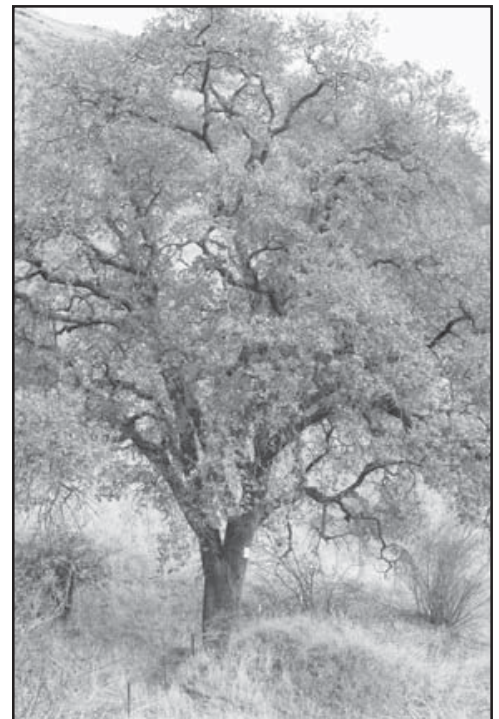


Capay Valley Watershed Stewardship Plan



Yolo County Resource Conservation District
Cache Creek Watershed Stakeholders Group
November 2003

Capay Valley Watershed Stewardship Plan

created by the Cache Creek Watershed Stakeholders Group & Yolo County Resource Conservation District, 2003. For copies, contact the Yolo County Resource Conservation District at:

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This plan is also available in Portable Document Format (pdf) at the Yolo County RCD website: [www.yolorcd.org/programs/Cache Creek/CapayWatershedPlan.shtml](http://www.yolorcd.org/programs/Cache%20Creek/CapayWatershedPlan.shtml).

Executive Summary

The *Capay Valley Watershed Stewardship Plan* is a project and program guidance document for the Cache Creek Watershed Stakeholders Group, which holds as its mission:

To enhance and protect watershed resources by bringing together all interested parties in a collaborative process that promotes watershed stewardship through community outreach and cooperative planning and implementation of projects, while respecting public and private property rights.

The Stakeholders Group was formed in 1996 as a diverse group of landowner and resource agency “stakeholders” (“anyone who cares”) to deal comprehensively and thoughtfully with resource issues in Capay Valley. This Plan is a result of a concerted effort to refine a set of Goals and subservient Objectives and Actions for attaining them based on the resource issues defined at a series of public stakeholder meetings and the remarkable array of resource data already available from studies in the region. The recommended actions in this plan are directed on two levels: tasks for the Stakeholders Group (an array of projects and recommended studies), and possible *voluntary* actions that landowners (either individually or in neighborhood or ‘tributary’ groups) can undertake in order to address the resource issues they identify on their properties

Capay Valley is a narrow alluvial valley located in northwestern Yolo County, California that holds 20 miles of meandering Cache Creek that drains approximately 1,300 square miles of Lake, Yolo, and Colusa Counties, trending in a southeast direction from the Northern California Interior Coast Range to the Sacramento Valley. The primary landscapes are mountainous chaparral, rangeland and fertile valley floor agriculture (orchards and row crops). Several small, discrete rural communities are dispersed along State Highway 16, which runs the length of the Valley. The human community is diverse with a primarily ag-based economy that includes a rapidly-growing organic farming sector. A casino/resort facility hosted by the Rumsey Band of Wintun Indians is a growing influence in the Valley’s economy, land use, and highway traffic.

Through a series of regular public meetings, the Stakeholder Group identified major resource issues of concern such as streambank erosion along Cache Creek and tributaries; eradication and/or management of invasive plants such as Tamarisk, Arundo, and Yellow Starthistle throughout Capay Valley; the health effects of mercury in Cache Creek on humans and wildlife; and the current permitting system

functioning as a hindrance to watershed restoration and management activities. Based on these and other listed issues, the Group developed the following goals and objectives to address them:

Goal 1: To manage watershed lands to minimize unnatural rates of erosion and sedimentation.

Goal 2: To use and manage both surface and ground water wisely to meet current and future needs.

Goal 3: To maintain and improve water quality for all water users.

Goal 4: To maintain and improve watershed habitats to support a diversity of native plants and animals.

Goal 5: To promote land management practices that maintain and improve local natural resources and habitats and support a productive and sustainable agricultural economy.

Goal 6: To promote a watershed approach for decisions involving Cache Creek by supporting communication and collaboration among all stakeholders.

Based on these goals and their respective objectives and actions described in the Plan, the Stakeholders Group has drafted a short-term action plan to initiate Plan implementation. Initial tasks include: complete on-going analysis of digitized aerial Tamarisk survey on Cache Creek in order to prioritize and implement demonstration control and revegetation (where needed) projects; prioritize and implement creek bank stabilization demonstration projects; and complete and support self-implementation of one tributary group (sub-watershed) conservation plan.

The *Plan* includes resources for project financial and technical support as well as a recommended process for developing and carrying out a tributary or neighborhood conservation plan. *The Capay Valley Watershed Conservation and Restoration Manual* is a companion document to this *Plan* that includes specific information about conservation practices, required permits, and informational and financial resources for watershed work.

