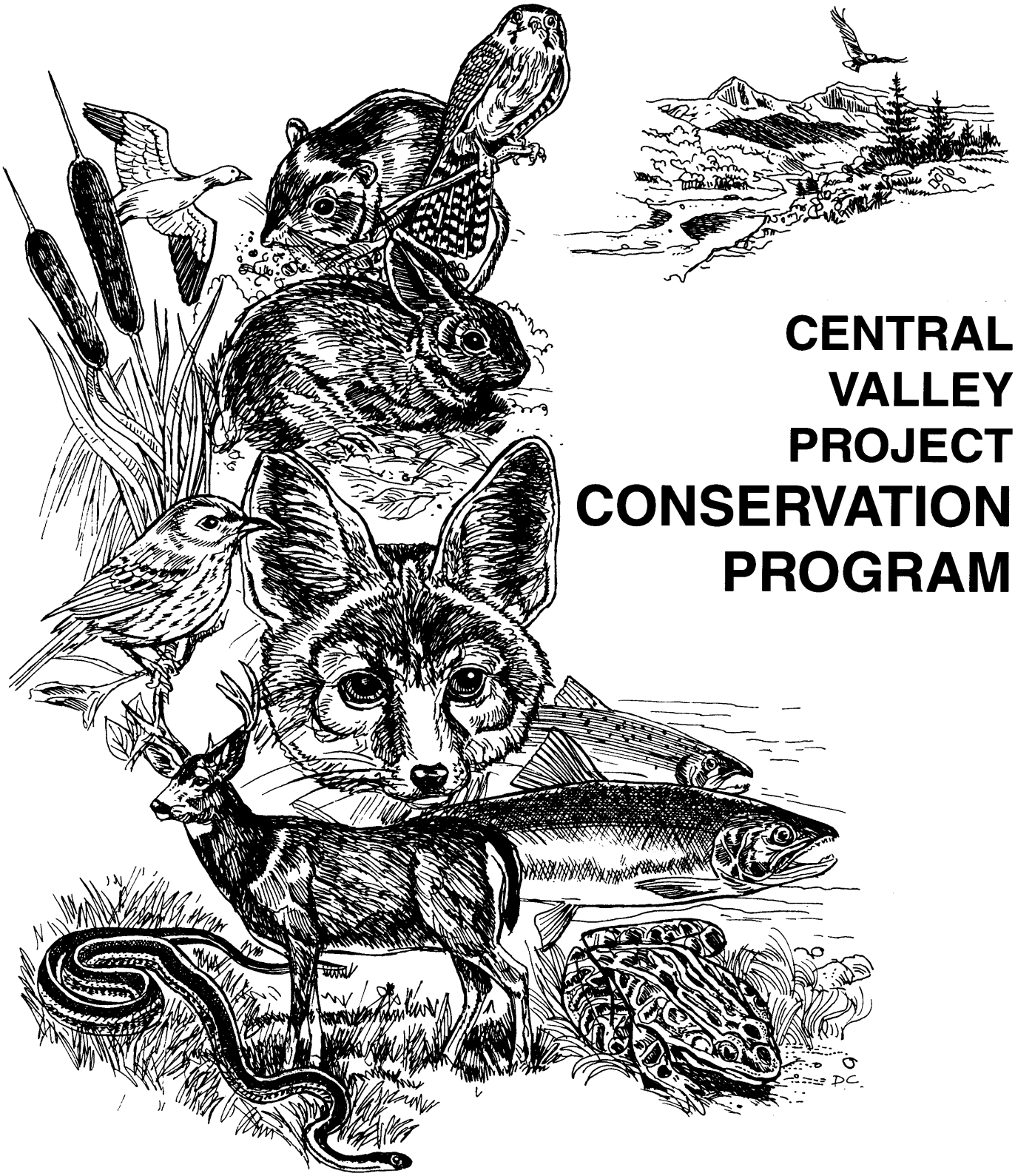


CENTRAL VALLEY PROJECT CONSERVATION PROGRAM

U.S. Bureau of Reclamation / U.S. Fish and Wildlife Service

August 2001

Acknowledgments

This revision of the program and operational framework document was prepared by the Central Valley Project Conservation Program Team, Heather Bell, Fish and Wildlife Service (FWS), Sam Blankenship, California Department of Fish and Game (CDFG), Robert Eckart, Bureau of Reclamation (BOR), Rosalie Faubion, BOR, Larry Host, FWS, Kathy Luken, BOR, Myrnie Mayville, BOR, Sandra Morey, CDFG, Sandi Richerson, BOR, Chuck Solomon, BOR, Marie Sullivan, FWS, and Basia Trout, BOR. The original document was published in September 1997. This document sets the overall goals and objectives of the program and an operational framework. By its nature the Conservation Program is dynamic; consequently, this document is dynamic and will continue to be changed/updated periodically to reflect new information, changing ecological needs of species, and input from agencies and publics. The illustrations used throughout this report were provided by Dale Crawford, U.S. Geological Survey, Midcontinent Ecological Services Center, Fort Collins, Colorado.

If you have any questions or comments on this document, please provide them to:

Chuck Solomon
Conservation Program Manager
MP-152, Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

or contact Chuck
at **(916) 978-5052**
email: **rsolomon@mp.usbr.gov**

Central Valley Project Conservation Progam

1.0 Introduction

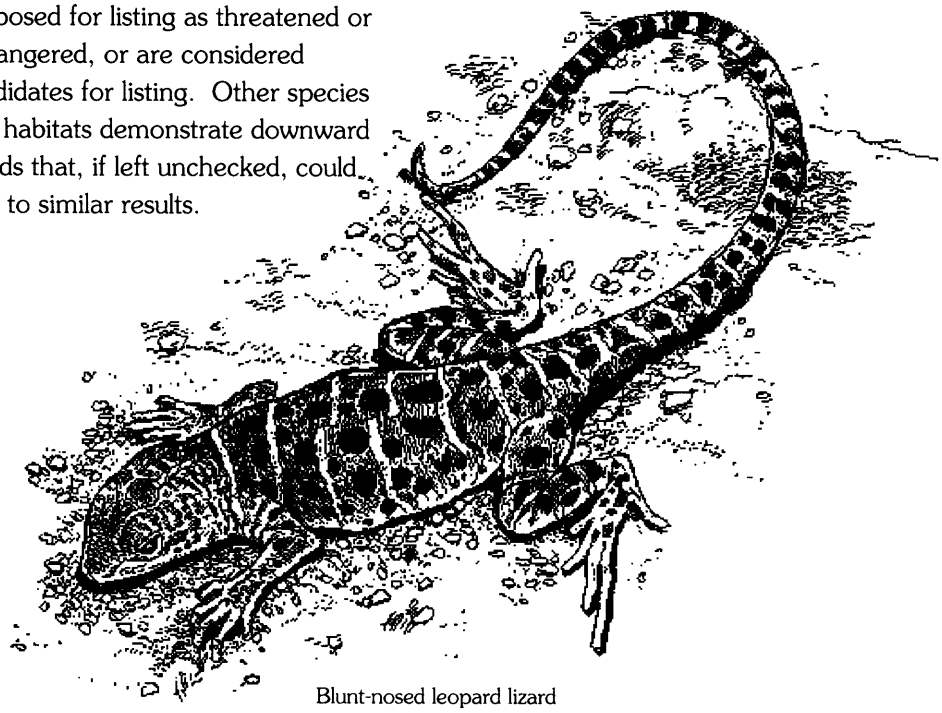
This report describes a framework for the Central Valley Project Conservation Program (CVPCP). The original report was published in September 1997; this revision provides updates and additional information. The primary goal of the Conservation Program, developed and managed by the U.S. Bureau of Reclamation (Reclamation) and the U.S. Fish and Wildlife Service (Service), is to meet the needs, including habitat needs, of listed and special-status species affected by the Central Valley Project (CVP). The species whose needs will be addressed by the Conservation Program include primarily federally-listed species. In addition, species that are are proposed or are candidates for Federal listing, as well as other species of concern, will benefit from the Program if they have high-priority biological needs. Together with the attached appendices, this document describes the Conservation Program and how it is being and will continue to be implemented.

1.1 Purpose and Need

The overall purpose and need of the Conservation Program is to meet, in concert with other programs, the habitat and related needs of special-status species as defined above. Implementation of the Conservation Program, by addressing the needs of listed species, should reduce existing threats and help ameliorate past impacts to special-status species whose historic or current range includes areas that have been affected by the CVP (Figure 1 shows the potential area of effect).

