, California red-legged frog, golden eagle
LAND – L11. Acquire in fee title or obtain easements on ___ acres of Grassland, Chaparral & Coastal Scrub, and Oak Woodland natural communities to connect Almaden Quicksilver County Park with protected open space to the east near Calero Lake.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle
LAND-L12. Acquire in fee title or obtain easements on ___ acres of Conifer Woodland, Riparian Forest & Scrub, Oak Woodland, and Grassland natural communities, in the portion of the Pescadero Watershed that is in the study area and along the Pajaro River, to help maintain wildlife connections between the Santa Cruz Mountains and the Gabilan Range outside the study area.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, tricolored blackbird
Grassland (G)	
LAND-G1. Acquire 6,000 acres of serpentine grassland by fee title or conservation easement with the full range of serpentine grassland associations and vegetation diversity found throughout the study area.	Covered serpentine plants, Bay checkerspot butterfly
LAND-G2. Acquire__ acres of annual grassland by fee title or conservation easement as part of the Reserve System.	California tiger salamander, golden eagle, western burrowing owl
LAND-G3. Acquire areas of native perennial grasslands by fee title or conservation easement as part of the Reserve System.	Covered plants, California tiger salamander, golden eagle, western burrowing owl
LAND-G4. Acquire ___ acres of suitable habitat for Bay checkerspot butterfly on Silver Creek Hills, Coyote Ridge, Pigeon Point, Tulare Hill, Santa Theresa Hills, areas west of Calero Reservoir, and the Kalanas, and Hale/Falcon Crest. Prioritize sites according to threat, patch size, current occupancy and prevalence of cool microsites for Bay checkerspot butterflies.	Covered serpentine plants, Bay checkerspot butterfly
LAND-G5. Acquire or obtain easements on sites with secluded rock outcrops or large trees overlooking open grassland in the Diablo Range and Santa Cruz Mountains.	Golden eagle
LAND-G6. Acquire grassland and woodland in fee title or with easements that contains recently occupied (within last 10 years) golden eagle nest sites plus a 0.5-mile buffer.	Golden eagle

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND-G7. Acquire or obtain easements on grasslands with existing ground squirrel colonies in the Diablo Range and Santa Cruz Mountains.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander
LAND-G8. Obtain conservation easements on __ acres of occupied burrowing owl breeding sites at the San Jose Water Pollution Control Plan Bufferlands, north of Highway 237.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander
LAND-G9. Acquire or obtain easements that protect suitable burrowing owl breeding habitat within __ miles of the San Jose International Airport or other important northern San Jose breeding sites.	Western burrowing owl
LAND-G10. Acquire or obtain easements on __ acres of suitable overwintering habitat in the Diablo Range that support ground squirrel populations or could support them with improved management.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander
LAND-G11. Acquire in fee title or obtain easements on ___ acres of annual grassland and suitable oak woodland types (e.g., oak savanna and oak woodland within 500 feet of annual grassland) north and south of Highway 152 in suitable modeled San Joaquin kit fox movement habitat.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander, Townsend's western big-eared bat
Chaparral and Northern Coastal Scrub (C)	
LAND-C1. Acquire ___ acres of northern mixed chaparral/chamise chaparral by fee title or conservation easement.	Golden eagle, Califorina tiger salamander, Townsend's western big-eared bat, chaparral harebell
LAND-C2. Acquire ___ acres of mixed serpentine chaparral by fee title or conservation easement.	Golden eagle, Califorina tiger salamander, Townsend's western big-eared bat, chaparral harebell
LAND-C3. Acquire ___ acres of northern coastal scrub/Diablan sage scrub by fee title or conservation easement.	Golden eagle, Califorina tiger salamander, Townsend's western big-eared bat, chaparral harebell
Oak and Conifer Woodland (OC)	
LAND-OC1. Acquire in fee title or obtain conservation easements on ___ acres of mixed oak woodland, including land in both the Santa Cruz Mountains and the Diablo Range.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander, California red-legged frog, Townsend's western big-eared bat
LAND-OC2. Acquire ___ acres of coast live oak woodland and forest by fee title or conservation easement, including land in both the Santa Cruz Mountains and the Diablo Range.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander, California red-legged frog, Townsend's western big-eared bat
LAND-OC3. Acquire ___ acres of blue oak woodland and ___ acres of valley oak woodland by fee title or conservation easement in both the Santa Cruz Mountains and the Diablo Range.	Golden eagle, western burrowing owl, San Joaquin kit fox, Califorina tiger salamander, California red-legged frog, Townsend's western big-eared bat

