4.2 AGRICULTURAL RESOURCES AND LAND USES

This section analyzes the potential effects of the proposed project on agricultural resources and land uses. The analysis is based on a review of agricultural characteristics of lands in the study area (Exhibit 4.2-1); it is further based on consideration of proposed project actions that could result in adverse physical changes to the environment or in the degradation of physical attributes that historically supported native riparian habitat and that have supported agricultural production in more recent times. Agricultural characteristics include lands designated by the California Department of Conservation (DOC) as being of prime, unique or statewide importance and relative values of active agricultural operations in the study area and local counties. Existing conditions related to agricultural resources within both the project area and the study area are described in the environmental setting provided below. Consistency of the proposed project with USFWS management objectives within the SRNWR is also addressed.

4.2.1 ENVIRONMENTAL SETTING

SOURCES OF INFORMATION

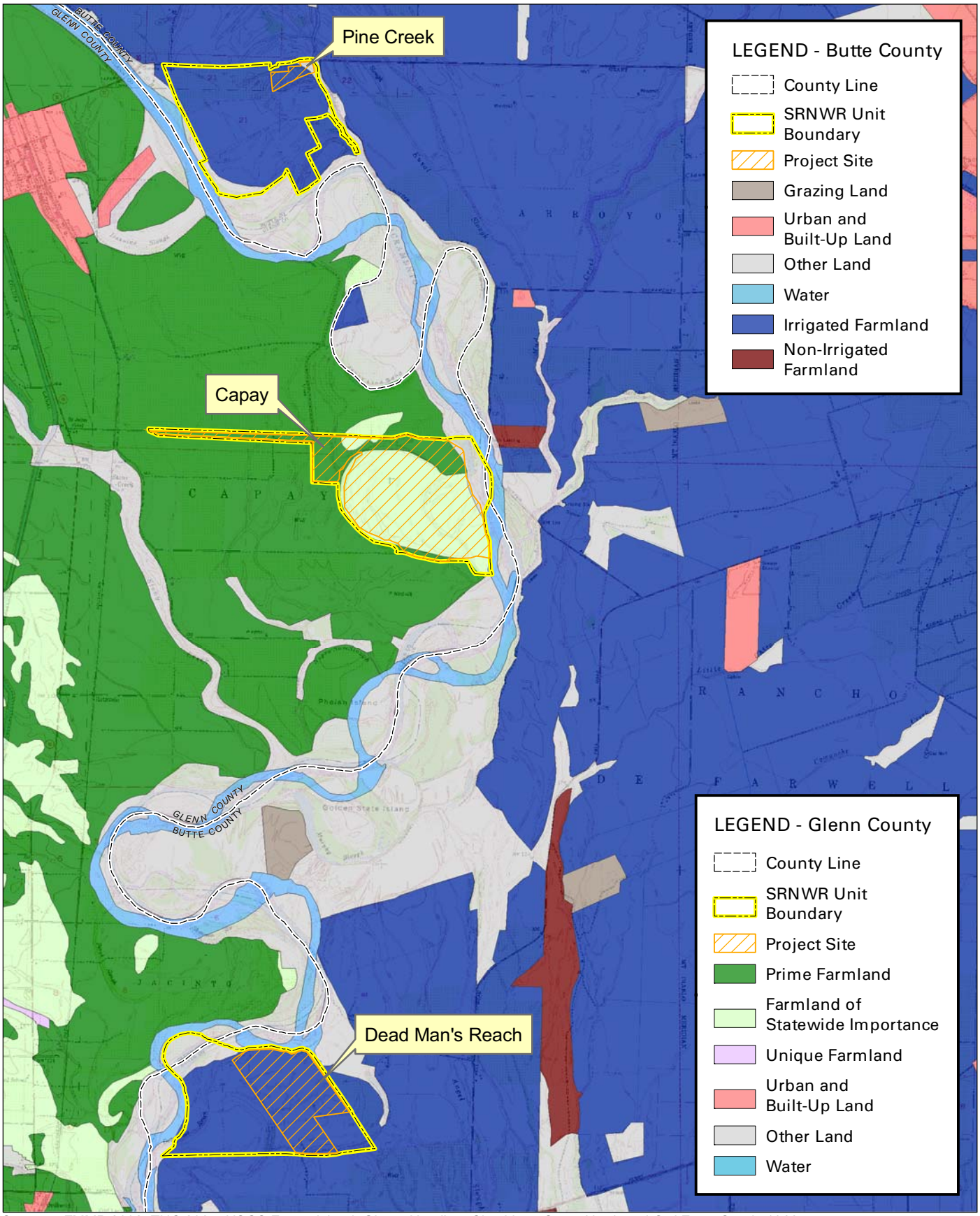
The information presented in this section is primarily based on review of existing documents and other relevant information, including:

- 1991 General Plan for Butte County (Butte County 1991).
- 1993 General Plan for Glenn County (Quad Consultants 1993).
- 2004 data on Williamson Act contracted lands provided on the DOC Web site (http://www.consrv.ca.gov, 2004).
- *Final environmental assessment for proposed restoration activities on the Sacramento River National Wildlife Refuge (Ryan, Ohm, Haleakala, Pine Creek, Kaiser, Phelan Island, Koehnen, Hartley Island, and Stone Units)*. (USFWS 2002).
- Final CCP and environmental assessment for the SRNWR (USFWS 2005).
- Funding proposal submitted by TNC to CBDA that includes details on existing conditions at the project sites (TNC 2002). TNC and USFWS staff provided current information as necessary to supplement that provided in the 2002 document.
- CALFED Final PEIS/EIR; Section 7.1, "Agricultural Land and Water Use" (CALFED 2000b).

These resources are among those cited throughout this section and corresponding references are included in Chapter 11, "References and Personal Communications."

REGIONAL CONTEXT

The Chico Landing Subreach is a dynamic, largely actively meandering reach of river surrounded by a mosaic of public and private lands in Butte and Glenn Counties. The 240-acre Bidwell-Sacramento River State Park is north and east of the project area. Properties adjacent to the river flood on an annual basis in the winter and/or spring in most years. Nearby towns to the west of the river include Hamilton City, Willows, and Orland. Lands east of the river and west of Chico are predominantly orchards with the exception of the small residential area of Nord. Both counties have a large portion of their land base dedicated to agricultural land uses. The Sacramento River marks the county boundaries within the study area (see Exhibit 3-1).



Source: FMMP 2002, TNC 2005, USGS Foster Island, Glenn, Hamilton City, Llano Seco, Nord, and Ord Ferry Quads 1969

Important Farmland

EXHIBIT 4.2-1

Sacramento River–Chico Landing Subreach Habitat Restoration DEIR

X 04110109.01 5/05

0 1 2

MILES

NORTH

EDAW

Resource Management along the Middle Reaches of the Sacramento River

The proposed project is a product of a number of policies, programs and activities focused along the Sacramento River over the last 20 years at multiple levels of government. The implementation of these programs represents a significant public investment in the protection and restoration of riparian habitat. The efforts began in 1986, when the State of California legislature passed into law SB 1086, calling for development of a management plan for the Sacramento River and its tributaries. This set into motion an effort to protect, enhance and restore fisheries and riparian habitat that has become a model for the State. SB 1086 resulted in publication of the *Sacramento River Conservation Area Forum Handbook* (SRCA Forum 2003) that contains a set of principles and guidelines for habitat management along the river. SB 1086 also led to the formation of a nonprofit organization, the SRCA Forum, to coordinate the habitat restoration efforts along the river in accordance with guidance in the SRCA Forum Handbook.

One important outcome of the Sacramento River habitat restoration and resource management efforts came in 1989 when Congress established the SRNWR to help protect and restore riparian habitat along the Sacramento River where it meanders through the Sacramento Valley from Red Bluff to Colusa. The area approved for acquisition to meet the 18,000-acre goal of the SRNWR is located along the Sacramento River, generally within the 100-year meander zone between Red Bluff and Colusa, as outlined in the middle Sacramento River refuge feasibility study (USFWS 1987) and the environmental assessment on the SRNWR (USFWS 1989). The USFWS manages the SRNWR and has developed a CCP that establishes guidelines and standards related to acquisition and management policies for properties within the SRNWR (USFWS 2005) (see Chapter 3, “Description of the Proposed Project”). Acquisition of SRNWR properties is conducted on a willing-seller basis only and is authorized under a variety of legislative acts and administrative orders that usually define one or more purposes for which land can be transferred or acquired. These management tools combine to form the standard for determining whether proposed uses within the refuge are compatible. Properties that become part of the SRNWR are selected for their ability to fulfill SRNWR goals. All SRNWR units are acquired with the intent to restore or enhance native habitat, pending the availability of funding to do so.

The overarching management principle for the resources within the SRNWR originated with the National Wildlife Refuge System Improvement Act of 1997 (PL 105-57), which states: “The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." (16 USC 668dd et seq.)