New information generated from project results and the recommended watershed studies will allow periodic updating and review of the Watershed Stewardship Plan to maintain its relevance and proper focus.

Watershed Vision, Mission and Planning Principles

In 2000, the Cache Creek Watershed Stakeholders Group developed an Operating Charter that includes the following vision, mission, and operating principles, which were adhered to throughout the watershed planning process:

Vision

“A healthy Cache Creek watershed with balanced uses of the natural environment for human benefit and conservation of local resources.”

Mission

The following mission statement was developed in order to guide the approach to achieving the vision above:

“To enhance and protect watershed resources by bringing together all interested parties in a collaborative process that promotes watershed stewardship through community outreach and cooperative planning and implementation of projects, while respecting public and private property rights.”

Operating Principles

Members of the Steering Committee and Technical Advisory Committee, and the participants of the Stakeholders Group respect the viewpoints of others, and expect that their viewpoints will be respectfully heard and considered. They understand that they are responsible for maintaining an atmosphere where ideas and positions can be freely discussed. They refrain from making personal attacks on others, avoid hidden agendas, and conduct themselves in a way that fosters consensus building.

The Operating Charter is not legally binding; it is instead an agreement among the Steering Committee, Technical Advisory Committee, and participants of the Cache Creek Watershed Stakeholders Group to work together toward common goals to the extent possible.

Table of Contents

Executive Summary	1
Table of Contents	5
Introduction	6
Watershed Status	8
Capay Valley Community Summary	21
Resource Issues	25
Stewardship Goals, Objectives and Recommended Actions	27
From Plan to Project	35
Resources	49
References	54

Introduction

“This plan is meant to provide the basis for a voluntary effort of the residents of Capay Valley to jointly address the concerns expressed, while protecting and preserving their natural and community resources in an economically reasonable manner.”

The *Capay Valley Watershed Stewardship Plan* takes a comprehensive look at the health of the natural resources of Capay Valley and offers a collection of recommended actions developed through a collaborative effort between the Yolo County Resource Conservation District and the Cache Creek Watershed Stakeholders Group. It is the culmination of a process that began in 1996. This plan provides a community-based framework for maintaining and improving watershed health in Capay Valley. This framework can be used to guide the development of tributary stewardship action plans so that through these numerous smaller efforts the larger goals for the entire Capay Valley can be realized. These more localized action plans will provide the opportunity for neighbors to work together to address the most important issues in their respective tributary watersheds. While this Plan is focused on the Capay Valley Watershed, it is important to note that it was developed to be complementary and supportive of other watershed work and plans that are underway or in place throughout the entire Cache Creek Watershed and in Capay Valley itself. These plans and activities are noted in the “Watershed Status” section of the Plan.

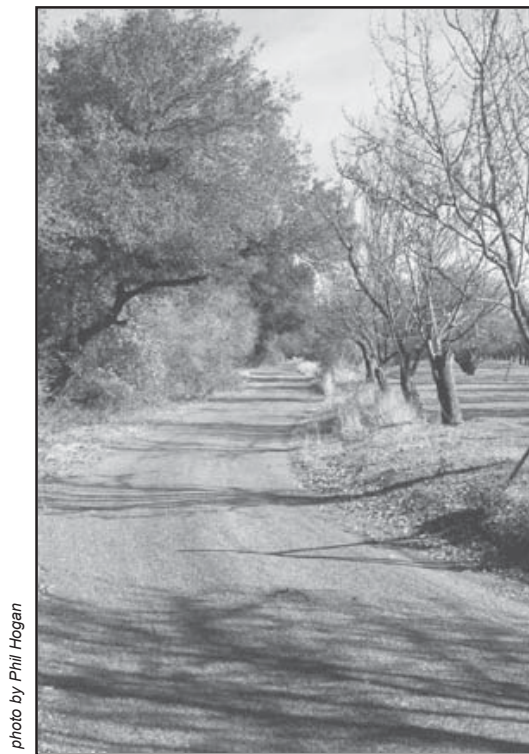


photo by Phil Hogan

Because there is usually more than one way to manage any given land use, this plan offers many alternative voluntary actions from which to choose, dependent on specific site conditions and personal preferences. In some cases, the recommended actions include further research in order to inform the development of additional recommended actions to help the residents of Capay Valley maintain a healthy, sustainable natural resource system. This plan is designed to be flexible, and includes accommodation for periodic review and revision as new information becomes available. The recommended actions in this plan are intended for use as a technical and educational resource for

landowners and managers in the watershed who have a vested interest in the long term protection of the soil, water, and other natural resources of the watershed.