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND-OC4. Acquire ___ acres of foothill pine-oak woodland and forest by fee title or conservation easement.	Golden eagle, western burrowing owl, San Joaquin kit fox, California tiger salamander, California red-legged frog, Townsend's western big-eared bat
LAND-OC5. Acquire ___ acres of mixed evergreen forest by fee title or conservation easement.	California tiger salamander, California red-legged frog, foothill yellow-legged frog
LAND-OC6. Acquire ___ acres of redwood forest by fee title or conservation easement.	California tiger salamander, California red-legged frog, foothill yellow-legged frog
LAND-OC7. Acquire ___ acres of ponderosa pine woodland by fee title or conservation easement.	California tiger salamander, California red-legged frog, foothill yellow-legged frog, golden eagle
LAND-OC8. Acquire ___ acres of knobcone pine woodland by fee title or conservation ³	California tiger salamander, California red-legged frog, foothill yellow-legged frog
Riverine and Riparian Forest and Scrub (R)	
LAND-R1. Acquire through fee title or conservation easement lands that protect existing riverine habitat or stream segments that provide key connectivity between spawning/natal habitats and the ocean.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R2. Acquire ___ miles of stream along upper tributaries of fish-bearing streams that have high sediment load or other functional shortfalls that limit fish productivity such as Bodfish Creek, Little Arthur Creek, and Penetencia Creek.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R3. Acquire by fee title or conservation easement targeted stream segments such as Alamos Creek in Almaden Valley not currently under the ownership of SCVWD or other HCP/NCCP partners.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R4. Acquire through fee title or conservation easement lands that protect existing riparian habitat or riparian areas that provide key connectivity between existing riparian habitats.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R5. Acquire stream segments below dams or permanent natural barriers that currently provide or could provide high quality spawning and/or rearing habitat, focusing on the Uvas Creek, Pescadero Creek, Pacheco Creek, and Pajaro River watersheds.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R6. Acquire stream segments along Uvas Creek and its tributaries below Uvas Dam, and along Pacheco Creek below Pacheco Dam that currently provide or could provide high quality spawning and/or rearing habitat.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND-R7. Acquire or obtain easements along the Pajaro River between the Santa Clara/Santa Cruz/San Benito County lines (just west of Sargent Creek) and up to Miller Canal.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R8. Acquire or obtain easements along Uvas/Carnadero Creek and Llagas Creek between Highway 152 and its confluence with the Pajaro River.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R9. Acquire or obtain easements along the portions of Pacheco Creek that are in Santa Clara County between Pacheco Lake and San Felipe Lake.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
LAND-R10. Acquire or obtain easements along perennial streams located above Uvas, Calero, Chesbro, Anderson, or Coyote Reservoirs or in Uvas Creek below Uvas Reservoir, Upper Penitencia Creek, Alamitos Creek or Guadalupe Creek that have or could be restored to have cobblestone substrate and consistent, gentle flows from late March to late May.	Covered fish, California red-legged frog, California tiger salamander, western pond turtle, foothill yellow-legged frog, least Bell's vireo,
Wetland and Pond (WP)	
LAND-WP1. Acquire in fee title or conservation easement grassland, oak and conifer woodland habitat east of Highway 101 with ponds occupied by covered or native species and/or other ponds capable of being restored.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP2. Acquire in fee title or conservation easement grassland, oak and conifer woodland habitat west of Highway 101 in the Santa Cruz Mountains with ponds occupied by covered or native species and/or other ponds capable of being restored	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP3. Acquire in fee title or conservation easement __ acres of perennial freshwater wetlands suitable for covered or native species or other freshwater wetlands capable of being enhanced or restored to support covered species in. [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP4. Acquire in fee title or conservation easement __ acres of seasonal freshwater wetlands suitable for covered or native species and/or other seasonal wetlands capable of being enhanced or restored to support covered species in . [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP5. Acquire in fee title or conservation easement __ acres of ponds suitable for covered or native species or capable of being enhanced or restored to support covered species in ____.[3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP6. Acquire land between existing ponds and wetlands that provide a linked matrix of pond, wetland, and upland habitat as part of the Reserve System.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND-WP7. Acquire __ acres of land in the East San Francisco Bay Recovery Unit for red-legged frog (USFWS 2002) (Coyote Creek, Pacheco, and Santa Cruz Mountain Watersheds).	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP8. Acquire habitat adjacent to Joseph D. Grant County Park, Palassou Ridge Open Space Preserve, southeast of Henry Coe State Park, Santa Cruz Mountain foothills, and Calero County Park in areas where dense forest is absent to reduce competition with other native amphibians (e.g., California newts).	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP9. Acquire stream segments or ponds that currently provide or could provide high quality basking, breeding, and nesting habitat (vegetated banks and at least 150 feet of adjacent upland habitat) for western pond turtle.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP10. Acquire habitat near Santa Teresa Hills and Tulare Hill to provide connectivity between populations in the Diablo Range and the Santa Cruz foothills.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP11. Acquire __ acres of suitable breeding habitat for tricolored blackbird within dry land farming or ranching complexes in Santa Clara Valley and the Diablo Hills; put high priority on protection of occupied sites or on historic breeding sites that could be restored.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
LAND-WP12. Acquire 200 acres of foraging habitat for tricolored blackbird in areas where there is sufficient breeding habitat within 2 miles.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
Specific Plant Occurrences (P)	
LAND-P1. Acquire in fee title or conservation easement sites in the study area that support the remaining two unprotected occurrences of Coyote ceanothus and the remaining unprotected portion of the third occurrence, or provide the necessary buffer between incompatible land uses, focusing first on protection of the largest populations and those under greatest threat of development.	Coyote ceanothus
LAND-P2. Acquire in fee title or conservation easement sites in the study area that support __ populations of Santa Clara Valley dudleya and stratify protection on both sides of Coyote Valley to ensure geographic diversity in protected populations.	Santa Clara Valley dudleya
LAND-P3. Acquire in fee title or conservation easement sites in the study area that support four populations of Metcalf Canyon jewelflower.	Metcalf canyon jewelflower
LAND-P4. [optional] Acquire north side of Tulare Hill to allow for reintroduction of Metcalf Canyon jewelflower on west side of Valley.	Metcalf canyon jewelflower

Table 5-2a. Land Acquisition Actions

(Note to reader: Numeric targets to be added once preferred alternative selected).

Acquisition Action	Target Species
LAND-P5. Acquire sites in the study area that support five populations of most beautiful jewelflower.	Most beautiful jewel flower
LAND-P6. Acquire sites in the study area that support Mount Hamilton thistle in drainages or spring systems and stratify protection on both sides of Coyote Valley to ensure geographic diversity in protected populations.	Mount Hamilton thistle
LAND-P7. Acquire sites in the Reserve System that support 10 populations of smooth lessingia	Smooth lessingia
LAND-P8. Acquire sites along Coyote Ridge that support the three remaining unprotected fragrant fritillary occurrences.	Fragrant fritillary
LAND-P9. Acquire sites in the study area that support new populations and/or identify suitable locations in the Reserve System for establishing new populations.	Chaparral harebell
LAND-P10. Acquire in fee title or conservation easement a site that supports San Francisco collinsia, including a biologically appropriate buffer to protect it from incompatible land uses.	San Francisco collinsia
LAND-P11. Acquire one site in the study area that supports Loma Prieta hoita, including a biologically appropriate buffer to protect it from incompatible land uses, if needed.	Loma Prieta hoita
LAND-P12. Acquire 12 sites in the study area that support Hall's bush mallow, including a biologically appropriate buffer to protect it from incompatible land uses.	Hall's bush mallow

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
Landscape Management (LM)	
LM-1. Remove fences and roads, where feasible.	San Joaquin kit fox, American badger, Tule elk
LM-2. Replace small culverts or culverts that create a one-way barrier with large, straight culverts that allow direct movement from one side of the road to the other and ensure that the culvert is visible to the target species (i.e., do not obscure entrance with vegetation).	San Joaquin kit fox, covered fish, western pond turtle, foothill yellow-legged frog
LM-3. Where appropriate replace culverts with free span bridges to allow wildlife to move freely under roadways.	San Joaquin kit fox, covered fish, western pond turtle, foothill yellow-legged frog
LM-4. Install fencing or other features that will direct wildlife attempting to cross the roadway towards the culvert or other safe crossing.	San Joaquin kit fox, American badger, bobcat
LM-5. Remove or perforate median barriers along roadways to improve successful wildlife crossings and, if appropriate, install fencing or other features to direct wildlife to those open sections.	San Joaquin kit fox, mule deer, Tule elk
LM-6. Enhance or restore an estimated ___ acres of grassland, ___ acres of chaparral and northern coastal scrub, ___ acres of oak woodland, and ___ acres of conifer woodland within the Reserve System.	California tiger salamander, western burrowing owl, San Joaquin kit fox, golden eagle, covered plant species
LM-7. Enhance or restore an estimated ___ miles of stream, ___ acres of riparian woodland and forest, ___ acres of freshwater marsh, ___ acres of seasonal wetlands, and ___ acres of ponds to maintain and when necessary improve hydrologic functions in the study area.	covered fish, least Bell's vireo, foothill yellow-legged frog, California red-legged frog, western pond turtle
LM-8. Negotiate a let-burn policy in the study area with local and state fire agencies that could include paying ranchers for initial loss of livestock forage and structures (e.g., fences, corrals) to allow fire frequency to return to historic levels and eliminate or reduce need for prescribed burns.	Covered plants, California tiger salamander, western burrowing owl
LM-9. In identified "No Burn" areas implement the appropriate management actions that mimic the natural effects of fire (e.g., mowing, grazing, hand pulling) and subsequently improve habitat for native vegetation.	Covered plants, California tiger salamander, western burrowing owl
LM-10. TBD: Specific action for natural flood protection (integrate with District Policy)§ Natural flood protection.	Covered fish, least Bell's vireo, foothill yellow-legged frog, California red-legged frog, western pond turtle