Farmland Protection and Countywide Land Use Trends

Since 1965 the State has encouraged landowners to protect agriculture and open space lands via the California Land Conservation Act of 1965, commonly referred to as the Williamson Act. Under this law, agricultural, recreational, and other related open space uses are protected with property tax incentives when the landowner enters into a restrictive use contract with the State. Counties benefit when they formally adopt the program for then they are able to claim Open Space Subvention Act Payments that partially replace property tax losses associated with Williamson Act enrollees. Butte County administers the Williamson Act Program, while Glenn County administers both the Williamson Act and Farmland Security Zone (FSZ or Super Williamson Act) contracts within the study area. Both programs are intended to preserve farmland although a landowner could have other activities on the same land, including a permitted mining operation, a hunting club (without permanent facilities), or processing operations for agricultural products. The only major differences between the programs are the length of the renewable contract term (10 years for Williamson Act and 20 years for FSZ) and the size of the tax incentive. Over the last 4 years, Glenn County has been one of the top five counties showing the largest net enrollment increase. Glenn County also outpaces other counties each year in recording new FSZ contracts and FSZ transfers. FSZ transfers are as significant as new contracts in that they reflect landowners making a bigger commitment as they transfer the 10 year Williamson Act contract into a 20-year FSZ contract term. Between 2000 and 2003, both counties have experienced increased participation in these programs, as shown in Table 4.2-1.

Table 4.2-1
Agricultural Land Protected in Butte and Glenn Counties

County	2003 Williamson Act		2003 Farmland Security Zone		2000–2001 Total Acres	2002–2003 Total Acres
	Prime	Non-prime	Prime	Non-Prime		
Butte	110,652	102,234			211,245	212,886
Glenn	59,215	266,839	71,841	3,547	394,147	401,443

Source: DOC 2004b

The DOC (DOC 2004a) uses the U.S. Department of Agriculture's modern classification when administering the Farmland Mapping and Monitoring Program (FMMP) to characterize the types and amounts of agricultural land in an area. Agricultural lands in the study area are primarily characterized as:

- *Prime Farmland*. Lands which are considered to be the best combination of physical and chemical features able to sustain long-term agricultural production.
- *Farmland of Statewide Importance*. Farmlands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ambient moisture.
- *Other Land*. Land not included in any other mapping category, such as low-density rural development, wetland, and riparian areas not suitable for livestock grazing.

At the present time, FMMP data with these specific designations are available for Glenn County, but not for Butte County. The Butte County soil survey is in the process of being updated; FMMP land designations for Butte County in the study area are currently limited to *Irrigated Farmland*, *Non-irrigated Farmland*, and *Other Land*. Exhibit 4.2-1 displays Important Farmland in the project area.

Riparian Habitat Restoration on Previously Farmed Lands within SRNWR

The resolution to restore riparian habitat on SRNWR land is based on SRNWR goals, policies and decisions. The USFWS completed an EA/FONSI in accordance with the National Environmental Policy Act (NEPA) that evaluated proposed riparian habitat restoration activity on SRNWR units, including the restoration of project sites addressed in this Draft EIR (USFWS 2002). The EA/FONSI included discussion of an alternative to the proposed action that would have restored habitat only on lands that were not designated as Prime or Important Farmland. (Refer to Section 7.2.1 in Chapter 7, "Alternatives," for further discussion.) The analysis of this alternative resulted in the conclusion that avoiding restoration of agricultural land in the SRNWR not only would be inconsistent with SRNWR goals and policies, but it would also reduce the number of acres available for habitat restoration throughout the SRNWR by approximately 90%, resulting in dramatic reductions in benefits to wildlife, including threatened or endangered species (USFWS 2002).

STUDY AREA SETTING AND NEARBY HABITAT RESTORATION

Within the study area there are 11 SRNWR units and one TNC parcel comprising about 3,974 acres of land, on both banks of the Sacramento River that consist of existing mature or recently restored riparian habitat, as well as land proposed for restoration (Table 4.2-2). The TNC parcel is accounted for here because it is in the process of being transferred to USFWS for the SRNWR. Approximately 35% of the land within the SRNWR units in the study area have intact riparian habitat that do not require active restoration. Of the remaining acreage on the 12 units, TNC and USFWS have plans to restore 2,597 acres (USFWS 2002). To date, 807 acres of the planned restoration has been implemented (Luster, pers. comm., 2005).