The focused Plan development process took place between October 2002 - November 2003, during which time Stakeholder Group participants refined a list of resource issues from which they generated a set of Goals, Objectives and Recommended Actions for addressing those concerns. Voluntary implementation of the recommended actions in this plan will not only help deal with the problems related to the identified resource issues, but will prevent others from occurring. Thus, this type of watershed planning is intended to be as much a guide for preventive maintenance as it is a guide for addressing current issues. This plan is meant to provide the basis for a voluntary effort of the residents of Capay Valley to jointly address the concerns expressed, while protecting and preserving their natural and community resources in an economically reasonable manner. As with personal health or home maintenance, preventive care is the least burdensome and least expensive way of keeping a watershed healthy. This plan provides a first step toward the mutual education within the community that will provide the basis for broad cooperative action. Community participation in development of a long term plan to manage and maintain the uniqueness of Capay Valley will ensure that the positive attributes of the valley will persist for the constructive enjoyment of its residents, and that elements that threaten that enjoyment will be recognized and avoided by cooperative action.

The six goals identified in this plan are each elaborated with several objectives. These objectives are measurable milestones that will enable the community to track progress toward maintaining a natural balance in watershed resources. Most of the objectives involve promoting and encouraging practices and behaviors that will support development of a healthy watershed. Each objective offers several recommended actions that can be undertaken to meet that objective. Education is a major characteristic of this planning and management program. Education is desirable regarding not only the technological issues related to watershed management, but also social interaction that promotes more complete understanding of the respective needs of the residents of Capay Valley.

The Planning Process

1996 - Cache Creek

Watershed Stakeholders
Group formation

February 2000 – Operating
Charter ratified – including
watershed vision and
mission

February 2002 – Operating
Charter updated

April 2002 – Capay Valley
Watershed Improvement
Program Strategic Plan
developed – identified the
need for a watershed plan

September 2002 – Capay
Valley Conservation and
Restoration Manual released
to the community

October 2002 – Watershed
Plan Committee formation

November 2002 -
Identification of Resource
Issues; Begin data collection

January 2003 – Development
of Goals

May 2003 – Development of
Objectives

July 2003 – Development of
Recommended Actions

September 2003 – Review
first draft of the Watershed
Plan

October 2003 – Review
second draft of the
Watershed Plan

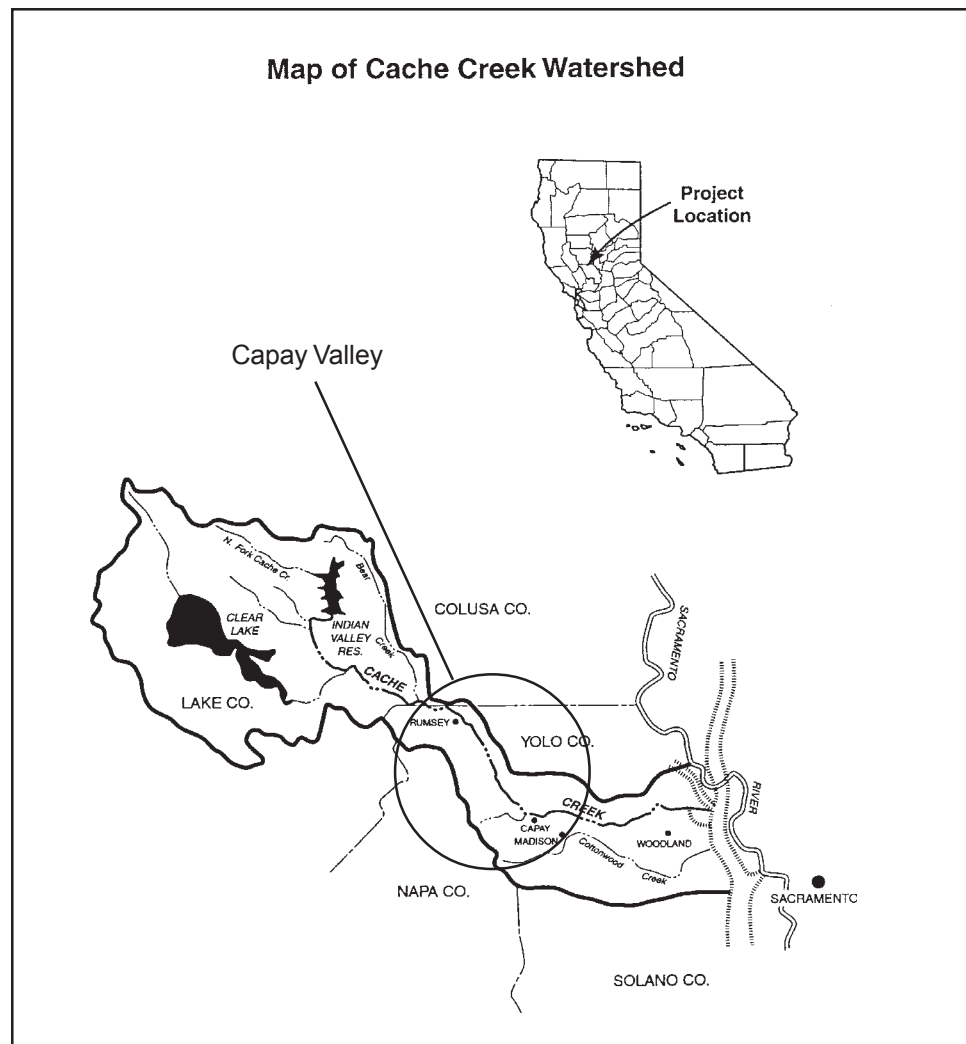
November 2003 – Final
Capay Valley Watershed
Stewardship Plan released
to the community

Watershed Status

(this section includes text developed by Capay Valley Vision)

Watershed Description

A watershed is defined as an area of land that drains water, sediment, and dissolved materials to a common outlet at some point along a stream channel (Dunne and Leopold, 1978). A watershed is in effect a drainage basin. Watersheds occur at multiple scales, from small streams that may drain only an acre to large river systems that drain thousands of square miles. The smaller drainages are often referred to as sub-watersheds. Several sub-watersheds combine to form a larger watershed. Watershed boundaries are drawn along the ridgelines or highpoints, be they mountains or subtle rises in flat lands, that surround the waterway of interest.