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
LM-11. Graze, mow, hand-pull, to reduce non-native invasive plant species to a level where native plants can reestablish and remain dominant within the Reserve System.	Covered plant species, California tiger salamander, western burrowing owl
LM-12. Reduce nonnative pigs within the study area through trapping, hunting, or other control methods.	Covered plant California tiger salamander, California red-legged frog, western pond turtle, oak woodlands
LM-13. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish, feral cats) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.	California tiger salamander, California red-legged frog, western pond turtle
LM-14. Selectively apply herbicides or other treatments.	Covered plants
Grassland Management (GRASS)	
GRASS-1. Continue or introduce livestock and native herbivore (e.g., elk) grazing in a variety of grazing regimes.	California tiger salamander, western burrowing owl, San Joaquin kit fox, covered plant species
GRASS-2. Conduct prescribed burns, where possible.	California tiger salamander, western burrowing owl, San Joaquin kit fox, covered plant species
GRASS-3. Conduct mowing in selected areas to mimic grazing where use of livestock is impractical.	California tiger salamander, western burrowing owl, San Joaquin kit fox, covered plant species
GRASS-4. Conduct selected seeding of native forbs and grasses.	California tiger salamander, western burrowing owl, San Joaquin kit fox, covered plant species
GRASS-5. Cease using rodenticides within the Reserve System and when possible outside of the Reserve System except when needed to protect the integrity of structures such as levees, stock pond dams or to prevent nuisance2 populations on adjacent private lands.	California tiger salamander, western burrowing owl, San Joaquin kit fox, covered plant species
GRASS-6. Encourage colonization of new areas within the Reserve System where conflicts with covered activities are minimized.	Golden eagle, western burrowing owl, San Joaquin kit fox, California tiger salamander, California red-legged frog
GRASS-8. Translocate Bay checkerspot butterflies (eggs, larvae, or adults) from core populations into suitable but unoccupied sites if natural dispersal fails to reestablish population.	Bay checkerspot butterfly
GRASS-9. Implement vegetation management that reduces the height of all vegetation to less than 12 inches (i.e., graze/mow).	California tiger salamander, covered grassland plants, western burrowing owl
GRASS-10. Create artificial burrows to encourage colonization of sites where ground squirrel establishment is not feasible or during the interim before ground squirrel colonies can be established.	western burrowing owl

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
GRASS-11. Conduct a public education campaign in the southeastern portion of the study area to provide landowners with information about management and land use techniques the are more compatible with movement and use by San Joaquin kit fox.	San Joaquin kit fox
GRASS-12. Establish targeted covered plant species on unoccupied but suitable rock outcrops using seeds and transplanted adults from large populations.	Santa Clara Valley dudleya
GRASS-13. Manage and maintain the hydrologic systems (springs, streams, ponds, etc.) that provide habitat for Mount Hamilton thistle.	Mount Hamilton thistle
Chaparral and Northern Coastal Scrub Management (CHAP)	
CHAP-1. If feasible and desirable, conduct prescribed burns in chaparral and northern coastal scrub to maintain canopy gaps and promote regeneration.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, western burrowing owl, Townsend's western big-eared bat, Coyote ceanothus, Hall's bush mallow
CHAP-2. If appropriate, mechanically thin chaparral and northern coastal scrub to promote structural diversity where fires are infeasible.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, western burrowing owl, Townsend's western big-eared bat, Coyote ceanothus, Hall's bush mallow
CHAP-3. Identify areas in the Santa Cruz Mountains, eastern mountains, and in Henry Coe State Park where Douglas fir is encroaching on chaparral scrub land cover and, if appropriate, work to reduce the spread.	golden eagle, Townsend's western big-eared bat
Oak and Conifer Woodland Management (OAK)	
OAK-1. Conduct prescribed burns in low-density oak woodlands to enhance the community and to reduce non-native, invasive grass cover beneath oaks and encourage growth of a native understory and oak seedlings.	California tiger salamander, California red-legged frog, western pond turtle
OAK-2. Restore __ acres of valley oak woodland within the Reserve System in [add general locations when conservation strategy is developed].	California tiger salamander, California red-legged frog, western pond turtle
OAK-3. Plant valley oaks in the Reserve System in areas where they have been removed, where they are not regenerating naturally, or where densities are low relative to reference stands due to past land uses.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, San Joaquin kit fox, Townsend's western big-eared bat
OAK-6. If feasible and desirable, conduct prescribed burns in redwood forest, ponderosa pine woodland, and knobcone pine woodland to maintain and where possible enhance native species diversity in the mid-canopy and understory.	California tiger salamander, California red-legged frog, western pond turtle, San Joaquin kit fox, Townsend's western big-eared bat
OAK-7. If appropriate, mechanically thin the understory of redwood forest, ponderosa pine woodland, and knobcone pine woodland in target areas to promote a healthy understory/canopy.	California tiger salamander, California red-legged frog