Table 4.2-2
Status of Habitat Restoration on Sacramento River National Wildlife Refuge Units within the Study Area

SRNWR Unit	Owner	River Mile	Total Acres	Planned Restoration Acres	Acres Restored To Date	Date Restored	Remaining Acres to Restore	Planned Date of Completion
McIntosh Landing North	USFWS	202	63	0	0		0	NA[1]
McIntosh Landing South	USFWS	201	67	0	0		0	NA[2]
Pine Creek (now includes Harley and Sunset Ranch)	USFWS	199	576	546	525	1998–2004	21	2006
Capay	USFWS	194	666	576	0		576	2006
Phelan Island	USFWS	191	308	186	186	1997–2001	0	NA[3]
Jacinto	USFWS	187	69	10	0		10	Not planned
Dead Man's Reach (see note)	USFWS	186	637	554	0		554 [4]	2006-2010
North Ord	USFWS	185	29	0	0		0	NA[1]
Ord Bend	USFWS	184	111	96	96	1999	0	NA[3]
South Ord	USFWS	182	122	0	0		0	NA[1]
Llano Seco Riparian Sanctuary (includes islands 1 and 2)	USFWS	177	906	387	0		387	Unknown, depends on funding
Hartley Island	TNC	173	420	242	0		242	Unknown, depends on funding
Totals			**3,974**	**2,597**	**807**		**1,790**	NA[1]

Notes:
[1] Unit consists of good quality, intact riparian habitat; active restoration not required.
[2] Passive restoration at this site.
[3] Restoration is complete.
[4] Of the total 554 acres planned for restoration on Dead Man's Reach, 239 acres are proposed for restoration under this Draft EIR. Native riparian vegetation will be restored on the remaining 315 acres in the future as proposed in the environmental assessment for properties within the SRNWR (USFWS 2002).

Agricultural activity within the study area consists of walnut, almond, and prune orchards and field crops such as barley, alfalfa, corn and wheat. The remaining acreage within the study area is composed primarily of riparian habitat, wetlands, open water and uplands. Upland areas not in agriculture may be fallow, grasslands, or contain native habitat. Much of the agricultural land within the project area is currently subject to seepage, erosion, flooding, and scouring from the Sacramento River. These conditions can diminish agricultural productivity which in turn reduces the economic return on the agricultural management investment.

Approximately 67% of the land within the proposed project area occurs on Prime or Important Farmland, all of it occurring within the Capay project site (Table 4.2-3). A total of 267 acres (32% of the project area) is classified as Other Land (TNC 2002). Although designated as Prime Farmland, these lands are affected by the physical processes along the Sacramento River (e.g., flooding and erosion) that can degrade or limit the value of these areas for farming. There are no Williamson Act or FSZ contracts in the project area because the land is owned by the federal government.

Table 4.2-3
Agricultural Land Classifications in the Project Area (acres)

Site	Prime Farmland	Farmland of Statewide Importance	Other Land [1]	Total Acres
Pine Creek	0	0	21	21
Capay	155	408	13	576
Dead Man's Reach	0	0	239	239
Total	155	408	273	836

[1] Other Land = Land not included in any other mapping category, such as low-density rural development, wetland and riparian areas, and other areas not suitable for livestock grazing.

The following three sections describe specific conditions in the project area.

Pine Creek Project Site

This restoration site is located in Butte County about ¼ mile south of State Route 32 (see Exhibit 3-3). The project site is surrounded by USFWS land. Properties adjacent to the Pine Creek Unit (the entire 576-acre USFWS property) are owned by public agencies, with private ownership of land occurring north of Road 32 and east of Pine Creek (the tributary). The Sacramento River channel is fairly stable in this reach (refer to Section 4.3, "Hydrology, Water Quality, and River Geomorphology"). The soils on the project site are dominated by sandy loams punctuated with many gravel lenses. There are no prime or statewide important soils at the restoration site. As described above, the project site is within an area of the county designated as Other Land pending completion of an updated soil survey. This project site had been subject to a Williamson Act contract that became nullified when ownership was transferred to the USFWS on September 12, 2003. The Pine Creek project site is currently fallow (TNC 2002). As a 20-acre agricultural unit, on marginal soils with periodic flooding, the project site cannot sustain economically viable agricultural production (Luster, pers. comm., 2005).