The *Capay Valley Watershed Stewardship Plan* focuses on the Capay Valley reach of Cache Creek. This area has been defined by the Cache Creek Watershed Stakeholders Group to include the area from the Blue Ridge of the Coast Range in the west to ridgetops of the Capay Hills in the east and from Capay Dam in the south upstream to Camp Haswell, north of Rumsey. Because the Capay Valley reach is part of the larger Cache Creek watershed, the following information serves to describe historical watershed conditions for the Capay Valley reach within a larger watershed context.

Cache Creek is located in Lake, Yolo, and Colusa Counties in the Coast Ranges of Northern California. Cache Creek drains approximately 1,300 square miles and trends (from upstream to downstream) in a southeast direction. The major tributaries to Cache Creek are Clear Lake, North Fork Cache Creek, and Bear Creek. Numerous minor tributaries join Cache Creek as it flows to the Cache Creek Settling Basin with its outlet to the Yolo Bypass of the Sacramento River.

The mainstem of Cache Creek flows from the outlet of Clear Lake and is controlled by the Cache Creek Dam. The lake traps virtually all sediment from the upstream tributary watersheds. The North Fork of Cache Creek begins in an alluvial valley surrounded by hills much lower in elevation than those surrounding Clear Lake. Sediment produced by this area is trapped in the Indian Valley Reservoir. Bear Creek is similar to the North Fork in that it also flows through a long alluvial valley in its upper reach before flowing approximately 12 miles through steep canyons to its confluence with the combined North Fork and mainstem of Cache Creek. The Capay Valley reach of Cache Creek is located in northwestern Yolo County, approximately 7 miles downstream of the confluence of Bear and Cache Creeks. Below Capay Valley, the Cache Creek channel flows into the wide alluvial fan area of the Sacramento Valley, in which deposition of sediment was historically the dominant process. The creek's terminus is the Cache Creek Settling Basin, designed to capture sediment and enhance ground water recharge, before ultimately releasing water into the Yolo Bypass of the Sacramento River. (U.S. ACOE, 1988)

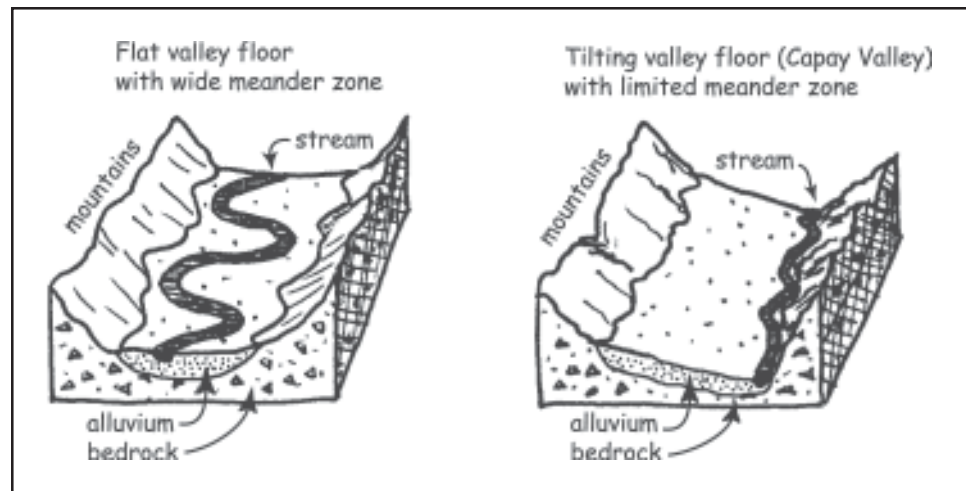
Geology

The valley floor consists of deep, alluvial soils deposited by Cache Creek and its tributaries. These deposits make up the deep, rich soils that host the productive agriculture of Capay Valley and the Great Central Valley. The western walls of the valley are Cretaceous rocks (formed 145-65 million years

ago) of the so-called Great Valley Group that were deposited when the Central Valley was an inland sea. As with the rest of the region, the area now known as Capay Valley was under water for millennia.

The eastern wall of Capay Valley consists of two different ages and types of rocks. The lower slopes are younger, formed in the Pleistocene era 2 million to 10 thousand years ago. The upper 1/4 of the eastern wall of the Valley consists of older Cretaceous Great Valley Group rocks (the same as the rocks on the opposite side of the valley). At the interface on the slope there is a change in pitch caused by the thrust fault which has superimposed the older rocks over the much younger Pleistocene rocks exposed at river level.