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
Riverine and Riparian Forest and Scrub Management (STREAM)	
STREAM-1. Regulate flow to improve passage during critical migratory periods for aquatic species in areas where partial or seasonal barriers prevent them from completing their life cycle.	Covered fish, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-2. Exclude livestock access to target stream segments (e.g., Pacheco Creek, floodplain of Coyote Creek) using exclusion fencing, off-channel water sources, and other potential actions.	Covered fish, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-3. Plant and/or seed in native understory and overstory riparian vegetation within 15 feet of the edge of the low-flow channel to create structural diversity, provide overhead cover, and moderate water temperature.	Covered fish, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-4. Plant and/or seed in native riparian vegetation in gaps in existing riparian corridors to promote continuity.	Covered fish, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-5. Mimic natural disturbance in the absence of scouring flood flows using techniques such as moving gravel, altering the channel, or removing vegetation to manage physical process and vegetation to ensure a variety of successional stages of riparian forest and scrub land-cover types.	western pond turtle, California red-legged frog, least Bell's vireo
STREAM-6. Replace XX miles of concrete, earthen or other engineered channels where feasible.	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-7. Replace XX miles of confined channels, where feasible, to restore floodplain connectivity and commensurate functions.	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle
STREAM-8. Stabilize XX feet of streambank that qualify as chronic anthropogenic sources of sediment within stream reaches that are currently on the Clean Water Act Section 303(d) list for impairment.	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle, least Bell's vireo, Townsend's western big-eared bat
STREAM-9. [In progress...action will address aquatic exotic species problem, Arundo controls and removal guidelines consistent with SCVWD SMP Program and encouraging stewardship on private land].	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle
STREAM-10. If new Pacheco Reservoir is built, acquire control of Pacheco Dam to influence the flow and function of Pacheco Creek downstream of Pacheco Dam for the benefit of covered fish. If new Pacheco Reservoir not built, reach agreement with operator to manage dam in ways that benefit native fish.	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
STREAM-11. Remove or modify partial or absolute barriers, including culverts, that impede movement or sediment transport.	Covered fish species, California tiger salamander, California red-legged frog, foothill yellow-legged frog, western pond turtle
STREAM-12. Create more stable winter base flows from November 1 through April 30 below dams to reduce stranding and provide minimum depths for upstream passage of adults, using dam operation rule curves developed for the FAHCE program. (Source: FAHCE HCP)	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-13. Release winter/spring (Feb. 1 to April 30) pulse flows of 50 cfs from Anderson, Calero, Almaden, and Guadalupe Reservoirs to attract adults moving upstream. (Source: FAHCE HCP)	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-14. Provide sufficient flow to maintain a minimum depth over riffles of 0.8 feet to allow upstream passage for adult Chinook salmon and steelhead trout. (Source: FAHCE HCP)	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-15. Isolate Ogier Pond and Metcalf Pond to off-channel structures to eliminate temperature and predation "traps" within the channel.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-16. Release cold water and sufficient flows to enhance spawning habitat for covered fish.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-17. Manage watershed-wide fine sediment inputs through controls on runoff from development sites (see Condition 4 in Chapter 6) to improve habitat functions for covered fish.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-18. Install large woody debris and other in-stream structural elements and promote woody debris recruitment to enhance winter rearing habitat. [3]	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-19. Place gravel to enhance existing spawning habitat (i.e., Gravel augmentation) and consider fine-sediment cleaning. [3]	Covered fish species, foothill yellow-legged frog
STREAM-20. Release cold water from Guadalupe, Almaden, Anderson, and Coyote Reservoirs to maintain water temperatures of 18° C within Cold Water Management Zones below dams to enhance viability of spring and summer incubation and rearing habitats.	Covered fish species, western pond turtle
STREAM-21. Release sufficient flow to provide xx square feet of fast water feeding habitat in Coyote Creek and Guadalupe River for summer rearing.	Covered fish species
STREAM-22. Operate Cherry Flat Reservoir (City of San Jose) to improve continuity of flows on Upper Penetencia Creek to benefit summer rearing native fish.	Covered fish species, California red-legged frog

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
STREAM 23. Improve flows on lower Upper Penetencia Creek using South Bay Aqueduct water.	Covered fish species, California red-legged frog
STREAM-24. Implement and monitor flow rule curves developed under FAHCE for Uvas and Chesbro Dams to improve flow in Uvas Creek.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-25. Release sufficient flow to provide head of pool, run, and riffle habitat in target stream reaches for summer rearing.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
STREAM-26. Increase dissolved oxygen using an oxygenation system in Uvas Reservoir to (perhaps) reduce turbidity in flow releases.	Covered fish species
STREAM-27. Where appropriate and likely to benefit least Bell's vireo over the long-term, implement a brown-headed cowbird control program to reduce the impact of brood parasitism on least Bell's vireo.	Least Bell's vireo
STREAM-28. Increase the amount of cobblestone substrate suitable to support breeding foothill yellow-legged frogs to ___ acres/___ stream mile.	Covered fish, foothill yellow-legged frog
STREAM-29. Below Uvas Reservoir manage flow regime to mimic a natural condition of high flow events during the winter months and into late March followed by gentle, consistent flow through the end of May.	Covered fish species, western pond turtle, California red-legged frog, foothill yellow-legged frog
Wetland and Pond Management (POND)	
POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.	California tiger salamander, California red-legged frog, western pond turtle
POND-2. Install woody debris around perimeter and in submerged bank of ponds and wetlands to create basking habitat and cover for native juvenile amphibians and turtles.	California tiger salamander, California red-legged frog, western pond turtle
POND-3. Plant native emergent vegetation around the perimeter and in ponds and wetlands.	California tiger salamander, California red-legged frog, western pond turtle
POND-4. Periodically clear vegetation or remove sediment, as necessary, in a way that minimizes negative effects on species.	California tiger salamander, California red-legged frog, western pond turtle
POND-5. If appropriate, graze or mechanically thin around pond perimeter to mimic grazing and promote native species.	California tiger salamander, California red-legged frog, western pond turtle
POND-6. Restore ___ acres of freshwater marsh within the Reserve System in _____. [3]	California tiger salamander, California red-legged frog, western pond turtle
POND-8. Restore freshwater marsh at a ratio of 1:1 (estimated at ___ acres) within the Reserve System in _____. [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-9. Restore seasonal wetlands at a ratio of 2:1 (estimated at X acres) within the Reserve System in _____. [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
POND-10. Create at least __ acres [and __ number] of ponds in ____. [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-11. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in ____. [3]	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-13. Offer incentives to private landowners to enhance pond and wetland habitat to suit breeding California red-legged frog, California tiger salamander, and western pond turtle.	California tiger salamander, California red-legged frog, western pond turtle
POND-14. Create at least __ acres [and __ number] of ponds in [add specific locations that will increase connectivity].	California tiger salamander, California red-legged frog, western pond turtle
POND-15. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in [add general location].	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-16. Offer incentives to private landowners to enhance pond and marsh habitat to suit breeding tricolored blackbirds, and to ensure that dry-land farming and ranching activities support breeding tricolored blackbirds.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-17. Offer incentives to private landowners to ensure that dry-land farming and ranching activities support foraging tricolored blackbirds.	Tricolored blackbird
POND-18. Encourage marsh habitat that will support dense reed-like vegetation (cattails) or other native vegetation that will attract nesting tricolored blackbirds.	California tiger salamander, California red-legged frog, western pond turtle, tricolored blackbird
POND-19. In areas with non-native vegetation (e.g., Himalayan blackberry) that supports existing tricolored blackbird colonies, initiate a gradual (3-4 year) transition from non-native vegetation to native vegetation that is structurally similar.	Tricolored blackbird
Research	
RESEARCH-1. Determine factors relevant to the health and regeneration of native chaparral/scrub species.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, western burrowing owl, Townsend's western big-eared bat, chaparral harebell
RESEARCH-2. Experimentally manage oak woodlands to reduce seedling mortality, increase seedling and sapling survival and determine factors relevant to regeneration, including browsing by mammals, birds, and insects.	California tiger salamander, California red-legged frog, western pond turtle, golden eagle, San Joaquin kit fox, Townsend's western big-eared bat

Table 5-2b. Land Management Actions

(Note to reader: Numeric targets to be added once preferred alternative selected)