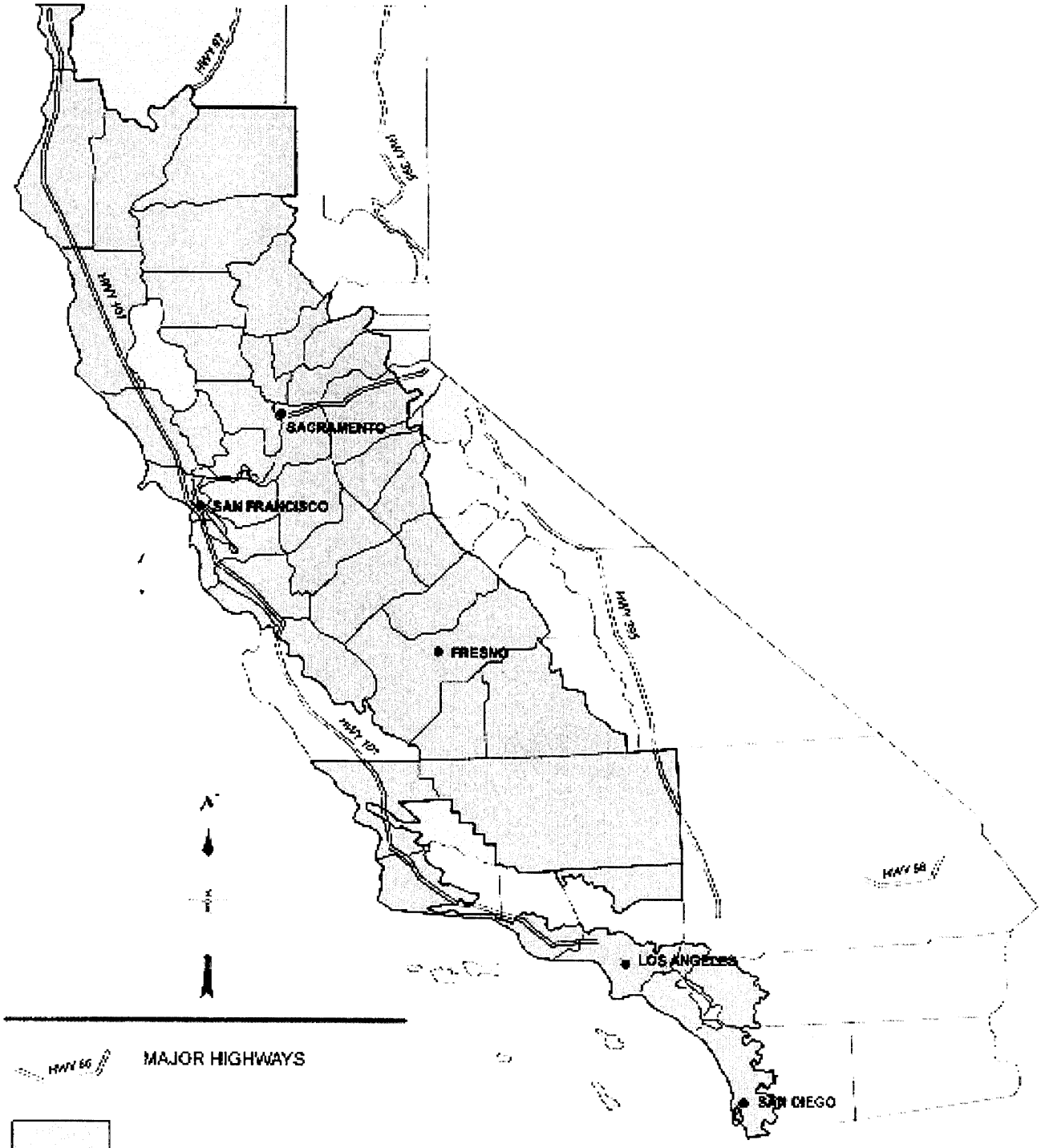
California is well known for its varied habitats; the Central Valley in particular was historically one of the most biologically diverse areas in North America. But many of the biological resources of this area have been reduced or severely degraded by human activities. Impacts include the inundation of thousands of acres of upland, wetland, and riparian habitats by large reservoirs; degradation of wetland, riparian, and aquatic habitats downstream from reservoirs due to changes in both quantities and timing of river flows; and conversion of upland and wetland habitats for agricultural, municipal, and industrial uses. Although the Central Valley remains biologically diverse, the present-day condition of indigenous fish and wildlife and their habitats can be described only as poor. As much as 80 and even 95 percent of some habitat types, such as wetlands and riparian forests, have been lost, and dozens of species have been listed or proposed for listing as threatened or endangered, or are considered candidates for listing. Other species and habitats demonstrate downward trends that, if left unchecked, could lead to similar results.

The primary goal of the Conservation Program is to meet the needs, including habitat needs, of listed and special-status species affected by the Central Valley Project.



Blunt-nosed leopard lizard

FIGURE 1
Potential Threatened and Endangered Species Impact Area for the Central Valley Project



1.2 Goals and Objectives

The primary goal of the Conservation Program is to implement an aggressive adaptive management program that will protect, restore, and enhance special-status species and their habitats in areas directly or indirectly affected by the CVP, especially in the Central Valley and in other areas where CVP water is delivered.

The objectives of the Conservation Program are to:

- Address the needs of listed and special status-species in an ecosystem-based manner
- Assist in the conservation of biological diversity
- Improve existing conditions for listed and special status species and reduce conflicts with future projects

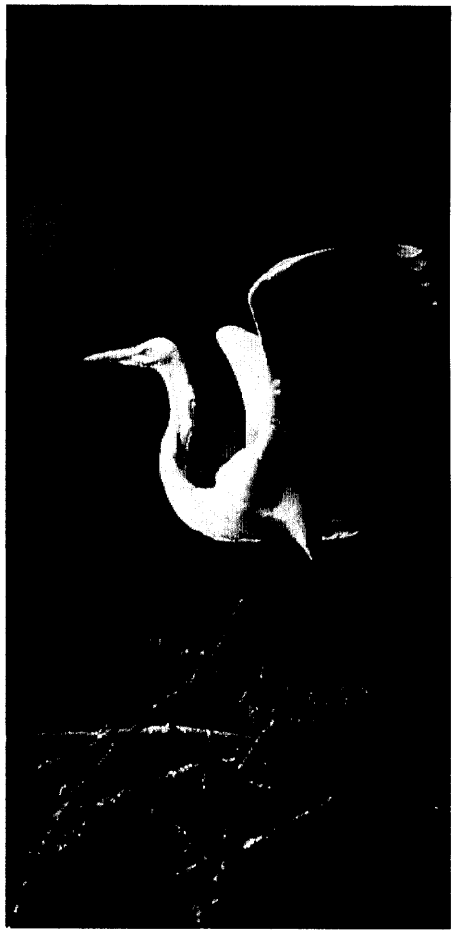
Meeting these objectives would help ensure that current and future operations of the CVP will not jeopardize the existence of any species.

2.0 Background

The concept for a CVP Conservation Program was developed in 1991 during the Endangered Species Act (ESA) section 7 consultation between Reclamation and the Service for the renewal of the Friant Division water contracts. As a result of this consultation, Reclamation and the Service developed the San Joaquin Valley Endangered Species Recovery Program to address endangered species issues in the San Joaquin Valley. As part of this consultation and a subsequent consultation on interim renewal contracts, Reclamation agreed to address endangered species issues throughout the area affected by the CVP.

In the summer of 1995, the Assistant Regional Directors of the Service and Reclamation, and their staffs, met with the goal of developing a mutually acceptable approach for addressing endangered species issues in the CVP service areas. The agencies agreed that:

- A CVP Endangered Species Act (ESA) Team (i.e. Technical Team) consisting of staff from both the Service and Reclamation would develop and implement a CVP Conservation Program.
- The Conservation Program would be based on (1) the needs of listed and special status species in the area affected by the CVP and (2) the opportunities available to Reclamation and the Service to address these needs (rather than on an accounting of the specific impacts of the CVP, which is accomplished through the Central Valley Project Improvement Act (CVPIA)).
- The Conservation Program, along with other initiatives, is intended to ensure that the existing operation of the CVP, implementation of the CVPIA, and renewal of CVP water service contracts would not jeopardize listed or proposed species or adversely affect designated critical habitat.



Great Egret

3.0 Implementation

This section briefly describes the implementation process for the Conservation Program, which will be guided by the following principles:

- Implementing actions will respond directly to biological needs
- Highest priority needs will generally be addressed first
- Priorities and needs, and thus the implementation plan, will change over time
- The Conservation Program will identify actions for implementation mainly by synthesizing existing information about needs and specific actions rather than by duplicating other efforts and developing information on its own. However, there may be some situations for which existing information is not available, and the Conservation Program will develop new information
- Actions will be implemented in coordination with other ongoing programs and with partners when possible.

The Conservation Program will primarily address federally listed species.

3.1 Identification of Threatened and Endangered Species

The Conservation Program will address primarily federally listed species. However, a secondary focus will be other special status species that are listed as threatened or endangered pursuant to the California Endangered Species Act, and species proposed for listing pursuant to either the Federal or State ESA. In addition, species that are candidates for listing pursuant to the Federal Act, species on the Service's list of species of special concern, species listed as rare under California law, species of special concern according to California Department of Fish and Game (CDFG), and other species with compelling biological needs may be appropriate special status species for the Conservation Program.

The Service has identified 1,320 special status species in the potential area of impact of which 288 are federally listed, proposed or candidate species. Because of the length of this list, it is not included in this report. The list can be obtained through the Endangered Species Program, Sacramento Fish and Wildlife Office. Species may be added to or removed from this list by the technical team based on new information or as species needs are met by program actions.

3.2 Identification of High-Priority Species

To narrow the range of actions considered each year to a manageable level, a list of high-priority species will be developed by the Service. An initial list (near-term priority) consists of those species identified as having high-priority needs in the consultations for both the interim renewal and Friant Division contracts. As the highest priority needs of these species are met, it may be appropriate to add new species to the list. The list of priorities will be refined through review of information from habitat-based data, recovery plans, listing packages, habitat conservation plans, other consultations, and monitoring programs.

3.3 Identification of Ecological Needs

The ecological needs of the high-priority species will be identified and compiled, largely from existing information developed by the Service, CDFG, other public agencies, and private sources. Factors responsible for the decline of the species will be identified. The ecological needs will be ranked and, if possible, the most important limiting factors will be identified for each species or habitat. This task has been largely completed for the species on the initial near-term priority list; these species' needs were identified during the Friant Division and interim renewal contract consultations. As other species are added to the list of priority species, information about their needs can be developed from listing packages, recovery plans, or other sources.

3.4 Identification of Options to Address these Needs

Options to address the ecological needs, especially critical needs or limiting factors, will be developed. Most options will have been identified in other efforts; however, with the help and input of the general public and stakeholders, the Conservation Program may identify new options.

3.5 Specific Action Proposals

Specific action proposals developed by the Service, Reclamation, and others will be used to meet the needs of the species or habitat. Each proposal will include

(1) the biological objectives (ideally, quantified) of the action

(2) specific measures to be implemented

(3) a description of the potential for success

(4) a monitoring plan including considerations for quality control

(5) evaluation criteria to determine whether the action is successful

(6) an implementation schedule

(7) funding requirements.

Appendix A is an example of an action proposal.

3.6 Selecting Actions for Implementation

On an annual basis, current proposals and proposals not previously selected for implementation will be evaluated. The following factors will be used to prioritize and select proposals.

Relationship to CVP:
Project will benefit species and habitats that have been directly or indirectly affected by the CVP.

Presence of Listed Species:
Project would benefit one or more listed, proposed, or candidate species.

Presence of Special Status Species:
Project will benefit one or more special status species.

Multiple Species:
Project would benefit other wildlife species.

Multiple Habitats:
Project contains two or more cover types/habitat types.

Cumulative Benefit:
Project would provide cumulative benefits to native resources as it would complement or enhance an existing project or management practices on adjacent lands.

Long-Term Benefit:
Project would have long-term rather than short-term or temporary benefits.

Project Connectivity:
Project site is ecologically and physically connected to existing native habitat which allows ingress and egress of species.

Partners:
Cost-share funding is available from other agencies, organizations, or publics.

Valley elderberry longhorn beetle

Maintain or Enhance Biodiversity:
Project is located in an area of existing or potentialy high biodiversity.

Within CVP Service Area:
Project is located within the place of use for CVP water.