Capay Project Site

This restoration site is located in Glenn County about 5 miles south of Hamilton City (see Exhibit 3-4). The Capay Unit (the entire 666-acre USFWS property) is bordered on the north by County Road 23 and the Pine Creek Unit of the DFG Sacramento River Wildlife Area. Land to the north is owned primarily by TNC with some privately held land to the northwest and DFG land to the northeast. Land to the west and south is in private ownership and is managed for agricultural production. Soils on the unit are derived from the Columbia Association, described as deep, moderately fine to moderately coarse textured soils found along the Sacramento River floodplain (Hubbell et al. 1999). Areas of coarse gravel wash and sandy loams and invasive yellow star thistle have challenged farming operations over time. Although farmland categorized as Prime and Statewide

Important Farmland are present on this project site, persistent flooding and lack of irrigation infrastructure has resulted in marginally successful efforts to cultivate row crops or orchards or to dryland farm. In 2005, crops planted on the Capay project site will include 113 acres of corn, 30 acres of wheat, and 185 acres of barley. The 246 acres of the mid-terrace area, with the poorest soils on the property, have remained fallow for the last 10 years (TNC 2002; Luster, pers. comm., 2005).

Dead Man's Reach Project Site

This restoration site is located in Butte County approximately 1 mile northeast of the Ord Bend Bridge (see Exhibit 3-5). The soils are predominantly sandy loams. The project site lies over the historic main channels of the river and is within the 1- to 2½ -year floodplain (Hubbell et al. 2003b). To the south and east of the site are privately owned lands in agricultural production. When the Dead Man's Reach project site was purchased in 1999, its almond orchard was near the end of its productive life despite being located on prime soils and having been recently replanted. The orchard's decline is the result of repeated heavy flooding that has eroded the property and caused severe damage. Damage to the orchard resulted from flood debris which required regular cleanup and wind damage that knocked down over 1,000 trees in December 2002. Between 2002 and 2003 income from the sale of almonds decreased by nearly 80% because of the loss of trees and the loss of acreage because of erosion. The unit's 350 acres of walnut orchard and 250 acres of almond orchard are farmed through a Cooperative Land Management Agreement (TNC 2002).

4.2.2 REGULATORY SETTING

CONSISTENCY OF THE PROPOSED PROJECT WITH THE SACRAMENTO RIVER NATIONAL WILDLIFE REFUGE COMPREHENSIVE CONSERVATION PLAN

USFWS has prepared a CCP for the SRNWR that defines the goals and policies for management of SRNWR units. The proposed project has been planned to be consistent with the CCP (USFWS 2005), which provides the following vision statement for the SRNWR:

> The Sacramento River National Wildlife Refuge will create a linked network of up to 18,000 acres of floodplain forests, wetlands, grasslands, and aquatic habitats stretching over 100 miles from Red Bluff to Colusa. These refuge lands will fulfill the needs of fish, wildlife and plants that are native to the Sacramento River ecosystem. Through innovative revegetation, the refuge will serve as an anchor for biodiversity and a model for riparian habitat restoration throughout the Central Valley. We will forge habitat, conservation and management links with other public and private conservation land managers.
>
> The Sacramento River National Wildlife Refuge is committed to the preservation, conservation, and enhancement of a quality river environment for the American people along the Sacramento River. In this pursuit, we will work with partners to provide a wide range of environmental education programs and promote high quality wildlife-dependent recreational opportunities to build a refuge support base and attract new visitors. Compatible wildlife-dependent recreational opportunities for hunting, fishing, wildlife observation and photography, environmental education and interpretation will be provided on the refuge.
>
> Just as the floodplain along the Sacramento River has been important to agriculture, it is also an important natural corridor for migratory birds, anadromous fish, and threatened and endangered species. Encouraging an understanding and appreciation for the Sacramento River will be a focus of the Sacramento River National Wildlife Refuge for generations to come.

To implement the vision, the CCP for the SRNWR identifies the following four goals for its units:

Goal 1: Wildlife and Habitat Goal

Contribute to the recovery of endangered and threatened species and provide a natural diversity and abundance of migratory birds and anadromous fish through the restoration and management of viable riparian habitats along the Sacramento River using the principles of landscape ecology.

Goal 2: Visitor Services Goal

Encourage visitors of all ages and abilities to enjoy wildlife-dependent recreational and educational opportunities and experience, appreciate and understand the Refuge history, riparian ecosystem, fish and wildlife.

Goal 3: Partnership Goal

Promote partnerships to preserve, restore and enhance a diverse, healthy and productive riparian ecosystem in which the Sacramento River refuge plays a key role.

Goal 4: Resource Protection Goal

Adequately protect all natural and cultural resources, staff and visitors, equipment, facilities and other property on the refuge from those of malicious intent, in an effective and professional manner.