Management Action	Target Species
RESEARCH-3. Experimentally manage redwood forest, ponderosa pine woodland, and knobcone pine woodland to determine factors relevant to regeneration and maintenance; possibly including prescribed burning, selective thinning, and other management actions to meet this objective.	California red-legged frog, foothill yellow-legged frog, western pond turtle, golden eagle, Townsend's western big-eared bat
RESEARCH 4. In the case of ponds, wetlands, and/ or amphibian populations becoming infected with chytrid fungus or other diseases, use the best scientific information available to manage and stop spread of epidemic.	California tiger salamander, California red-legged frog, western pond turtle
RESEARCH-5. Identify the extent of distribution and risk to existing indigenous populations of covered amphibians and reptiles from hybridization (e.g., California tiger salamander hybridizing with Texas salamander) and develop management plan based on results of targeted research.	California tiger salamander
RESEARCH-6. Identify and maintain upland breeding sites for western pond turtle because of the high fidelity of their use from year to year (even if sites are not "natural").	Western pond turtle
RESEARCH-7. Conduct targeted studies to determine factors limiting the expansion of the covered plant species, including but not limited to its management and micro-site needs, and implement measures to mitigate or eliminate these factors.	Coyote ceanothus, Santa Clara Valley dudleya, Metcalf Canyon jewelflower, most beautiful jewelflower, Mount Hamilton thistle, smooth lessingia, fragrant fritillary, Tiburon Indian paintbrush, big scale balsamroot, chaparral harebell, Loma Prieta hoita, robust monardella, rock sanicle, Hall's bush mallow
RESEARCH-8. Conduct experimental burning where feasible in protected populations of targeted covered plant species to determine the importance of fire for plant regeneration.	California tiger salamander, western burrowing owl, San Joaquin kit fox, Coyote ceanothus
RESEARCH-9. Identify suitable locations in the Reserve System for establishing new populations of covered plants.	chaparral harebell, robust monardella, rock sanicle, big scale balsamroot, metcalf canyon jewelflower
RESEARCH-10. Determine suitable propagation or planting techniques for targeted covered plant species and determine appropriate seed sampling techniques from existing populations.	Coyote ceanothus, Metcalf Canyon jewelflower, big scale balsamroot, chaparral harebell, San Francisco collinsia, robust monardella, rock sanicle
RESEARCH -11. Design and implement field experiments (if the number of propagules allows) to test alternative techniques for establishment of targeted covered plant populations.	Coyote ceanothus, Metcalf Canyon jewelflower, big scale balsamroot, chaparral harebell, San Francisco collinsia
RESEARCH-12. Test the effects of livestock grazing on targeted covered plant species by experimentally excluding livestock and monitoring effects on populations, including control sites in the monitoring plan	Santa Clara Valley dudleya, Mount Hamilton Thistle, smooth lessingia, Tiburon Indian paintbrush



Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan

Date: June 14, 2007

AGENDA ITEM 4

TO: Governing Body Liaison Group

FROM: Management Team

SUBJECT: Information Items

PREPARED BY: Kenneth Schreiber, Program Manager

Purpose of this Staff Report: Provide information on five items related to the Habitat Plan.

Next Steps After Liaison Group Review: Activities regarding these items will proceed as described.

Recommendation: Liaison Group action is recommended on item 4e, Meeting Schedule.

Discussion:

- a. *Stakeholder Group Activities:* The Stakeholder Group met on April 24th and May 22nd. The Meeting Notes for both meetings are attached. Meetings of the Stakeholder Group will continue on the fourth Tuesday of each month in the Morgan Hill Community Center.
- b. *Environmental Review:* On June 5th, the County Board of Supervisors authorized approval of the contract with CH2M Hill for preparation of the Environmental Impact Report and Environmental Impact Statement. A subsequent meeting with CH2M Hill staff, the Program Manager and Fish and Wildlife Service staff identified the September 25th Community Meeting as a target for the environmental scoping meeting. The date and time of the scoping meeting is dependant on publication of a Notice of Intent in the Federal Register.
- c. *Fiscal Year 2007 Section 6 Planning Grant:* The County received notification that the application for \$185,000 of Federal Section 6 Planning Grant funds was approved.
- d. *Local Attorney Meeting:* Attorneys representing the individual Local Partners have met on April 23rd, May 8th and June 1st. A monthly meeting schedule has been established for the remainder of 2007 (meetings to be held if needed and if a conference call can not be substituted for a meeting). The attorneys clarified/modified the proposed agreements with the Open Space Authority and the State Department of Parks and Recreation. The attorneys are in agreement on the need to secure the services of outside legal expertise to assist primarily with preparation of the Habitat Plan's Implementing Agreement. A scope of services is under review and three law firms are being contacted regarding their availability and the timing of interviews. Use of an outside legal resource is predicated on the assumption that attorneys for each Local Partner will address legal issues and tasks normally associated with local staff responsibilities and the outside resource will be focused on tasks that local staff have little to no experience with.

e. *Liaison Group Meeting Schedule:* The Liaison Group's meeting schedule for the remainder of 2007 is:

- Thursday, August 16 from 4 to 6;
- Thursday, October 18 from 6 to 8; and
- Thursday, December 13 from 4 to 6.

The project schedule has, on October 18th, the Liaison Group releasing a package of policy information for Local Partner elected decision maker review. That review process will extend into early to mid-January. Following the meeting schedule in 2006 and 2007, the first Liaison Group meeting in 2008 would be on February 21st. It is recommended that the Liaison Group:

- Retain the December 13th meeting date with the understanding that the meeting will only be held if needed to facilitate the policy information review process;
- Schedule a Liaison Group meeting on Thursday, January 31, 2008 to review the comments that Local Partners have made on the package of policy information; and
- Schedule Liaison Group meetings on the following Thursdays: February 21 (6 to 8 and to be held if needed based on the January 31st meeting), April 17 (4 to 6), June 19 (6 to 8), August 21 (4 to 6), October 16 (6 to 8) and December 11 (4 to 6), 2008. One of the reasons for establishing 2008 meeting times at this meeting is to help staff try to secure a consistent meeting location.

The August 16th and October 18th agendas will have considerable amounts of material for review. Staff requests that the Liaison Group consider whether the meeting times should be extended to 3 to 6 pm for August 16th and 6 to 9 pm for October 18th.

Attachments: April 24 and May 22, 2007 Stakeholder Group Meeting Notes

Copies: None

SANTA CLARA VALLEY
HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN
Stakeholder Group Meeting | April 24, 2007 | Morgan Hill Community & Cultural Center

IN ATTENDANCE:

Stakeholder Group Members:

Keith Anderson (South Valley Streams for Tomorrow)
Nancy Bernardi (Guadalupe-Coyote Resource Conservation District)
Jack Bohan (representing General Public)
Kevin Bryant (California Native Plant Society)
David Collier (Sierra Club)
Craig Edgerton (Silicon Valley Land Conservancy)
Justin Fields (Santa Clara County Cattlemen's Association)
Jan Hintermeister (Santa Clara County Parks and Recreation Commission)
Virginia Holtz (League of Women Voters)
Bob Loveland (Representative of general public)
Peter Mirassou (Agriculture/Landowner)
Kenn Reiller (Pajaro River Watershed Council)
Jack Sutcliffe (Santa Clara County Farm Bureau)
Lloyd Wagstaff (The Nature Conservancy)

I. WELCOME, INTRODUCTIONS & OBJECTIVES

Joan welcomed the group and noted that Carolyn Tognetti and Bob Power would not be able to attend. Joan is also working with Tim Steele to identify a replacement for him.

II. PRESENTATION ON THE COST MODEL OVERVIEW

Sally Nielsen of Hausrath Economics Group presented on the draft HCP budget. Sally noted that both her firm and Jones & Stokes had conducted similar analyses for other HCPs; this forms some of the basis for this draft budget.