Cost Effectiveness:
Projects with a greater cost effectiveness will generally be rated higher than projects which are not as cost effective (implementation cost, monitoring, and maintenance).

3.7 Implementation/Evaluation of Specific Actions

Once funds are available for a specific priority action, it will be implemented. In general, implementation may be accomplished directly by, or through contract with, the Service or Reclamation or through an outside agency or private contractor. The success of each action, and of the Conservation Program as a whole, will be evaluated each year. Either the action or the Conservation Program may be modified based on the results of this annual evaluation.

3.8 Monitoring

A monitoring program will be developed for each specific project to provide information on the status and success of ongoing actions. This will assist the Technical Team in revising priorities for future activities.

3.9 Funding

Funding sources for specific actions may include the regular budgets of the Service and Reclamation Energy and Water Funds as well as the Restoration Fund established by the CVPIA. The Conservation Program will also seek outside sources of funding through other agencies and private foundations where the goals of the Conservation Program converge with the goals of the funding program.

3.10 Environmental Compliance

All actions selected for implementation will be reviewed pursuant to the National Environmental Policy Act, ESA and other applicable environmental statutes, and the appropriate level of compliance documents will be completed.

4.0 Projects Funded to Date

A comprehensive list of projects funded to date is in Appendix B. Actual funding for the Conservation Program was initiated in 1999. Projects funded prior to that time were through the CVPIA Habitat Restoration Program ((b)(1) "other" Program).

5.0 Partnerships and Public Participation

The Service and Reclamation recognize that development and use of partnerships is a vital component of effective use of funds and staff toward meeting the goal of the Conservation Program. The Conservation Program will make every effort to implement specific programs in partnership with other involved agencies, organizations, and the public to maximize the use of available funds. These partnerships could take many forms, such as providing information or loans to other Federal, State, or local agencies involved in implementing actions to benefit listed species in the project area, or providing seed funds to a local agency or association of governments preparing a habitat conservation plan (HCP). By providing seed money to initiate the implementation of the HCP, the Conservation Program may achieve its goals (and the goals of the HCP) more quickly, or implement actions that otherwise could not be implemented. Partnerships will be especially important where they can leverage the limited resources of the Conservation Program to address needs that would otherwise be unmet.

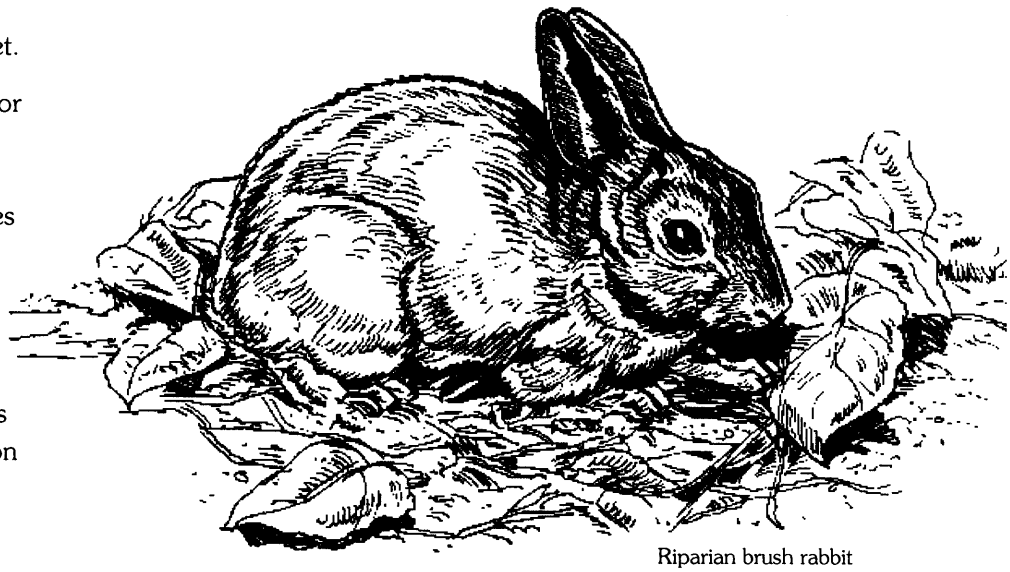
In addition to seeking partnerships for implementation of specific actions, the Conservation Program will promote public participation activities that will help shape effective management of the program. The objectives of the public involvement program are to:

- Effectively communicate the goals and objectives of the Conservation Program.
- Solicit public input on specific aspects of the Conservation Program, including key decision making steps.
- Clearly explain the issues and activities in the Conservation Program.
- Provide both general and technical information to interested groups and individuals.

The target audiences of the public participation program are diverse and include:

- Political/government interests
- Environmental interests
- Fisheries groups
- Wildlife organizations
- Agricultural interests
- Urban water users
- Business/community interests
- Water policy groups
- Native Americans
- Public interest groups
- General public
- Media
- Recreation interests
- Wildlife preserve neighbors

The Conservation Program will make every effort to implement specific programs in partnership with other involved agencies, organizations, and the public to maximize the use of available funds.



Riparian brush rabbit

6.0 Program Structure

The CVP Conservation Program is implemented through an organizational structure as shown in figure 2. This structure includes a Program Manager, a Technical Team, and a Steering Committee.

The Program Manager administers the Conservation Program and makes the day-to-day decisions to ensure a smooth-running and cohesive program. In addition, the Program Manager is the focal point for all contact with the public. Finally, the Program Manager serves as the coordinator for the exchange of information among the Technical Team, the Steering Committee, other existing related programs both within and outside the Department, interested parties, the general public, and decision makers. The Program Manager is the only full-time person associated with the program.

The Program Manager administers . . . and makes the day-to-day decisions to ensure a smooth-running and cohesive program.

The Technical Team is made up of representatives of the Service, Reclamation, and CDFG. The Technical Team will have the primary responsibility of identifying near-term high-priority species, identifying specific actions to address the needs of these species, evaluating and ranking these actions, and providing technical input throughout the planning process. Additionally, the Technical Team will participate in establishing the program goals and objectives, provide planning and implementation activities for CVPCP actions, and establish a general monitoring protocol to determine program effectiveness. Membership in the Technical Team will be based on expertise in ecology and the needs of special status species and their habitats addressed by the Conservation Program, and expertise in addressing these needs. The Northern California Area Office, South-Central California Area Office, and Central California Area Office of Reclamation will each provide part-time staff on an annual basis to the Technical Team. The Service and CDFG will each provide one to three part-time staff to serve on the Technical Team.

The Steering Committee will provide, when necessary, policy direction and guidance and will resolve management issues. The Steering Committee may assist with

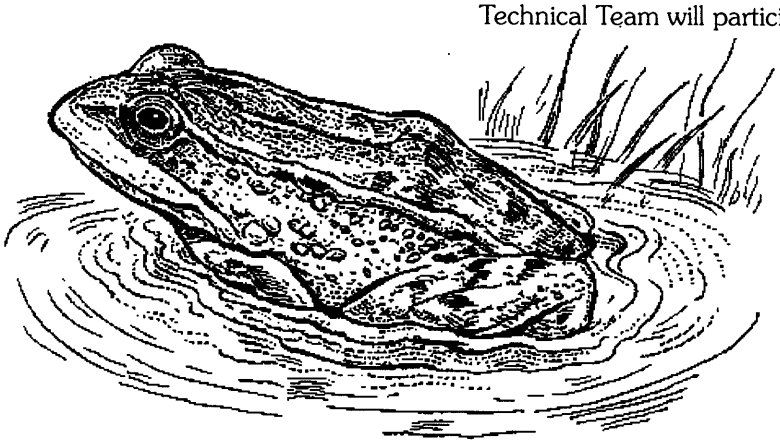
(1) determining the goals and objectives of the long-term program

(2) identifying priorities for the Conservation Program based on policy direction

(3) identifying and resolving policy issues among the participating agencies

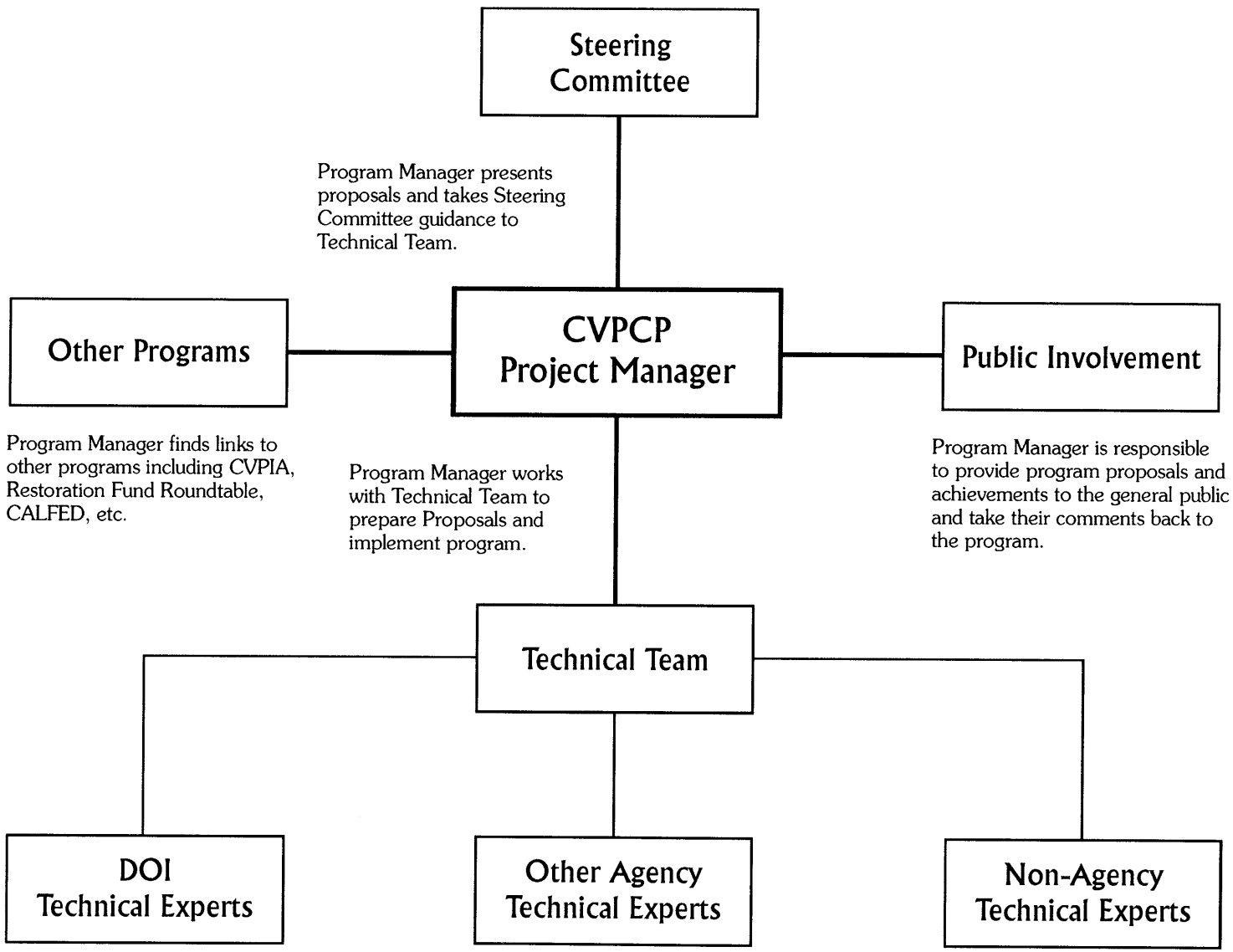
(4) coordinating within their agencies to help streamline the Conservation Program and facilitate its implementation.