Due to active tectonics, the floor of Capay Valley is increasingly tipping downward to the east. As a result, Cache Creek is confined mostly to the eastern side of the valley. This differs from most meandering streams, which can meander across the entire valley floor. Because of the tectonically-induced confinement of the stream, the effective “floodplain” is much narrower than the whole valley floor. This unique situation impacts Valley land uses. Whereas, on a level valley floor, the water table may be at a fairly uniform depth below the surface, the inclined valley floor affects the water table accordingly.



The way in which the stream erodes land and deposits sediment is also affected by the tectonic situation. Erosion-resistant Pleistocene (Ice Age) rock is exposed on the eastern side, forcing Cache Creek to focus its erosive activity on the western banks, which are composed of the much more easily eroded alluvium (older river deposits). As a result bank erosion has been and will continue to be a significant problem in Capay Valley. In fact a U.S. Army Corps of Engineers report (1988)

identifies 80 bank erosion points along Cache Creek in Capay Valley, and another report by the U.S. Geological Survey (1989) estimated 300 acres of streambank erosion in Capay Valley between 1953 and 1984. The effects of the 1997 New Year's Flood made this point clear: while the stream did not significantly erode the eastern bedrock banks, approximately 30 acres of alluvium on the western bank were eroded at Guinda Park alone.

Morphologic evidence for Capay Valley suggests the channel to be of the mixed-load type. Coarse material in the channel bed suggests significant bed load transport in the stream. Fine material in the high sediment production areas of the watershed suggests that suspended load transport in the stream is also significant. The channel pattern of the alluvial reaches of Cache Creek appears to be near a threshold where a change in hydrologic variables or sediment load can produce drastic changes in channel pattern. More than 65 percent of the bed material analyzed is gravel and about 23 percent is coarser than gravel with a general increase in the size of the bed material (particularly at the large end of the size distribution) in the upstream direction. Crumbling bedrock formations, slumps, debris slides on steep hillsides, streambank erosion, and sheet and rill erosion contribute sediment to the channel. Comparison of channel profiles surveyed in 1977 and 1983 indicate that there is no general aggradation or degradation trend; however limited areas of both aggradation and degradation do exist. Considering the implications of the various observations discussed above, it appears that the Capay Valley reach of Cache Creek may be somewhat overloaded with sediment due to high watershed and tributary sediment yield and contributions from mass wasting and active bank erosion. This is evidenced by a wide variation in channel width and presence of numerous alternate and mid-channel bars in unconfined areas of Capay Valley. (ACOE, 1988)

“Comparison of channel profiles surveyed in 1977 and 1983 indicate that there is no general aggradation or degradation trend; however limited areas of both aggradation and degradation do exist.”

Hydrology

Prior to the construction and operation of the Cache Creek Dam (1914) at the Clear Lake outlet channel and the Indian Valley Reservoir (1975) on the North Fork Cache Creek, the stream functioned as a seasonal stream which often naturally ran dry during the summer and fall and experienced heavy flows in the winter and spring. Flows ranged from 0 to over 40,000 cfs. The drainage area above Capay is 1,044 square miles, of which 55 percent empties into Clear Lake and 13 percent drains into the Indian Valley Reservoir. About 85 percent of the precipitation occurs from November to March. Normal annual precipitation varies from a maximum of more than 60 inches in the upper portion of the watershed to a minimum of about 17 inches near the Cache Creek Settling Basin and averages about 32 inches over the entire watershed. A high percentage of the rainfall that occurs in the mountainous

Since the delineation of a watershed is based on the movement of water, it is important to review the means by which water moves through a system. Precipitation falls to the surface of the earth either as rain or snow. Some of the precipitation is intercepted and absorbed by vegetation before it reaches the soil surface. The precipitation that does reach the soil surface infiltrates into the soil by means of gravity and capillary action. Water will continue to move down through the soil until it reaches a zone of saturation known as the phreatic zone. The top of the phreatic zone defines the ground water table. The area above the phreatic zone is called the capillary fringe, where soil moisture is maintained by capillary forces. Between the capillary fringe and the soil surface is the vadose zone. The vadose zone is where plant roots thrive because the pore spaces between the soil particles contain a mixture of respiratory gases, capillary water, and soil microbes. When the rate of precipitation

areas of the watershed results in direct runoff due to the nature of the soils and the steepness of the topography. Annual runoff in the drainage basin fluctuates over a wide range. (U.S. ACOE, 1978)



Throughout the recorded hydrologic history of Cache Creek, many floods have occurred, most notably in 1958, 1983, 1986, and 1997. Floods in the Cache Creek Basin are principally caused by runoff of high-intensity rainstorms during winter and spring. Since stream reaches are short and channel gradients steep, peak flood flows usually pass completely through the basin within 24-hour periods. The color map on the facing page outlines the areas within Capay Valley that are likely subject to flooding during 100 and 500-year storm events (i.e., storms with a 1/100 and 1/500 likelihood of occurring in a given year).