Craig asked whether the stakeholder group had a role in making decisions regarding the budget, or whether the presentation was simply for informational purposes. Sally responded that some group members might have a direct effect on what the numbers were—for instance, if their organization has special knowledge of an area—but by and large, the Management Group will be determining the cost factor. Ken Schreiber noted that the budget is an agenda item in part to expose group members to this information and in part to ensure that the budget is in check with reality. He noted that the model was especially complex so that it can be used as a tool once the plan is in place—for instance, if costs are diverging from the model, those managing the plan will be able to look at the model to see if this is across the board or in one particular area, and will better understand how to adjust to accommodate this change.

The stakeholder group will see this model again as it is further developed. Sally also noted that the budget model was being developed in close collaboration with the wildlife agencies and other stakeholders.

Keith asked about a line item for funding habitat management or restoration on private lands outside the reserve system. Sally agreed that this was not in the budget, as this is not anticipated as an HCP action. Keith feels it is still important to include funds for this in the budget. Ken Schreiber noted that the reserve system is limited to protecting land in perpetuity, and that is virtually impossible to guarantee on private property. It will be difficult to “get credit” for actions on private land. This doesn't mean that there won't be HCP actions on private land or with private landowners, but these actions may not be a part of the formal conservation strategy.

Lloyd noted that an easement was simply a tool to protect land in perpetuity. For today's discussion, it makes sense to exclude actions on private land not protected formally, though this should be revisited once we're actually developing HCP actions.

Sally noted that it would probably not be necessary to do a separate analysis for cost factors of actions on private lands unless the cost was likely to be dramatically different than taking this same action on preserve land.

David Collier wondered how flexible the easement tool is—can it be used, for instance, to guarantee permission to flood or burn an area, with no other rights? Sally noted that the budget model doesn't specify the range of types of easements being considered.

Ken Schreiber noted that the plan should involve some level of public access, perhaps by trails or docent-led activities, the public will be happier with the use of public funds for open space. Ken also noted that he would send the budget spreadsheet out to people to look at to better understand it.

Kenn Reiller asked about collaboration potential with respect to budgeting—for instance, can software be coordinated? Sally noted that they could take budgets from any source and adapt them to yield crucial information (e.g., if an agency knows their budget is \$2 million to manage their land, the consultants can assess how much land and what types of actions, and extrapolate to find an action per acre cost factor).

Ken Schreiber noted that the budget model currently uses a fifty-year permit term. However, this has not yet been determined, and this issue will come back to the stakeholder group. Craige asked if the budget included cost for protection in perpetuity. Yes, it does; the assumption is that there may be an endowment fund that will finance this cost.

Sally will send out the beginning and the assumptions page, which will give stakeholders a sense of the level of detail for cost factor assumptions.

Keith had an additional question: at the end of the plan period, does a partner agency have the option of walking away from the in perpetuity costs? Ken Schreiber believes they cannot do this—the contract commits each partner in perpetuity.

Craige asked whether the agencies and developers had any role in calculating the costs and fees associated with the budget. Are there political decisions to make here, or is the budget being determined independently? Ken Schreiber replied that it's not safe to assume that any particular interest group is "on board" yet, but many groups may have interest in looking at the numbers to understand where they came from.

III. PRESENTATION ON THE FUNDING BASE ANALYSIS

Sarah Graham of MuniFinancial presented on the analysis of potential funding for the HCP. Keith asked who MuniFinancial reported to. Their contract is with Santa Clara County, and Hausrath is a sub to MuniFinancial. They are responsible for the funding and financing side.

Keith asked whether specific funds like the Water District's enhancement fund, etc., were included in the list of potential funding sources. No, not specifically—but there's a general category to cover available local resources.

Sarah will present on specific funding alternatives today, but will discuss the broader alternatives at later points in the process. The comprehensive list includes funding and financing strategies.

Craige asked why easements were listed as a funding source. This is because land with an easement may pass into the preserve category, and thus may generate funds in that context. In select cases, there may also be an endowment associated with an easement. Costs commonly include funding for an endowment.

Ken Schreiber noted that the Open Space Authority had a special assessment approved by the voters, and it was challenged. It is now in the State Supreme Court, where there is no requirement to examine it in a timely manner, so

it may be some time before this is reviewed. Virginia clarified that there are two special assessment districts—one has already been tested in the courts and found successful.

Jack Sutcliffe noted that there was an extensive range of potential fees—does MuniFinancial have a sense of where the Santa Clara plan might fall? Sally's team is currently working on the cost, while MuniFinancial is looking at the funding. They need to bring these two ends together before they can identify these conclusively. This will likely come to the Stakeholder Group on June 26th. Keith asked if this meant that there would be an impact assessment ready by then as well, since we will need to know the magnitude of the mitigation. This is scheduled to come to the Stakeholder Group in May and June.

Lloyd noted that it might be time to bring the Coyote Valley Specific Plan (CVSP) back into the conversation, since this is a sizable chunk of land. Ken Schreiber asked that the group wait for Darryl Boyd to return to the room to discuss this. After Darryl returned, Lloyd continued by noting that the CVSP might have been a valuable tool but it's now off the table. Darryl noted that the CVSP still needs to mitigate its impacts, so they may be interested in coordinating those efforts in some manner.

Lloyd asked how economic incentives might fit into this picture. MuniFinancial hasn't looked at this closely yet, although they have consulted with the Water District on existing funding programs. Lloyd suggested that water management and incentives be closely considered.

Jan wondered about the restrictions on state and federal funding. These restrictions come from the state and federal governments, since they do not allow use of their funds for mitigation. Thus, other revenue streams are more useful since they can be used for whatever's most appropriate.

David Collier wondered about a program in Chicago where farmers allowed their land to go fallow and could gather additional funds by using the land as carbon-based units for carbon offsets. Could this be used as part of a cap and trade program?

Craige noted that this might have negative consequences—it's not necessarily a clear win. David Collier suggested that perhaps any funding from the cap program could be applied to protecting new lands outside of the original time of the HCP.

Craige also asked that the Integrated Regional Watershed Management Plan on the Pajaro River be included as a model.

Keith asked whether the funding could accommodate a decision to, say, operate Pacheco Reservoir in perpetuity. This might fall under an indirect payment or activity that contributes to revenue. These are difficult to quantify, but MuniFinancial is attempting to include them in the funding model.

IV. COYOTE VALLEY SPECIFIC PLAN: EIR UPDATE

Darryl Boyd gave an update on the Coyote Valley Specific Plan. The public comment period on the EIR has been extended by 30 days. There is an upcoming public meeting on May 2nd at 3 pm at the Camden Community Center. The early time is to accommodate agency staff. He encouraged stakeholders to review the document, which is available on the project website. Information regarding the public meeting is also available online.

Lloyd noted that the technical document made reference to hydraulic models, and wondered if he could have these to explore. Darryl will confer with him offline on this.

Craige mentioned an upcoming meeting on May 6th regarding wildlife corridors through Coyote Valley. He will send this information out electronically.