CONSISTENCY OF THE PROPOSED PROJECT WITH THE CALFED FINAL PROGRAMMATIC EIS/EIR RECORD OF DECISION

In launching "the most complex and extensive ecosystem restoration project ever proposed" (CALFED 2000a), the CALFED Final PEIS/EIR recognized that the Preferred Program Alternative could have potentially significant effects on agricultural land and water use. The CALFED Final PEIS/EIR specifically identified potential effects of converting Prime, Statewide Important and Unique Farmland to project uses. It also identified potential conflicts with local government plans and policies and potential incompatibilities with adjacent land uses. As a result, the CALFED Program developed mitigation strategies to reduce potential impacts to agricultural land and water use.

The proposed project has been designed to meet CALFED Program objectives (see Section 3.1.1 of this Draft EIR) and to be consistent with the mitigation strategies adopted as part of the ROD for the approval of the CALFED Program. A review of Section 7.1, "Agricultural Land and Water Use," resulted in identification of five mitigation strategies (described below) that have been incorporated into the design of this proposed habitat restoration project:

- Mitigation Strategy 4: Involve all affected parties, especially landowners and local communities, in developing appropriate configurations to achieve optimal balance between resource effects and benefits.

  To maximize conservation efforts along the river, USFWS encourages and supports a cooperative approach to problem solving by regularly communicating with neighbors and cooperatively addressing common issues (USFWS 2005). As steward of the SRNWR, USFWS participates in the SRCA Forum to assist with ongoing management coordination efforts. Further, as described in Chapter 3, the proposal to restore riparian habitat on Pine Creek, Capay, and Dead Man's Reach was presented by TNC to the SRCA Forum Board of Directors and Technical Advisory Committee at meetings in August 2001, May and September 2002, January 2003, and November 2004. TNC continues to provide project updates to Board of Director and sub-committee meetings. TNC also disseminates information in the SRCA Forum Notes that is distributed to 650 SRCA Forum stakeholders. Therefore, this proposed habitat restoration project is consistent with Mitigation Strategy 4.

- Mitigation Strategy 10: Focus habitat restoration efforts on developing new habitat on public lands before converting agricultural lands.

  This proposed habitat restoration project would develop new habitat on public lands; therefore, it is consistent with Mitigation Strategy 10.

- Mitigation Strategy 11: If public lands are not available for restoration efforts, focus restoration efforts on acquiring lands that can meet ecosystem restoration goals from willing sellers where at least part of the reason to sell is economic hardship (i.e., lands that flood frequently or where levees are difficult to maintain).

  The public lands on which the proposed project is planned for implementation were acquired from willing sellers where at least part of the reason for selling was economic. Therefore, this proposed habitat restoration project is consistent with Mitigation Strategy 11. Refer to Chapter 8, "Socioeconomic Issues," for further discussion of this topic.

- Mitigation Strategy 18: Minimize the amount of water supply required to sustain habitat restoration acreage.

  The proposed project would require seasonal irrigation for the first 3 years until the new plantings are established (after root systems have sufficiently developed to have tapped into the groundwater). No further water use is anticipated following the 3-year project implementation period. Therefore, this proposed habitat restoration project is consistent with Mitigation Strategy 18.

- Mitigation Strategy 19: Develop buffers and other tangible support for remaining agricultural lands. Vegetation planted on these buffers should be compatible with farming and habitat objectives.

  The proposed project has been designed to be respectful of neighboring public and private properties that together support a wide range of wildlife species and provide for economic vitality through agricultural production. The proposed project will conform to performance standards such as buffers, vector control, and fencing that are outlined in the SRNWR CCP (USFWS 2005); therefore, it is consistent with Mitigation Strategy 19.

CONSISTENCY WITH FEDERAL AND STATE FARMLAND PROTECTION POLICIES

Loss of farmland is an important concern that is captured by the development of federal, state and local policies calling for protection of Prime, Unique or Statewide Important Farmland. Under the Federal Farmland Protection Policy Act (FPPA)(Subtitle I of Title XI, Section 1539-1549), projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by, or with the assistance of, a federal agency. However, as the U.S. Department of Agriculture's Farmland and Conversion Impact Rating form advises, "The purpose of the rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government...Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development." The form advises that the "LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess the options for land use on an evaluation of productivity weighed against *commitment to urban development*." (USDA Farmland Conversion Impact Rating Form AD-1006 (10-83) at pages 4 and 7. Emphasis added.)