Soils

Soils in the Cache Creek watershed are primarily silt-clay layers, sands, and gravels. USDA Use Classifications for soil range from I (few limitations for crops) to VII (severe limitations). Limitations include slope,

Capay Valley Flood Zones and Waterways

- 100 Year Flood Zones
- 500 Year Flood Zones
-  Parcel Boundaries
-  Waterways
-  Major Roads & Highways

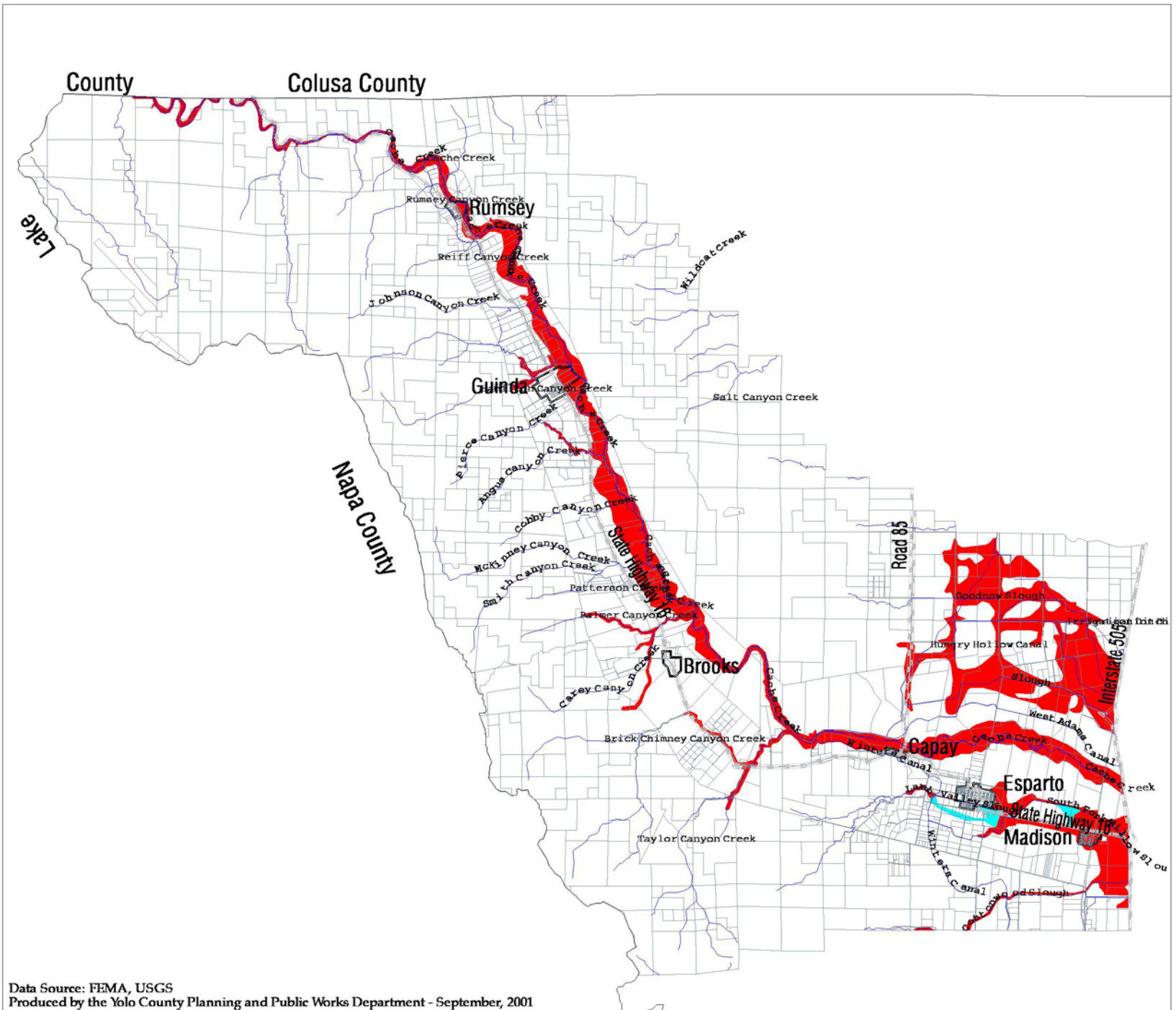


Scale in Miles
0 1 2 3 4

1 : 200 000



Data Source: FEMA, USGS
Produced by the Yolo County Planning and Public Works Department - September, 2001



soil depth, texture, excess moisture, and lack of available irrigation water. The primary soils found in Capay Valley by series and use classification include (Andrews, 1972):

- Brentwood – Class I, well drained silty clay loams on alluvial fans
- Yolo – Class I, well-drained silt loams and silty clay loams on alluvial fans
- Balcom – Classes IV & VI, well drained, calcareous silty clay loams on uplands
- Sehorn – Classes III, IV, and VI, well drained clays on dissected uplands
- Positas – Classes IV, VI, & VII, well drained gravelly loams on terraces
- Corning – Classes IV & VI, well drained gravelly loams on dissected terraces
- Reiff – Class I, well drained very fine sandy loams on alluvial fans
- Tehema – Class II, well drained loams on alluvial fans
- Millsholm – Class VII, well drained loams on uplands
- Dibble – Classes VI & VII, well drained clay loams on uplands








“Soils in Capay Valley tend to be very erodable when not protected by vegetation.”