Ken Schreiber noted that many of the local partners have strong interests in the Coyote Valley area, and many do not agree. Based on a Management Team decision, Ken Schreiber and David Zippin have committed to not becoming involved in the CVSP process because many of the partners are the same and there may be some conflicts of interest. Ken would like to keep the CVSP out of the HCP/NCCP discussions as much as possible, except where

it specifically affects HCP/NCCP actions or outcomes. Instead, stakeholders and their associated groups should participate in the CVSP process directly through the many opportunities to provide comments.

V. UPDATE ON LIAISON GROUP ACTIVITIES

The next Liaison Group meeting is June 14th at San Jose City Hall from 5:30 to 9 pm to allow the group to get into the conservation goals and objectives.

Ken noted that areas outside of the study area include the Baylands, Milpitas out to Alameda, the urban developed flatlands (Campbell, Los Gatos, etc.), and the western hillsides. Originally, the study area was based just on the four watersheds in the county, but was then expanded to include other areas as well, including all of the city of San Jose except their Baylands. The Management Team concluded there was not a huge need to extend the Habitat Plan into those four areas—much of the land is already developed in some areas, and much of the open space is already protected. The Liaison Group decided to hold off making any decisions on whether or not to expand the Habitat Plan.

Cory Mustin of Fish and Wildlife noted that there are opportunities to expand the area that is covered, but the wildlife agencies do not anticipate requirements to cover or protect these areas.

Ken also provided an update on project status. The original schedule called for taking three alternative strategies from the Liaison Board in June to the elected bodies over the summer. Instead, this presentation will include information on impacts and costs, permit term, conditions, and more, and will be brought to the elected bodies in October instead.

Review by the elected bodies will occur in late fall and early winter instead of over the summer. This may be a difficult time for review, but it's important to try to keep it there so that the feedback can come back in time for the plan to be pushed back only two months. It seemed important to push this back in order for the elected bodies to have all of the critical information for review.

VI. UPDATE ON PUBLIC INVOLVEMENT

Karen Molinari presented an update on public involvement. Feedback and questions from outreach efforts are added to the information on the website, and she encourages stakeholders to continue presenting to their groups and communities.

The next community meeting is Wednesday, September 26, 2007 in Morgan Hill. Karen also distributed a sheet for interested stakeholders to sign up for presentations at their organizations.

VII. PUBLIC COMMENT AND NEXT STEPS

One guest noted that the appendices were still not available at the library, and need to be.

The next meeting will be at the usual time, 4 pm to 6:30 pm, on May 22, 2007.

SANTA CLARA VALLEY
HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN
Stakeholder Group Meeting | May 22, 2007 | Morgan Hill Community & Cultural Center

IN ATTENDANCE:

Stakeholder Group Members:

Keith Anderson (South Valley Streams for Tomorrow)
Nancy Bernardi (Guadalupe-Coyote Resource Conservation District)
Jack Bohan (Representative of general public)
Kevin Bryant (California Native Plant Society)
David Collier (Sierra Club)
Craig Edgerton (Silicon Valley Land Conservancy)
Jan Hintermeister (Santa Clara County Parks and Recreation Commission)
Virginia Holtz (League of Women Voters)
Rick Hopkins (Home Builders Association of Northern California)
Kenn Reiller (Pajaro River Watershed Council)
Bob Rohde (Natural Resources Conservation Service, San Benito & Santa Clara Counties)
Brian Schmidt (Committee for Green Foothills)
Carolyn Tognetti (Save Open Space Gilroy)
Lloyd Wagstaff (The Nature Conservancy)

II. WELCOME, INTRODUCTIONS & OBJECTIVES

Joan Chaplick welcomed the group and gave a brief agenda overview. She noted that Ken Schreiber would not be in attendance, nor would Bob Loveland or Bob Power. A replacement for Tim Steele has not yet been identified.

III. STATUS OF DRAFT CHAPTERS 1-3

David Zippin introduced the Jones & Stokes presentation for the day, which would introduce much of the work that lies ahead.

All changes in the draft chapters 1, 2, 3, and Appendix D (species accounts) will be in “track changes,” so group members will be able to see exactly what is new and what has changed. These files are available on the website as PDF files. Comments on the first three chapters are due on July 15th to ensure that there will be time to review other forthcoming chapters. Comments should go to Joan, as in the past and she will forward them to Jones & Stokes.

David Collier noted that he felt that he needed the biological goals and objectives in order to evaluate the chapters. David Zippin replied that the BGOs would be in table format at the end of chapter 5.

Four new chapters will also be coming soon, though the date is unknown since these must go through the local agencies first. These include the impact analysis chapter (Chapter 4), the conservation strategy (Chapter 5), the conditions on covered activities (Chapter 6), and the literature cited chapter for all chapters to date (Chapter 12).

IV. INITIAL DISCUSSION OF IMPACTS (CHAPTER FOUR)

The impacts section is broken down into permanent impacts (lands that are gone for good) and temporary impacts (short-term impacts). Permanent impacts are spread very differently across each land type, although the calculation of exactly what this means for the covered species has not yet been done. Some areas like chaparral and oak woodland bear much of the impact of development. Much of this impact comes from the urban development of Morgan Hill and Gilroy.

One group member asked what the methodology for this was. David Zippin responded that Jones & Stokes had been working with the local partners to identify footprints of expected development and growth over the coming

years. This information was then mapped in GIS and overlaid on the land cover map. In some cases, this information wasn't exact because a location was not identified, so in these cases the impact was approximated based on expected impact.

David Collier asked about the percent column and whether it could be used in Table 4.2. David Zippin agreed and observed that there was only so much space but said he would see what he could do.

David Collier also requested that the team check to make sure the HCP/NCCP is consistent with recent agricultural protections passed by LAFCO to ensure that nothing is doubled up. Agricultural easements will not be a huge component of the HCP/NCCP, though, so there shouldn't be too much overlap. Keith asked why riverine areas weren't included. These impacts are still being calculated based on new data from partner agencies.

One group member asked what the "Other" category was. Much of this is areas like ornamental woodland, golf courses, etc. that is not as significant for habitat.

Total permanent impacts are about 25,000 acres. About 15,000 acres of this come from Gilroy/Morgan Hill growth. Although San Jose is bigger, it has much less greenfield development—hence the difference. There may also be some impact from plan implementation, but this is estimated to be quite low. Temporary impacts are roughly 1,800 acres per year. However, since most of these impacts occur annually (e.g., road maintenance or staging areas), this will probably be treated as if it were a permanent impact since it is consistent. The temporary impacts do not include the Water District's stream maintenance activities since these are not covered by the HCP/NCCP.

One group member noted that the team should be cautious not to fund the plan too heavily from impact fees, since it seems clear that this would place an undue burden on Morgan Hill and Gilroy, as the two cities that are currently growing. Other funding mechanisms should be introduced to ensure that the other urban areas also help fund the plan.

The impact area is comparable to those of other plan areas in northern California. However, southern California growth tends to have much more significant impact. There is some flexibility on the ground to respond to specific impacts and other changes.