Under the California LESA model the proposed project would not qualify as "Land Committed to Nonagricultural Use" as such land is designated as having received discretionary *development* approvals such as a tentative subdivision map, tentative or final parcel map, or recorded development agreement. (Department of Conservation California Agricultural LESA Model 1997 Instruction Manual (Manual) at page 26). In contrast, the proposed project falls within the California LESA model definition of "protected resource lands." The model defines protected resource lands as "those lands with long term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following: publicly owned lands maintained as park, forest, or watershed resources; and lands with agricultural, wildlife habitat, open space, or other natural resource

easements that restrict the conversion of such land to urban or industrial uses" (Manual at page 28). Since this project concerns protected resource lands and not "Land Committed to Nonagricultural Use" by virtue of urban development, evaluation under the LESA Model was not deemed appropriate. Such a determination by a lead agency is consistent with CEQA Statutes Section 21095, which makes use of LESA an "optional methodology."

LOCAL LAND USE PLANS AND POLICIES

Protection of agriculture is important in the general plans of both Butte and Glenn Counties. Multiple general plan land use policies identify preservation of agricultural land and production as important goals of the planning processes. In addition to general plan policies regarding protection for agricultural land, both Glenn and Butte Counties also promote policies to protect and improve natural areas for the benefit of wildlife. A summary of relevant policies from both counties is provided below:

Butte County General Plan

- Agriculture and Crop Land
  - Policy B: Retain in an agricultural designation on the land use map areas where location, natural conditions and water availability make lands well suited to orchard and field crop use, while considering for non-agricultural use areas where urban encroachment has made inroads into agricultural areas and where past official actions have planned areas for development.
- Biological Habitat
  - Policy B: Prevent development and site clearance, other than river bank protection, of marshes and significant riparian habitats.
  - Policy D: Regulate development to facilitate survival of identified rare and endangered plants and animals.
- Natural Areas
  - Policy A: Encourage the creation and expansion of natural and wilderness areas (Butte County Planning Department 1991).

Glenn County General Plan

- Agriculture/Soils (5.1.1)

  As the most expansive land use in the County, agriculture constitutes a significant component of the local economy. Agricultural land also provides valuable open space and important wildlife habitat. It is important that the County take steps to preserve its agricultural land from both economic and environmental perspectives… converting prime agricultural land to non-agricultural uses is considered an irreversible loss of resources. With the primary goal being that of preserving the County's valuable agricultural resources, a variety of preservation tools can be used.…

  - Policy NRP-1. Maintain agriculture as a primary, extensive land use, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's contribution to the preservation of open space and wildlife habitat.

- Land Use/Growth (5.3.1)

  Agriculture is the single most important component of the County's economic base, protection of agricultural land is of great importance. Land patterns, goals and policies have been established which promote agricultural land preservation and protect these lands from urban encroachment… It is the intent of the County to promote orderly growth into areas where it can be accommodated and served adequately, and to avoid potential land use conflicts through the appropriate distribution and regulation of land uses. Only compatible uses will be encouraged in agricultural area; compatible uses are defined as those uses capable of existing together without conflict or ill effect.

- Coordination With Wildlife and Land Management Agencies (6.7)

  For all projects, with the exception of those associated with sites low in wildlife value, early consultation with wildlife agencies should occur (Quad Consultants 1993).

4.2.3 ENVIRONMENTAL IMPACTS

THRESHOLD OF SIGNIFICANCE

This threshold criterion is based on relevant provisions of CEQA, the State CEQA Guidelines, environmental questions in Appendix G of the Guidelines, and significance criteria used in other relevant environmental compliance documents for similar projects.

The proposed habitat restoration project would be considered to have a significant effect on agricultural land and land uses if it would:

- Result in a permanent conversion of a substantial acreage of Prime, Unique or Statewide Important Farmland. A permanent conversion is considered to be one that involves the irreversible change to land uses that would cause serious degradation or elimination of the physical conditions or natural processes that provide the land's resource qualities for agriculture and/or require expenditures of substantial development costs that would likely preclude future conversion back to agricultural uses if the opportunity for such conversion were to arise.

Economic or social changes resulting from a project are not themselves significant effects under CEQA; however, a lead agency may include socioeconomic information in whatever form it wishes in an EIR (State CEQA Guidelines Section 15131). For policy purposes, socioeconomic issues related to the proposed project are further considered in Chapter 8, "Socioeconomic Issues."