Members of the Steering Committee should serve as advocates for the Conservation Program within their respective agencies. The Steering Committee will be comprised of management or senior staff from Reclamation, the Service, and CDFG.

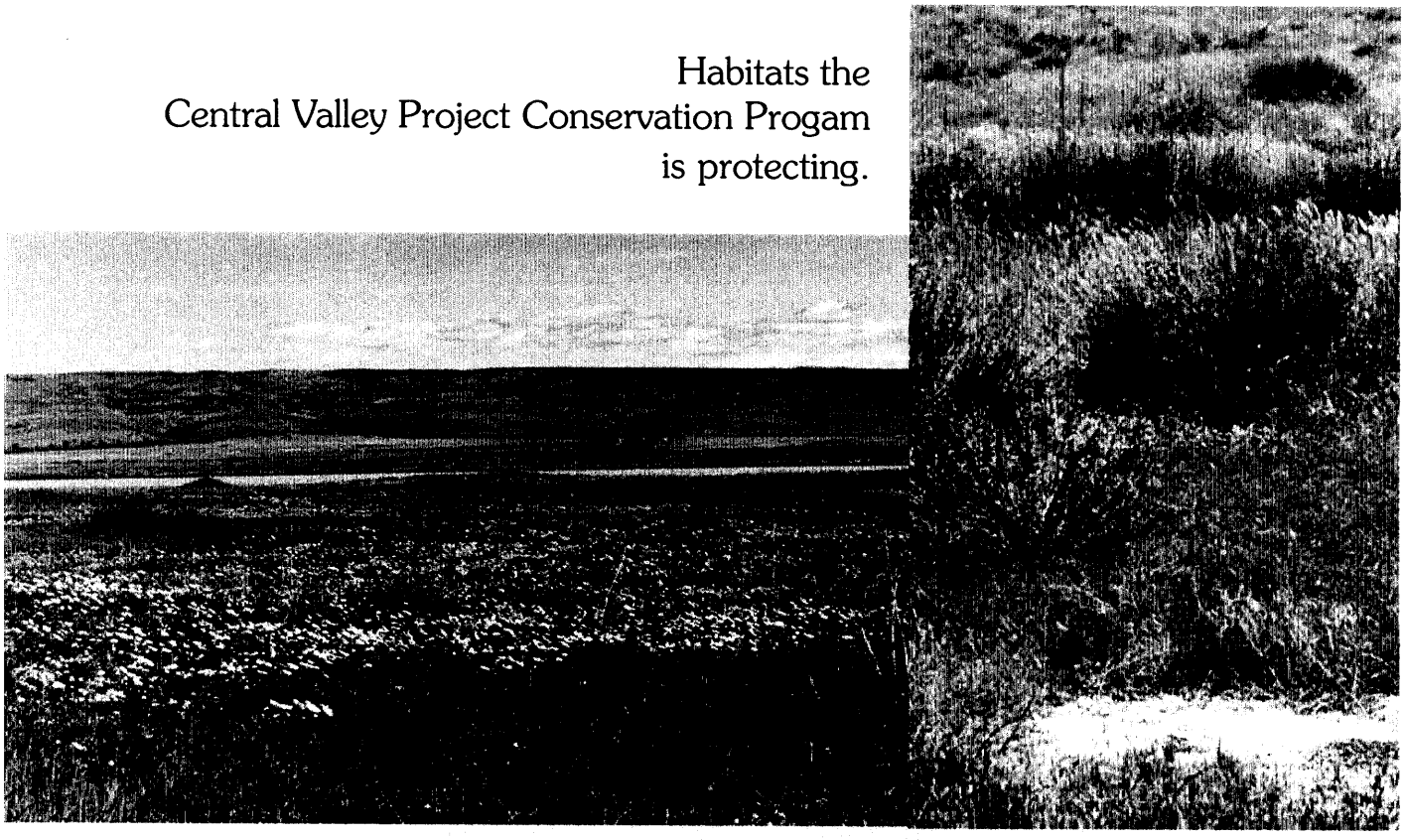


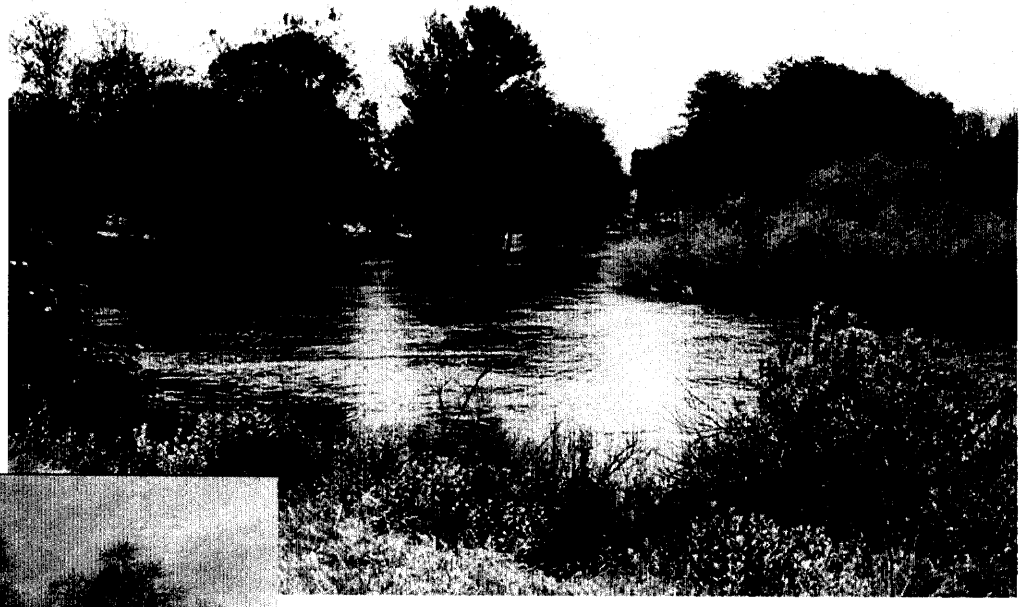
California Red-legged frog

Figure 2
Central Valley Project Conservation Program (CVPCP)



Habitats the
Central Valley Project Conservation Progam
is protecting.





Appendix A

Conservation Easement Purchase: Fernwood Partners Property

The Trust for Public Land / The Shasta Land Trust

Project Summary

The Trust for Public Land (TPL) and the Shasta Land Trust (SLT), working as partners, propose to acquire a conservation easement to protect the landscape and natural resources of the 2,180 acre Fenwood Partners property, an undeveloped tract located along the Sacramento River approximately 14 miles southeast of the city of Redding in Shasta County. The Fenwood property runs for approximately 2½ miles along the left shore of the Sacramento River between Cow and Bear Creeks. TPL is currently negotiating an option to purchase a conservation easement and prepare an appraisal of the proposed conservation easement. TPL would subsequently acquire and convey title to SLT to manage and enforce the provisions of the conservation easement. TPL and SLT will solicit expertise from interested state and federal resource agencies as well as other private land conservation organizations in drafting an effective easement that will stand the test of time.

Project Description

Location

Located along the Sacramento River *(River Mile 278–280)*, in an unincorporated portion of southern Shasta County, the property is about 3 miles east of the town of Anderson. Dersch Road runs along the northern edge of the property, and Parkville road runs along the eastern boundary. The property is easily accessed from Interstate 5 via Deschutes Road, and lies approximately 1 mile east of the intersection of Deschutes and Dersch Roads. The property is included on the *Balls Ferry* USGS 7½-minute quadrangle, in Sections 9, 16, and portions of Sections 8, 10, 15, 17 and 21, Township 30 North, Range 3 West, MDM. The vicinity map indicates the location of the property within the state.

Landscape

The property is bordered to the west by the Sacramento River, to the northwest by Cow Creek and by Bear Creek along the southeast. To the north, the property is bordered by the southern extent of the Millville Plains, which are flat to gently rolling grasslands. The property is in a transition zone between the grassland/ woodland landscapes to the north and east, and the riparian floodplain and valley landscapes of the Central Valley, to the south and west. The vast and largely undisturbed state of the property makes it a rare representative of the habitat and natural diversity of such a transition zone.

Most of the Sacramento River frontage is steeply sloping with plateaus 80 to 100 feet above the river. There are a few benches and riparian areas along the River. One such area is known as China Garden and contains about 40 acres of rolling, alluvial soil and a gravel bar. The property includes the east shore of Cow Creek from its mouth upstream approximately a quarter mile, and borders Bear Creek from its mouth upstream approximately 1 mile. Dry Creek is a seasonal stream that bisects the property. The overall topography gently slopes southwesterly to the bank overlooking the Sacramento River with elevations ranging from about 340 feet to 570 feet above mean sea level. There are no structures or other improvements on the property. Site improvements are limited to interior and perimeter cross fencing. A Western Area Power Agency *(WAPA)* high voltage transmission line alignment bisects the property, crossing the Sacramento River at China Garden.

Plant communities, habitat and wildlife

The property has a diversity of plant communities, and provides a richness of habitat types. The location of the property in a transitional zone between foothill woodlands and riparian floodplain and the largely undisturbed state of the land combine for a unique variety of habitat types. The expansive oak woodlands, and their proximity to the River are prime territory for Ospreys, bald eagles, sharp shinned hawks, Cooper's hawks and other raptors. There is an abundance of mammal, bird, amphibian and reptile species that also use the oak woodland, including bobcats, mule deer, wild turkeys, western pond turtles and Pacific treefrogs. The riparian areas provide habitat for winter-run chinook salmon, bank swallows, river otters and a variety of species, several of which are special status species. Nearly 100 species of amphibians, reptiles, birds and mammals have been observed on the property, and there is the potential for an even greater number to occur.