The color map on the following page illustrates the general distribution of soils by soil class in Capay Valley. The concentration of green bands (class I and II soils) indicates the high quality farming areas on the Valley floor that are the source of the region’s highly productive agriculture.

The Capay Valley reach of Cache Creek is characterized by similar topography and soils as is found in the upper watershed, however it is subject to significantly less precipitation. In general, the decrease in precipitation results in a change in vegetation types and overall a decrease in the density of vegetation both in upland areas and valley bottoms. (U.S. ACOE, 1988)

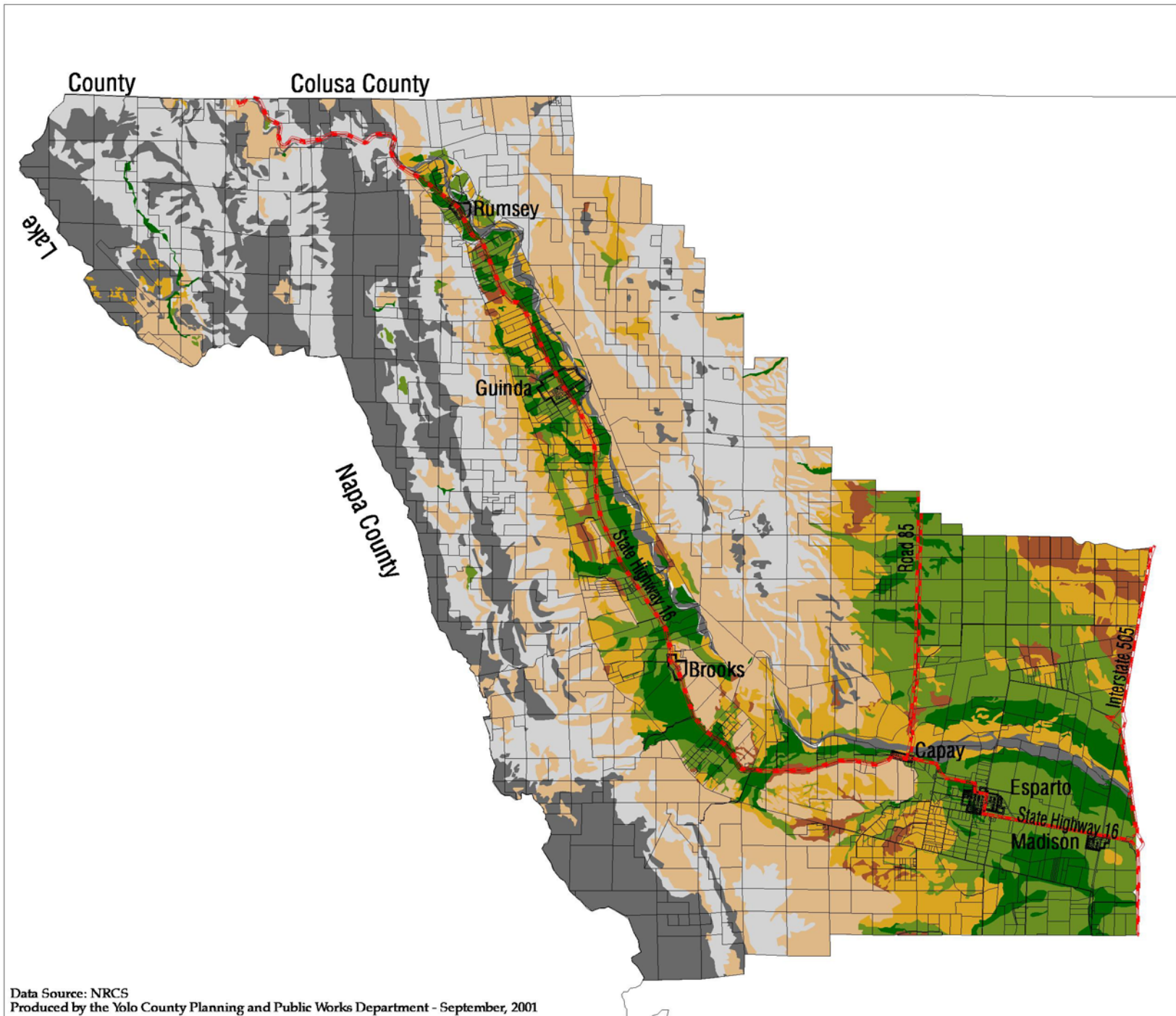
Soils in Capay Valley tend to be very erodable when not protected by vegetation. These soil types also appear to make up the majority of the channel banks. Some lenses of coarse gravel and clay have also been noted in the banks. Because of the lenticular nature of these deposits, they are not likely to contribute significantly to bank stability. The stability of the banks is thought to be highly influenced by the moisture content of the bank material. Nearly vertical banks along the creek have appeared quite stable when dry, but when saturated they become unstable. Saturation and drawdown of banks caused by flood flows most likely has a tremendous impact on the stability of the banks. In many locations, clay outcrops or large cobbles (that appear to have been deposited through the bank erosion process) along the toe of the banks may provide limited armoring or protection for the toe, limiting the tendency for further undercutting of the banks.