IMPACT ANALYSIS

IMPACT 4.2-a Change of Use From Agricultural Land to Restored Native Riparian Habitat. *The nature of the proposed project is habitat restoration, an activity consistent with federal and state legislation regarding the Sacramento River environment. The project sites were acquired with public funds from willing sellers for the express purpose of restoring the riparian corridor and wildlife habitat along this dynamic reach of the Sacramento River. These activities are consistent with both the legislative intent of establishing the SRNWR and the goals for the SRNWR, as provided in the SRNWR CCP. The proposed project would restore some agricultural acreage to native riparian habitat, effectively removing it from agricultural production; however, the proposed project would be neither irreversible nor cause serious degradation or elimination of the physical or natural conditions that provide the site's values for farming. The proposed project would not stop or hinder the agricultural practices that occur on neighboring properties. This impact is considered* ***less than significant.***

The agricultural history on the project sites, provided above, indicates the challenge of making agriculture successful along this reach in spite of the presence of prime agricultural soils. As described above, the agricultural lands within the project area are currently subjected to erosion, flooding, and scouring because of the dynamic action of the Sacramento River near or adjacent to the project area. These conditions create a frustrating combination for landowners near the river who must perennially fend off the river, clean up, and replant. It is these same conditions that led landowners to sell their parcels in the project area for inclusion in the SRNWR (Luster, pers. comm., 2005).

USFWS has acknowledged the impossibility of establishing the SRNWR without reducing the acreage of farmland in cultivation (USFWS 2002). USFWS partnered with TNC to begin evaluating the effects of agriculture and habitat restoration in the inner river zone. The findings show that in a dynamic riverine environment, the management of prime and unique farmland soils for agricultural purposes can expose them to some degree of degradation. Protection from flooding and associated sediment deposition, tilling, and the application of agricultural chemicals can adversely affect nutrient cycling, increase exposure to erosion, and inhibit natural soil microorganisms. In contrast, in restored riparian woodland, soils are improved in the values that make them valuable for farming. Brown and Wood (2002) evaluated soil development at riparian forest sites at different stages of restoration (new to mature), finding that soil bulk densities decreased as restored riparian forests matured. Higher bulk densities are evidence of soil compaction that happened over time. The lower bulk densities exhibited in mature forests is considered to result from increased biological activity in the soil, such as earthworms, beetles and small mammals aerating the soils (Brown and Wood 2002).

The proposed project would re-establish long-term processes and functions present in riparian habitat communities, including the natural formation of soils that gave these sites their original agricultural value. Fully functioning riparian ecosystems are also known to improve groundwater and surface water quality by removing undesirable constituents such as nutrients and pesticides (Brown and Wood 2002). Ceasing agricultural practices and restoring the project area could benefit adjacent and downstream agricultural lands by diminishing the volume and frequency of pesticides applied to the properties, slowing the loss of soils from the sites onto adjacent or downstream locations, and by increasing groundwater levels. Because the agricultural value of the soil is tied directly to the natural conditions and processes that existed before commercial agricultural development of the land, habitat restoration efforts would in effect be preserving (and possibly improving over time) the agricultural value of the soil (Cannon 2004, Tilman et al. 1996 and 2002).

While current SRNWR goals and policies (USFWS 1999, 2002, 2004) do not support either continuing agricultural practices at the SRNWR or changing use of SRNWR lands to agriculture, the proposed project does not include the establishment of any facilities, structures, or land uses that would physically or economically preclude returning the land to cultivation in the future if there were to be such a public policy decision. The proposed project, which would result in mixed savannah and riparian woodland habitats on the site, would not be prohibitively costly to return to its present condition. Returning the land to cultivation would require removing the native vegetation and implementing some soil preparation, which is similar to the requirements of the original clearing of habitat necessary to create farmed land decades ago. In contrast, when farmland is converted to urban uses, the resulting construction of infrastructure and buildings, and the compaction and paving of soils with cement or petrochemical products makes the conversion irreversible. When farmland is lost because of encroachment of urban uses, the cost of returning these urban uses to farmed land would be prohibitive, given the necessity to demolish buildings and remove infrastructure, not to mention the consequent loss of resource values that made these soils productive in the first place when urban uses were constructed.

The proposed project would not hinder or stop farming operations on adjacent properties. In addition, to benefit neighboring farmed properties, TNC and SRNWR endeavor to be good neighbors in their property management. SRNWR policies include those addressing maintenance of fire breaks and vegetation buffers that are carried into project design to minimize incompatibilities with active agricultural operations on adjacent properties.

For the reasons provided above, the proposed project would not result in a permanent loss of acreage of Prime, Unique or Statewide Important Farmlands. Restoration of the sites to native habitat is expected to improve the physical characteristics of these lands within the project area and downstream that originally contributed to their value as farmlands. Therefore, this impact is considered less than significant.

4.2.4 MITIGATION MEASURES

No mitigation is required for impacts to agricultural resources and land uses.

This page left intentionally blank