There are six habitat types supported by the property, as identified by the Wildlife Habitat Relationship (*WHR*) classification system. These are described below and the locations of these communities on the property are presented in Figure 1.

Blue oak woodland is the dominant plant community, encompassing approximately 2,018 acres (92%) of the property. Most areas are relatively open savannahs with blue oak as the dominant tree species, and a predominantly herbaceous understory. Some areas have greater canopy cover, with a mixture of blue oak, interior live oak and gray pine, with shrub species like manzanita and coffeeberry. Although blue oak woodlands are considered a common plant community, large tracts of largely undisturbed oak woodlands are rare in California. Over a century of clearing oak woodlands for urbanization and agriculture have fragmented oak woodland habitat, and adversely affected regeneration. This unfragmented oak woodland provides a wide variety of habitat components. High densities of snags, downed woody material and other habitat components contribute to a diversity of wildlife species. Firewood harvests between 1988 and 1990 led to coppice sprouting of the oaks and also left behind slash piles, which have created additional shrub components to the habitat.

Over 100 mammal species and 110 bird species rely on such vast, intact tracts of oak woodland for a variety of trees, shrubs, grasses and forbs that provide a variety of food sources and habitat components, such as roosting, nesting and cover. The structural diversity and size of the oak woodlands on the property make it a valuable breeding habitat, and a place for great diversity of resident and migratory wildlife species. For a discussion on the special status species that occur on the property, see below.

Non-native grassland covers approximately 105 acres (4%) of the property. This plant community occupies the flat areas of the property, with poor drainage. Introduced annual grass species like soft brome and cultivated oat are dominant species. This plant community is interspersed with the blue oak woodland and northern hardpan vernal pools, and adds diversity to the mosaic of habitat types on the property. The blue oak woodland and non-native grasslands cover approximately 95% of the property. Ahart's paronychia (Paronychia ahartii) and silky cryptantha (Cryptantha crinita), both Category 2 candidate species for federal

listing, and California Native Plant Society *(CNPS)* list 1B *(see table 1)* plant species have been found on the property in the non-native grasslands and blue oak woodlands. Overall, there are nine special status plant species that actually or potentially occur in these two plant communities *(see Figure 1 and Table 1)*.

Northern hardpan vernal pools are associated with the non-native grasslands and oak woodlands, and cover about 1 acre (<1%) of the property, in five separate locations. This is a wetland plant community that has been rapidly diminishing in the Central Valley due to agricultural conversion and urbanization, and is listed as a rare plant community by the California Natural Diversity Database *(CNDDB)*. These communities are composed mostly of native species that are endemic to vernal pools. There are seven special-status plant species that potentially occur in these vernal pools *(see Table 1)*. Vernal pools are also associated with a variety of invertebrate species that are endemic to vernal pool habitat, such as the vernal pool fairy shrimp. No invertebrate surveys have been done on the property to establish which vernal pool species occur on the property.

Riparian vegetation communities are found along Cow, Bear and Dry Creeks, and are divided into three categories:

a) **Great Valley mixed riparian forest** covers approximately 47 acres (2%) of the property, and is found mostly along China Garden and along Bear Creek, near the confluence of Dry Creek. Oregon ash, valley oak, box elder, California walnut and tree of heaven dominate in this community.

b) **Great Valley cottonwood riparian forest** covers approximately 22 acres (1%) of the property, and is found in narrow corridors along the Sacramento River and China Garden. Fremont's cottonwood, willows and white alder are found in this community.

c) **Great Valley willow scrub community** covers approximately 9 acres (<1%) of the property and occurs along Dry Creek. Willows dominate this community, with some Himalayan blackberry and blue elderberry.

Riparian plant communities are recognized by the CNDDB as rare plant communities. These are structurally and floristically complex communities that are rich in habitat and resources for a variety of species.

The Sacramento River and its adjacent riparian areas have been designated as critical habitat by the U.S. Fish and Wildlife Service for the threatened winter run chinook salmon (*Oncorhynchus tsawytscha*). Bear and Cow creeks are known spawning streams for fall and late-fall run chinook salmon. Riparian areas also provide extremely valuable habitat for a large percentage of California's wildlife, and many of California's threatened and endangered species in particular. Riparian habitat in the state has been severely impacted by agriculture, urban development, and the damming of rivers, and alteration of riverine ecosystems.

The majority of special status wildlife sightings and nesting locations on the property occurred in riparian habitats. Approximately 190 elderberry shrubs

occur in riparian areas on the property on China Garden and at the confluence of Dry Creek and Bear Creek, which provide habitat for the Threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). The locations of these elderberry shrubs is shown in Figure 3. Northwestern pond turtles (*Clemmys marmorata marmorata*), a candidate species for federal listing, have been found on the property along Dry Creek.

Riparian areas are also important migratory corridors for neotropical migrant bird species. Of the 81 bird species observed on the property, 48 species (59%) are neotropical migrants. This is a relatively high number for Shasta County, which has some 131 species of neotropical migrant bird species. The 48 species observed on the property represent nearly 37% of all neotropical migrant species found in the county. The riparian areas and the variety of other habitat types on the property encourage such a high occurrence of neotropical migrants.

Special Status Species

Thirteen wildlife species and two plant species observed on the property are considered Special Status species. Table 1 has a complete list of all Special Status plant species that were observed or might potentially occur on the property. Table 2 has a complete list of all Special Status wildlife species observed or potentially occurring on the property.

Two of the bird species observed on the property are protected under either the Federal or State Endangered Species Act. These species are the bald eagle (*Haliaeetus leucocephalus*) and the willow flycatcher (*Empidonax traillii*). Neither of these species have been observed nesting on the property, but there is a bald eagle nest near the property recorded in the CNDDB. The other eleven wildlife species observed on the property are either candidate species for federal listing or California species of special concern. All birds in the orders Falconiformes or Strigiformes are protected by California Fish and Game Code 3503.5, against any kind of take, possession, destruction of such birds, their nests or eggs. The property has nests of ospreys, sharp-shinned hawks, Cooper's hawks, red-shouldered hawks, and red-tailed hawks, and is a prime hunting ground for birds of prey.

One reptile species observed on the property, the northwestern pond turtle (*Clemmys marmorata marmorata*), is protected under the Federal Endangered Species Act as a Category 2 candidate species.

There is one Special Status invertebrate species, which potentially occurs on the property. The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is federally listed as a Threatened species, and there are over 190 elderberry shrubs on the property, which provide habitat for the beetle. No surveys have been conducted to establish whether the beetle actually occurs on the property, or investigate whether any of the elderberry shrubs have emergence holes, which would indicate the presence of the beetles.

There are twelve plant species with some sort of Special Status which actually or potentially occur on the property. Two of these species were observed on the property – Ahart's paronychia (*Paronychia ahartii*) and silky cryptantha

(*Cryptantha crinita*), both of which are category 2 Candidate Species for Federal listing as Threatened or Endangered, and are also listed as CNPS list 1B species.

Project Rationale and Benefits

Development Threats

The property has been subject to interest from numerous real estate developers from around the state, and a 1994 appraisal for the property described its highest and best use as "investment based upon continued agricultural use and speculation on future development of a rural residential subdivision." In fact, when the Fenwood Partners purchased the property in 1985, the intention was to develop the property into rural home sites or a planned community. In the early 1990s development plans were produced by Shasta Bear Properties, a real estate development firm. The intended result, the Eagle River Golf and Country Club, was a 2,200 acre planned community, over half the size of the city of Anderson. The plans offered approximately 1,000 homes with lots ranging from ¼ acre to 10 acres, with a variety of residential options, such as condominiums, luxury townhouses and golf villas. The community also included a commercial center, a school, a research and development park, independent public service facilities, such as fire, police medical care, and transportation system, two world class golf courses covering over 250 acres, a tennis club, swimming center and club house by the Sacramento River, horseback riding and bicycling trails and other river recreation facilities.

A Draft Environmental Impact Report (Draft EIR) was prepared for the project, and it identified several concerns over the impacts of the project. These concerns included the loss of riparian habitat along the Sacramento River, Cow Creek and Dry Creek, permanent loss of vernal pools and seasonal wetland habitat, encroachment into the 100-year floodplain, loss of special status species and degradation of regional air and water quality. The Draft EIR also noted that there are two types of Class I and six types of Class II soils on approximately 443 acres of the property of prime agricultural importance. Most of these soils are found within the floodplains of Dry Creek and Sacramento River and at the mouth of Dry Creek. The California Department of Conservation expressed concerns over the loss of grazing lands to development.

The Eagle River proposal also prompted several concerns from a number of agencies and individuals familiar with the property. China Garden is a state and federally recognized significant riparian habitat resource, and the proposed development of golf courses, tennis courts, cottages and a clubhouse within this portion of the property prompted concerns from the California Department of Fish and Game (DFG), the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (CoE), California State Lands Commission (SLC), California Department of Conservation (CDC) and CNPS. China Garden provides habitat for several special status species, such as the valley elderberry longhorn beetle, winter-run chinook salmon and northwestern pond turtles. DFG was particularly concerned about development on the river bluffs along the Sacramento River, which would disturb and possibly erode the bluffs, affecting the bank swallows that nest in that area. DFG also noted its concern over plans to place golfing

fairways within stream channels. The golf courses would also require very intensive watering, fertilizing and pesticide spraying, which would pollute the property greatly. USFWS listed of 18 special status species that might occur on the property or in the vicinity that would be adversely affected by the development. SLC and CoE were concerned by possible encroachment into channels and the 100-year floodplain.

Project Benefits & Connectivity

A conservation easement will protect the property in perpetuity from the real and persistent threat of development. The proposed easement will protect the rich habitat values and incredible biodiversity of the property, without removing a large portion of land from the local tax base. Under the conservation easement, the use of the property for organic cattle ranching during the winter months will be continued. The conservation easement also allows great flexibility in this conservation effort. For example, the very sensitive riparian and seasonal wetland portions of the property may be protected to a greater extent, in order to shelter these fragile habitat types. The protection and conservation effort will be backed up the monitoring effort to ensure that the easement is effectively protecting the property's resources.