Rural development impacts are more difficult to predict, so these impacts were estimated using trends seen in the last 10 years. Broadly, impact was estimated by taking random parcel samples across the study area to identify what types of impacts and footprints could reasonably be expected from future development, based on the patterns seen in the last 10 years.

V. CONSERVATION STRATEGY

David Zippin introduced the discussion of the conservation strategy for the plan.

Pat Showalter wondered if the team planned to differentiate between the HCP requirements (mitigation) and the NCCP requirements (restoration) in terms of impact and activities. David Zippin noted that developed areas were not likely to be a part of the conservation strategy unless a rare plant occurred on the site.

Val shared an example about a subdivision approved in Santa Barbara just as the tiger salamander was being listed. There was a conflict between property rights and take of the salamander. With funding assistance, building envelopes were developed for each house to allow for corridors between the houses. This seemed to satisfy the requirements for the species, and avoided a lawsuit. He wondered whether there might be intermediate solutions like this that could permit development but protect specific species.

Val noted that the cost for development in the hills is much higher, which has been a deterrent.

This is meant to be an estimate for planning purposes, so there will not be a cap per zone, for instance. The conservation strategy will also attempt to address development threats accordingly.

Impact to Covered Plants

Habitat distribution models have been developed for most of the covered plants. These maps are a coarse tool, however, and are less helpful for habitat protection. Known occurrences of the plants are the most important piece of information and therefore what is used as the unit of conservation.

David Collier asked what would happen if, in the planning survey, we discover that our estimates are very far off, and in fact there are many occurrences of a protected plant on a site. David Zippin noted that this was unlikely to occur, but in some cases, all occurrences of a species will be protected as they are discovered. David Collier wondered how it would be possible to tell if this was likely or not since no error figures are given.

David Zippin also noted that the text outlines the general rule for this. There is a process defined to ensure that populations that are lost are of lower quality than populations that are protected. There are multiple criteria to ensure that this is the case.

Another group member asked about the sampling in the tables, noting that in the open space lands, some of these species have actually been counted, so this should be compared to the estimates and sampling error information.

Craige asked what the definition of an occurrence was—for instance, is every instance of a species on Coyote Ridge a separate occurrence, or one large occurrence? Right now, these are defined based on the Fish and Game database. Really, we want to be preserving populations, but occurrences are the closest approximation to that. This may not exactly correlate to population, but the plan will combine closely related occurrences to reflect populations. (For instance, a plant may occur multiple times in a drainage area, which is many occurrences—but a single population.)

This table outlines predicted impacts. One guest asked whether there would eventually be tables of actual impact, and what might happen if this number was significantly bigger than the prediction. At that point, there will be rules in place to dictate how to accommodate this impact. However, the plan largely sets limits for take—so if many more occurrences surface, the limit will be quickly met. This ensures that the take permits err on the side of species protection rather than on the side of take.

Val noted that there are also several new technology gadgets that may support this research, including a GPS camera that will take polygon photographs.

Use of Maps

David Zippin discussed the use of maps in the HCP/NCCP. Maps are used in different ways for different plans, and it's important that they include enough information—but not so much that people get alarmed. Virginia was surprised that there were as many gaps as there were in the sample map.

David Collier noted that while willing sellers were a concern, most sellers are willing at the right price, so prioritization is important. Lloyd asked about the stars on the sample map. David Zippin explained that they indicated potential restoration areas.

Buffers are also a controversial issue, particularly with respect to distance from urban development.

David Zippin also brought up the issue of rough proportionality, a requirement of the NCCP Act. The timing and extent of impact affect what is required. Essentially, you must make progress towards your conservation targets as you make progress towards your development predictions. A ten percent deviation is permitted, however.

David Zippin clarified that for the purposes of measuring rough proportionality, conservation includes both mitigation and contribution to recovery..

David Collier asked to be sure that the East Contra Costa County model, which permitted the plan to stay ahead only in grassland conservation, not be used for this plan. David Zippin agreed, noting that in the East Contra Costa case, that was a very high and appropriate bar, but that each plan was different.

Kenn Reiller wondered whether a quantitative measure of “staying ahead” was really appropriate. Some new lands might not serve a conservation purchase for many years to come, and it might be most important to get acreage as early as possible and focus on restoration in later years.

David Collier noted that the acreage measure doesn’t take into consideration the health of a population, or factors like which willing sellers will come into the picture with available lands—this might come into play well after a permit is issued. There is a two-year grace period in some plans, however, to allow for this. David Collier noted that it might make sense to work this in reverse—look at what’s protected before deciding whether to grant a permit or not, rather than granting a permit and then building the reserve system.

The next section deals with how species are protected before impact occurs.

What happens if you wildly over or underestimate impact? Ratios are used to help approximate this for aquatic land cover types.

Lloyd asked if a pond was a sag pond or a stock pond. A pond is a stock pond, and is easy to map—it’s just hard to predict impact on these, including whether they’ll be filled or not. Preservation and restoration requirements will be set accordingly.

Lloyd also asked whether developers might provide their own land or do their own restoration. Yes, there will certainly be an option for this, but it will be evaluated on a case-by-case basis to ensure that conservation goals are being met.

Kenn Reiller wondered if different zones might have performance criteria to determine how well each was achieving its potential.

David Collier asked about the role of the science advisors and their comfort levels in the conservation strategy. Their views certainly influenced the strategy development, though they may not have been asked to comment specifically on ponds, etc.

Some species are fully protected—you can take habitat, but you can’t take individuals. Migratory bird take also requires special permits. Regional avoidance is also allowed on biologically low-value areas. Any set aside is permanent.

Keith asked what would happen if the landowner said he was willing to set aside some portion of the property as an easement. Yes, this is allowed and even encouraged in some cases, even though the area might not be contiguous to the rest of the reserve system. In other cases—e.g., the case of a pond with red-legged frog—this would probably not be accepted, since the pond can’t function in isolation. In that case, a fee would be paid in lieu of actual land preservation.

Val noted that there were also many obstacles to be overcome in policy—for instance, there are existing grading and subdivision ordinances that specify what people can and can’t do when they develop land.

There are also potential dilemmas around areas that can’t avoid impact, like a bridge construction that must go through specific lands. Surveys are designed to verify land cover and identify key resources that may require avoidance or mitigation. If protected species are found, this can trigger a pre-construction survey. The idea is to make the surveys and requirements clear and predictable.

David Collier asked what covered species the surveyors were required to survey for. They survey for specific covered species including covered plants, no take species, and the covered wildlife listed in chapter 6. It’s important to remember that the majority of the projects affected by the HCP/NCCP would not pay anything for conservation right now, while a few would bear a significant burden—what the plan does is spread the cost of preservation more equitably across all parties.

VI. COVERED ACTIVITY CONDITION OF APPROVAL ISSUES

David Zippin introduced key covered activity condition of approval issues and outlined the general approach to getting coverage under the plan. A full discussion of these issues was tabled until the June meeting due to time constraints.

VII. PUBLIC COMMENT AND NEXT STEPS

The next meeting will be June 26th. David Zippin will not be in attendance, but Troy Rahmig of Jones & Stokes will be there instead.

The next meeting will be at the usual time, 4 pm to 6:30 pm, on June 26, 2007.