The Shasta Land Trust has identified the property as an ideal candidate for

its mission to protect land that has natural, recreational, scenic, historic, or productive value. In addition to enforcing and monitoring the protection of existing natural resources, the conservation easement as envisioned will allow SLT to carry out habitat restoration activities on the basis of available funding and in-kind project support in partnership with interested resource agencies and other resource conservation organizations. The conservation easement would also provide unique natural resource education opportunities through guided site visits by local school and community groups, particularly SLT may also pursue some native plant restoration activities, and will seek the participation of the local chapter of CNPS.

This conservation effort serves as an excellent linkage between a number of current priority conservation efforts in the upper Sacramento valley. BLM has two focus areas, the Sacramento River/Bend Area of Critical Environmental Concern and the Clear Creek/Sacramento River Island Area of Critical Environmental Concern. This conservation effort aims to protect nearly 60 miles of contiguous riparian/stream habitat between Redding and Red Bluff, with a target of $13 million to acquire and protect nearly 16,000 acres of land in this area. There have been numerous partners and supporters of this effort. The David and Lucile Packard Foundation made a $3.7 million grant to the Sacramento Tributaries and River (STAR) proposal, submitted jointly by BLM and TPL, to support this conservation effort. The American Land Conservancy, The Nature Conservancy and CALFED have also contributed to this expansive conservation program on the Sacramento River. The Fenwood Partners property lies in a critical zone between the Clear Creek ACEC and the Sacramento River Bend Area ACEC, and will serve as a link between the two areas. Other conservation efforts in this area include DFG's Battle Creek Wildlife Area and Cottonwood Creek conservation efforts.

The project as envisioned follows the guiding principles of the Sacramento River Conservation Area Program (SB 1086), which include employing an ecosystem approach, addressing flood control issues and bank stabilization opportunities, voluntary participation by private landowners, full consideration to landowner, public and local government concerns, and opportunities for developing resource management information and educational outreach.

Lastly, the proposed project is also intended to encourage a sustainable working landscape through protecting intact a large, economically viable grazing unit. The conservation easement as envisioned will take great care in specifying appropriate livestock grazing practices and controls to ensure compatibility with natural resource protection goals, while also providing a degree of flexibility to accommodate changing markets and best management practices for grazing and animal husbandry.

Project Relationship to the Central Valley Project (CVP)

The project site is located within the Redding metropolitan area near the Anderson-Cottonwood Irrigation District and other local CVP service areas. The surrounding land includes mostly large farm properties, such as orchards, grazing tracts and irrigated land, many of which rely on water provided by the Central Valley Project. There is a remarkable contrast between the Fenwood Partners property and all neighboring properties, which are converted to irrigated grazing and agricultural lands. Irrigated agriculture and the establishment of farming operations within the floodplains of many Central Valley rivers has been one of the leading causes for the loss of riparian and upland habitats in the Valley. The development of large dam projects and water management systems on California's major rivers also heavily impacted riparian habitat, by modifying channels, converting wetlands and reducing flows. The Fenwood Partners property is a rare example of a landscape-scale mosaic of diverse Central Valley plant communities, particularly in such close proximity to a major metropolitan area.

The Eagle River development was proposed during a period of rapid state and local economic growth during the late 1980s and early 1990s. The property continues to be threatened by development. The periphery of the greater Redding area has seen many rural residential subdivisions since the late 1980s, and the riverfront property is ideally located within the development corridor along Interstate 5 between Redding and Cottonwood. The areas north of the property are subject to increasing amounts of rural homesite development, varying from 5 to 20 acres, which has fragmented some of these large tracts. Most of the land to the south and east of the property is still intact in large tracts. The fact that the 1994 appraisal concludes that the highest and best use of the property is an eventual conversion to rural home sites suggests that the development of the property is something of an inevitability.

Project Cost

The cost to acquire a conservation easement has been estimated pending the drafting of the conservation easement deed itself and preparation of an appraisal to determine fair market value. An independent appraisal will be commissioned once a complete conservation easement deed acceptable to all parties has been

drafted. The appraisal will be made available to all funding partners for inspectin and approval.

In the absence of a current appraisal, a previous appraisal of the property together with general observations by appraisers familiar with estimating conservation easement values are helpful here. An appraisal of the property was commissioned by Fenwood Partners and completed in October 1994 by Robert H. Shaw, MAI. Shaw concluded the fee value of the property to be $2,180,000, or $1,000 per acre. The highest and best use concluded by Shaw was "investment based upon continued agricultural use and speculation on future development of a rural residential subdivision." An informal survey of appraisers active in the area confirms that overall property values have steadily climbed in the six years hence.

Conservation easements have appraised at anywhere from 20% to 80% of the fee value, depending on how restrictive the easement is to current use and its impact on the highest and best use of the property. Conservation easements on rangeland have hovered around 50% of the fee value. The value of a conservation easement on the Fenwood Partners property in proportion to the fee value will likely be greater than the average for rangeland conservation easements if a new appraisal concurs with Shaw's conclusion of highest and best use. Put simply, the property is in the path of development and appears uniquely suited for large-scale, rural residential development.

Taking the foregoing into consideration, the project team has chosen a $1.5 million acquisition funding goal pending an appraisal of the proposed conservation easement. This funding goal is equal to approximately 70% of the October 1994 fee value estimated by Shaw, and presumably a smaller percentage of the current fee value (50% to 70%).

Amount Requested / Funding Sources

This project proposal requests **$1 million** from the *CVP Conservation Program* (CVPCP) and/or *CVPIA Habitat Restoration Program* (HRP), equal to 2/3 of the $1.5 million acquisition funding goal. Concurrently with this proposal, the project team is applying for $500,000 in matching funds from the State *Environmental Enhancement and Mitigation Program* (EEMP). Additional potential matching funds include the State *Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act of 2000* (Proposition 12), the *Conservation Lands Program* through the Federal Transportation Enhancement Activities Program (TEA-21 CLP), the National Fish and Wildlife Foundation *Pacific Grassroots Salmon Initiative*, the *CALFED Bay-Delta Program* (CALFED), and the David and Lucile Packard Foundation *Conserving California Landscapes Initiative* (Packard).

The project team will also pursue the start-up funding necessary to establish a grazing system that is optimally compatible with the conservation easement objectives. Potential sources of these funds include the Natural Resource Conservation Service *Environmental Quality Incentive Program* (EQIP) and CALFED.

Project Completion Schedule

The table below summarizes the project scope of work and anticipated dates for completion of tasks. Under written agreement, Fenwood Partners will hold the property off the market for an initial 120-day period during which they will cooperate with TPL and SLT in drafting an acceptable conservation easement deed (first 60 days) and obtaining an appraisal (second 60 days). TPL will commission the appraisal. This initial four-month period commenced October 5, 2000 and will conclude February 1, 2001. On or before February 1, and subject to approval of the appraisal by all parties, Fenwood Partners and TPL will enter into an option agreement for TPL's purchase of the conservation easement. Both parties have already signed a Letter of Intent confirming the business terms of the proposed option agreement.

Project Scope of Work

Task 1: Complete Conservation Easement Deed *(12/1/00)*

1.1. TPL, SLT and landowner representatives draft the conservation easement deed.

1.2. Peer review of conservation easement deed.

1.3. Conservation Easement deed brought to final form.

Task 2: Complete Appraisal *(1/15/01)*

2.1. Contract for appraisal.

2.2. Appraisal report reviewed by TPL, SLT, project funders and landowner.

2.3. Negotiate final purchase agreement based on approved appraisal.

Task 3: Acquisition and conveyance *(between March to August 2001, depending on funding)*

3.1. Conduct due diligence on condition of title and environmental hazards.

3.2. Prepare Present Conditions Report.

3.3. Pull together complete funding package.

3.4. TPL acquires and conveys conservation easement to SLT.

Contact Information

The Trust for Public Land
Michael Reeves, Project Manager: mike.reeves@tpl.org
Rishi Das, Project Associate: rishi.das@tpl.org

Phone: (415) 495 5660
Fax: (415) 495 0541
Mail: 116 New Montgomery, 3rd Floor
San Francisco, CA 94105

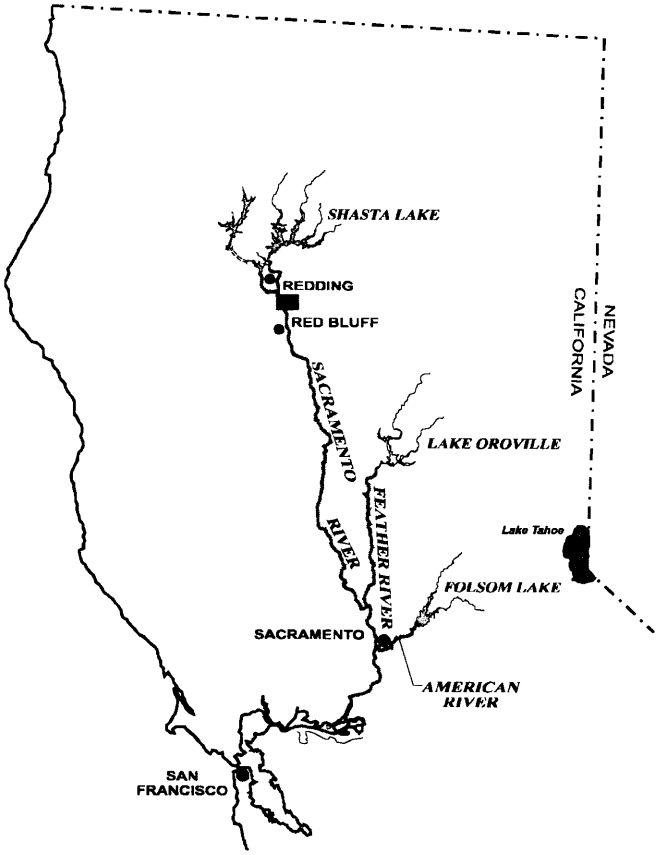
The Shasta Land Trust
Kathleen Gilman, Board Chair

Phone : (530) 243 1998
Fax : (530) 246 5164
Mail : P.O. Box 992026
Redding, CA 96099-2026

Information and References Used

All wildlife and plant survey information used in this proposal is based on the 1992 Draft Environmental Impact Report for the Eagle River Development, 1994 surveys and reports on the biological characterization of the Fenwood Partners property by Northstate Resources, Inc., botanical surveys conducted for PG&E by Dean Taylor, and correspondence with the U.S. Fish and Wildlife Service, the California Department of Fish and Game and the U.S. Bureau of Land Management.

VICINITY MAP



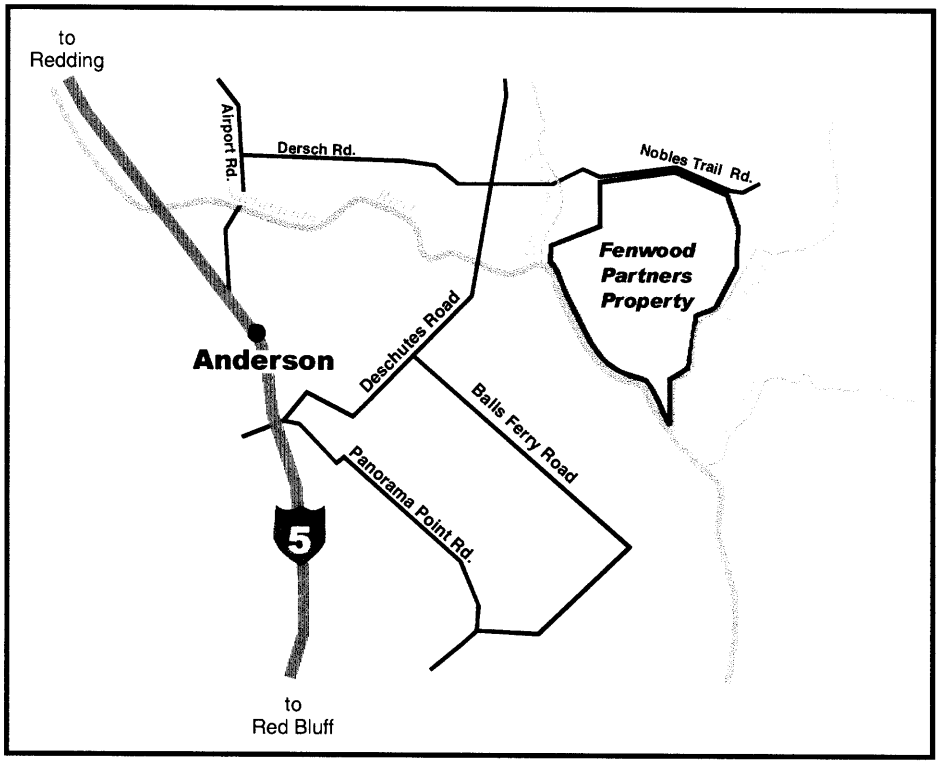


TABLE 1:
List of Special Status Plants Observed/Potentially Occurring on Fenwood Partners Property, Shasta County, California

Common Name	Scientific Name	Habitat Types[1]	Federal/State/CNPS Status[2]	Occurs/ Potential
Henderson's bent grass	*Agrostis hendersonii*	NnGr, VPI	C2 / - / 3	Potential
Shasta clarkia	*Carkia borealis ssp.auda*	BOWo	C2 / - / 1B	Potential
Silky cryptantha	*Cryptantha crinita*	BOWo, NnGr	C2 / - / 1B	Occurs
Butte county fritillary	*Fritillaria eastwoodiae*	BOWo	C2 / - / 1B	Potential
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	VPI	C3 / SE / 1B	Potential
Red Bluff dwarf rush	*Juncus leiospermus var. leiospermus*	BOWo, VPI	- / - / 1B	Potential
Legenere	*Legenere limosa*	VPI	C2 / - / 1B	Potential
Bellinger's meadowfoam	*Limnanthes flocossa ssp. bellingeriana*	BOWo, VPI	C2 / - / 1B	Potential
Wolly meadowfoam	*Linmanthes focossa ssp. flocossa*	BOWo, VPI	- / - / 2	Potential
Slender orcutt grass	*Orcuttia tenuis*	VPI	T / SE /1B	Potential
Ahart's paronychia	*Paronycia ahartii*	NnGr	C2 / - / 1B	Occurs
Thread-leaved breadtoungue	*Penstemon filiformis*	BOWo	C2 / - / 1B	Potential

[1]Habitat Types: **BOWo** = Blue oak woodland; **NnGr** = Non-native grassland; **VPI** = Northern hardpan vernal pool (see Figure 1)

[2]Special Status Definitions: **Federal: T** = Federally listed threatened species; **C2** = Category 2 candidate species for Federal listing; **C3** = Category 3 candidate species for Federal listing. **State: SE** = California Endangered Species. **CNPS** (California Native Plant Society): List **1B** = (CNPS listing) plants rare, threatened, or endangered in California and elsewhere; List **2** = plants rare, threatened, or endangered in California, but more common elsewhere; List **3** = CNPS review list. (-) = not listed

TABLE 2:
List of Special Status Wildlife Species Observed/ Potentially Occurring on Fenwood Partners Property, Shasta County, California

Common Name	Scientific Name	Observed/ Potential Habitat	Federal/State/DFG Status[1]
INSECTS			
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Could occur in elderberry plants (Fig. 2). No survey done.	T / - / -
BIRDS			
Double-crested cormorant	*Phalacrocorax auritus*	Observed in riparian habitat, which is suitable for roosting.	- / - / SC
Osprey	*Pandion haliaetus*	Observed in riparian habitat. Occupied nest in power line tower (Fig. 2)	- / - / SC
Black-shouldered kite	*Elanus caeruleus*	Extremely uncommon, observed once	- / - / SC
Bald eagle	*Haliaeetus leucocephalus*	Observed once. No nesting sites	T / SE / SC
Northern harrier	*Circus cyaneus*	Observed once. No nesting sites	- / - / SC
Sharp-shinned hawk	*Accipiter striatus*	Two nesting sites, Dry Creek (Fig. 2)	- / - / SC
Cooper's Hawk	*Accipiter cooperii*	One nesting site, China Garden (Fig. 2)	- / - / SC
Ferruginous hawk	*Buteo regalis*	Observed in grassland habitat	- / - / SC
Golden eagle	*Aquila chrysaetos*	Observed in grassland habitat	- / - / SC
Willow flycatcher	*Empidonax traillii*	Observed once in riparian habitat, Dry Creek. No nesting sites known	- / SE / -
Bank swallow	*Riparia riparia*	Active nesting colonies along the Sacramento River (Fig. 2)	- / ST / -
Yellow-breasted chat	*Icteria virens*	Observed, nests in riparian habitats along Dry Creek, Bear Creek and China Gardens. (Fig. 2)	- / - / SC
REPTILES			
Northwestern pond turtle	*Clemmys marmorata marmorate*	Observed in Dry Creek and Bear Creek, wetland habitats. Riparian areas are suitable nesting habitat	C2 / - / SC

[1]Special Status Definitions: **Federal: T** = Federally listed threatened species; **C2** = Category 2 candidate species for Federal listing; **C3** = Category 3 candidate species for Federal listing. **State: SE** = California Endangered Species; **ST** = California Threatened Species. **DFG: SC** = California Species of Concern. (-) = not listed.

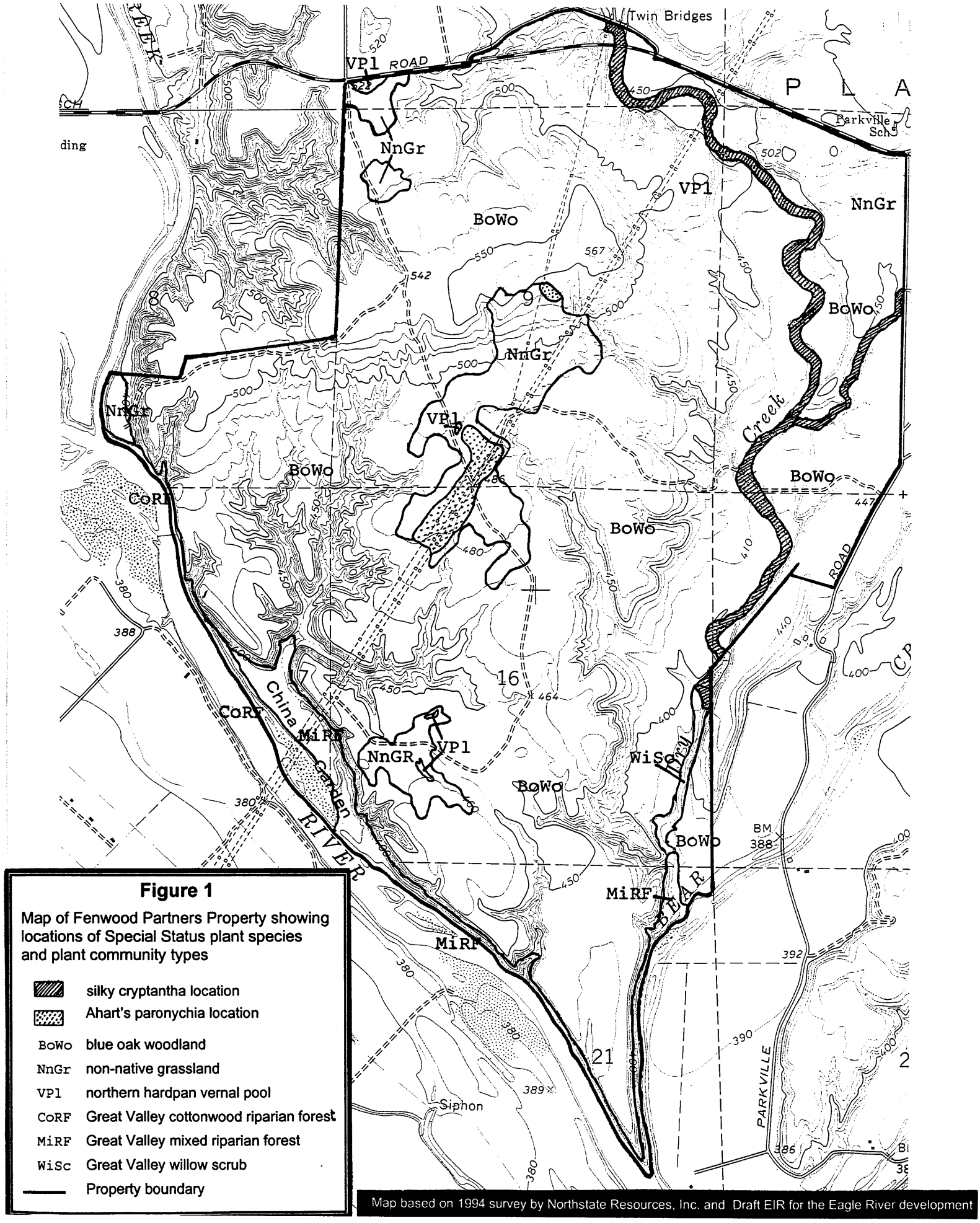


Figure 1

Map of Fenwood Partners Property showing locations of Special Status plant species and plant community types

- silky cryptantha location
- Ahart's paronychia location
- BoWo blue oak woodland
- NnGr non-native grassland
- VPl northern hardpan vernal pool
- CoRF Great Valley cottonwood riparian forest
- MiRF Great Valley mixed riparian forest
- WiSc Great Valley willow scrub
- Property boundary

Map based on 1994 survey by Northstate Resources, Inc. and Draft EIR for the Eagle River development

Appendix B

CVPCP Projects Funded to Date

YR	Project	County	Total Cost	CVPCP Contribution	Acres	Habitat Type	Action	Partners
96	Valensin Ranch	Sacramento	10,750,000	1,250,000[1]	4,356 (580 Fee Title, 180 Conservation Easement)	GL HW RI VP	ACQ RS	TNC, NAWC, BDCP, CDPR, CWCB, CalTrans, FHA, NFWF DFG, NRCS, AFT, CUWA
97	Buena Vista Lake Shrew	Tulare		53,500[1]			SUR	ESRP, CDFG
97	California Red-Legged Frog	Sierra	37,500	37,500[1]			SUR RS	
97	Doyens Dune Weevil	Kings		10,000[1]			SUR	ESRP, CalTrans
97	Giant Garter Snake	Colusa	486,500	201,500[1] 200,000[1] 5,000[1]	450	WL UP	RS SUR SU	DU, CWA, SCI, SacNWRC, USGS-BRD
97	Jensen Ranch	Fresno	5,273,250	3,168,250[1] 200,000[1]	156.1	RI	ACQ RS	FWUA, CTC, WCB, SJRC, TPL, SJRPCT, CalTrans
97	Keck, s Checkerbloom & Vasek's clarkia	Kings	22,000	22,000[1]			SUR	SFC, ESRP, BLM
97	Large Flowered Fiddleneck (Lemoore NAS)	Contra Costa Alameda	158,500	73,500[1]	50'x50' Native Site 100'x100' Exp Site		MON RS	DOE
97	Livermore Hydrology Study (Palmate-bracted birds beak)	Alameda	80,000	50,000[1]		AKS	RES SU	City of Livemore, Alameda County
97	Pine Hill Ecological Reserve Gabbroic Northern Mixed Chaparral	El Dorado	4,500,000	1,007,800[1] 500,000[1]	180 acres (5,000 acre Cameron Park)	CH HW	ACQ	DFG,EID, ELDCounty, NFWF, BLM, CalTran, ARC
97	Riparian Brush Rabbit/ Riparian Wood Rat	San Joaquin Valley		85,000[1] 30,000[1]		HW RI	SUR RS	DFG, ESRP, CDPR, CDF, Ripon Fire Dept
97	Sacramento River Modeling	Glenn Colusa	40,614	40,614[1]			SU	
97	San Joaquin Kangaroo Rat	Kings		10,000[1]			SUR	CDFG
98	Allensworth Ecological Reserve	Tulare Kern	On-going	160,000[1]	~200 ~200	AKS VP	ACQ	DFG, WCB
98	Buttonwillow Ecological Reserve	Kern	3,500	3,500[1]	1,200	AKS	SUR	

YR	Project	County	Total Cost	CVPCP Contribution	Acres	Habitat Type	Action	Partners
98	Fresno Kangaroo Rat	Kings	20,000	20,000[1]		AKS	SUR	DOD, BLM
98	Howard Ranch	Sacramento	on going - purchase price will be 14,300,000	101,500[1]	13,000	VP WL HW GL	ACQ	SWRCB, Packard, WCB, TNC
98	Livermore Palmate-bracted Birds Beak	Alameda	1,270	1,270[1]		AKS	SU	
98	Spivey Pond Red-Legged Frog	El Dorado	310,000 (purchase price) 379,269 (acq. & restore)	100,000[1] 31,000[3]	54	RI CF RH	ACQ RS	NFWF, WCB, ARC,USFS BLM, ELDCounty, EID, DFG
98	Springtown Alkali Sink Unit (Livermore)	Alameda	On-going	70,000[1]	Unknown	AKS	ACQ	City of Livermore
99	Allensworth Ecological Reserve	Tulare Kern	On-going	150,000[3]		AKS VP	ACQ	DFG, WCB
99	Denny Ranch/Inks Creek	Tehama	1,460,074	480,000[3]	13,000	VP RI HW GL	CE	NFWF, Packard, TNC
99	Effie Yeaw Endangered Species Exhibit	Sacramento	60,000	5,000[3]			D&D	ARNHA
99	Herbert Ranch	Tulare	1,250,000	30,000[3]	725	VP GL	ACQ	FCLT, WCB, Packard, EPA, WDP
99	Keck's Checkerbloom: King's River Ranch	Fresno	74,500	72,000[3]	40	GL	ACQ	SFC
99	Keck's Checkerbloom: Knapton-Sheilds	Fresno	103,403	103,403[3]	40	GL	ACQ	SFC
99	Large-flowered fiddleneck Lemoore Naval Air Station	Contra Costa Alameda	~50,000	25,000[3]		GL	MON RS	DOE
99	Riparian Brush Rabbit	Stanislaus	358,000	276,000[3]		HW RI	SUR MGT CST	CDFG, DWR, CDPR
99	Simon-Newman & Romero Ranches (Wells Fargo)	Stanislaus Santa Clara Merced	19,100,000	500,000[3]	61,041 SN=32,996 R = 28,045	RI GL HW	CE	TNC, DWR, WCB, NFWF
99	Stillwater Ecological Reserve	Shasta		310,000[3]		VP GL	ACQ	WCB, CDFG
99	Vernal Pool Poster	CVP-wide	15,000	5,000[3]			D&P	SCCAO
00	Allensworth	Tulare Kern	On-going	300,000[3]		AKS GL	ACQ	CDFG, WCB

YR	Project	County	Total Cost	CVPCP Contribution	Acres	Habitat Type	Action	Partners
00	Folsom O & M Manual	Sacramento El Dorado Placer Stanislaus		15,000[3]			D & D	
00	Foor Ranch	Tehama	~2,500,000	450,000[3]	10,000	VP	CE	TNC
00	Furey Ranch	Merced	501,662	350,000[3]	391 (250 ac. GL/VP med-hi density)	VP GL	CE	TNC, MCFOST, Great Valley Center
00	George Dairy	Sacramento	~380,000	360,000[3]	109.82	WL	CE RS	TNC, CDFG
00	Keck's Checkerbloom Hunt Property	Fresno	38,000	38,000[3]	40	GL	CE	SFC
00	Keck's Checkerbloom DeLeon Property	Fresno	100,000	100,000[3]	50	GL	ACQ	SFC
00	Riparian brush rabbit pen construction	Stanislaus	167,500	126,000[3]			D&D	
00	Riparian brush rabbit Christman Island Refugia (move fill)	Stanislaus	100,000	100,000[3]		RI	RS	FWS
00	Schneider	Sacramento	400,000	108,000[3]	1,136 total	VP GL	CE	TNC, WCB
00	Southam Property	Colusa	On-going	300,000[3]		RI	RS	TNC...
00	Stone Corral Ecological Reserve	Tulare	On-going	200,000[3] 100,000[3]	114	VP UP	ACQ	WCB, CDFG
01	Riparian brush rabbit captive propagation	Stanislaus	On-going	143,000[3]		RI	CST	ESRP, CDPR
01	Fenwood Property	Shasta	1,500,000	300,000[3]	2,180	HW GL RP VP	CE	TPL, SLT
01	Carter Property – Tivy Mtn Keck's checkerbloom	Fresno	62,500	62,500[3]	40	GL	ACQ	SFC
01	Mount Hamilton Fencing	Merced	375,000	175,000[3]		RI	RS	TNC
01	Cunningham Ranch	Merced	1,800,000	480,000[3]	3,900	GL VP	CE	TNC, CRT
01	Pine Hills Ecological Reserve	El Dorado	On-going	250,000[3]	49	CH	ACQ	ARC
01	Riparian Woodrat	Stanislaus	89,654	89,654[3]		RI	SU	ESRP
01	Farmington Property	San Joaquin	On-going	250,000[3]	960	GL VP	ACQ	SJRCD

Funding Program

[1](b)(1) "other" and Conservation Program

[3]Conservation Program

Partners

AFT - American Farmlands Trust
ARC - American River Conservancy
ARNHA - American River Natural History Association
BDCP - Bay-Delta California Program
BLM - Bureau of Land Management
BOR - Reclamation
CalTrans - California Transportation Department
CDFG - California Department Fish and Game
CDPR - California Department of Parks and Recreation
CF - Conservation Fund (Herbert)
CTC - California Transporation Commission
CUWA - California Urban Water Agencies
CWA - California Waterfowl Association
CWCB - California Water Conservatin Board
DOE - Department of Energy
DU - Ducks Unlimited
DWR - Department of Water Resource
EID - El Dorado Irrigation District
ELDCounty - El Dorado County
ESRP - Endangered Species Recovery Program
FCLT - Four Creeks Land Trust
FHA - Federal Highway Administration
FWS - Fish and Wildlife Service
FWUA - Friant Water Users Association
MCFOST - Merced County Farmland and Open Space Trust
NAWC - North American Wetlands Council
NFWF - National Fish and Wildlife Foundation
NRCS - Natural Resource Conservation Service
Packard - Packard Foundation
SacNWRC - Sacramento National Wildlife Refuge Complex
SCCAO - South Central California Area Office (USBR)
SCI - Safari Club International
SFC - Sierra Foothil Conservancy
SJRC - San Joaquin River Conservancy
SJRPCT - San Joaquin River Parkway and Conservancy Trust
SNWRC - Sacramento National Wildlife Refuge Complex
TNC - The Nature Conservancy
TPL - Trust for Public Land
USFS - United States Forest Service
USGS - BRD United States Geological Survey - Biolgoical Resource Division
WCB - Water Conservation Board
WDP - Wetland Development Program

Habitat Types

AKS - Alkalai Sink
CF - Coniferous Forest
CH - Chapparral
CST - Construction
GL - Grassland
HW - Hardwood
MGT - Management
RH - Reproductive Habitat
RI - Riparian
UP - Uplands
VP - Vernal Pool
WL - Wetland

Action

ACQ - Acquire
CE - Conservation Easement
D&D - Development & Design
D&P - Design & Print
MON - Monitoring
RES - Research
RS - Restoration
SU - Study
SUR - Survey