Capay Valley Soils Map - USDA Classifications

-  Class I
-  Class II
-  Class III
-  Class IV
-  Class VI
-  Class VII
-  Class VIII



Scale in Miles
0 1 2 3 4
1 : 200 000



Data Source: NRCS
Produced by the Yolo County Planning and Public Works Department - September, 2001

Potential for mass wasting of hillslopes in the form of landslides and slumping is also high in many areas in the lower watershed. (U.S. ACOE, 1988)

Vegetation

The historic landscape of Capay Valley is much like that of the rest of the Great Central Valley, with dense riparian forests dominating the stream corridor of Cache Creek, giving way to grasslands and oak woodlands on the valley floor and uplands. Before development, Capay Valley was covered by a dense oak forest (Andrews, 1972). Both the valley floor and the uplands have been affected dramatically by agriculture, as native trees, shrubs and grasses were removed to provide room for food crops and improved forage. While the area of the old riparian forests has been reduced to accommodate agricultural and, to a lesser extent, urban development, significant stretches of native riparian forest remain along portions of Cache Creek. Native plant species commonly found in the riparian areas along Cache Creek and its tributaries include: valley oak, Fremont cottonwood, several species of willow, California rose, Mulefat, Western redbud, California grape, Creeping wildrye, and Deergrass, just to name a few.

Introduced exotic (and often invasive) “erosion control” plants such as Tamarisk and Giant reed (*Arundo*) also play an increasing role in the streamside (and mid-channel bar) vegetation, displacing native trees and shrubs more valuable to wildlife, and exacerbating bank erosion by laterally diverting stream flows. The foothill and mountainous areas flanking Capay Valley have the most intact native plant communities, although some historical impact of human activity and livestock management is evident in the dominance of non-native, annual or improved grass and forb species in the understory. While most of these relatively new plant species provide excellent forage for wildlife and livestock, there are also increasing



photo by Phil Hogan

concentrations of noxious weedy species such as Yellow starthistle, Barbed goatgrass, and Medusahead that threaten to reduce the quality of Capay Valley rangelands. The foothills of Capay Valley host typical California foothill woodland species, such as Blue oak, Interior live oak, Foothill pine, California buckeye, California coffeeberry, Toyon, Manzanita, and Western redbud among others. Above the foothills, the more mountainous areas are characterized by a mix of chaparral species, including chamise, coyote brush, ceanothus, and manzanita, and foothill woodland species with the addition of California bay, California juniper, and California black oak.



photo by Phil Hogan

Wildlife

A number of wildlife species are associated with the types of habitat available for food, cover, and nesting in Capay Valley. Avian species found in the Capay Valley include House finch, Scrub jay, Acorn woodpecker, Tree swallow, Bank swallow, Common flicker, California quail, California towhee, Wild turkey, American goldfinch, and Stellar's jay. Raptors found in Capay Valley include bald eagle, Golden eagle, Osprey, Red-tailed hawk, Cooper's hawk, Sharp-shinned hawk,

Kestrel, Great horned owl, Barn owl, Long-eared owl, and pygmy owl. Riparian-dependent avian species include Osprey, Great blue heron, Great egret, Green heron, Bittern, Spotted sandpiper, Least sandpiper, Belted kingfisher, Mallard, Wood duck, Widgeon, and Common merganser.

Common herptile species include Pacific treefrog, Bullfrog, Foothill yellow-legged frog, Western toad, Northwestern pond turtle, Western fence lizard, Western skink, Western whiptail, Alligator lizard, Gopher snake, Common kingsnake, Common garter snake, Western terrestrial garter snake, Western aquatic garter snake, and the Northern Pacific rattlesnake.



photo by Phil Hogan

Mammalian species found in Capay Valley include, Blacktail deer, Wild pig, Black bear, Jackrabbit, Cottontail rabbit, California ground squirrel, California vole, Opossum, Western gray squirrel, and Muskrat. Mammalian predators in the area include Mountain lion, Coyote, Gray fox, Bobcat, Badger, Raccoon, Beaver, River otter, and Striped skunk.

Resource Management and Planning Context

The *Capay Valley Watershed Stewardship Plan* is one of several resource management plans that affect the Cache Creek watershed. This plan was developed to complement those other efforts in order to enable future collaborative work in minimize conflicts or redundant efforts. The most significant of these plans are summarized below with their relevance to Capay Valley work highlighted.

Central Valley Regional Water Quality Control Board “Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Mercury in Clear Lake (Lake County)” Adopted by the Central Valley RWQCB in Dec. 2002 and the SWRCB in May 2003; under final review by U.S. EPA.

Proposes to amend the Basin Plan for the Sacramento River to address regulation of mercury in Clear Lake. It includes: addition of a beneficial use designation of commercial and/or sport fishing for Clear Lake; numeric objectives for methylmercury in fish tissue that are site-specific to Clear Lake; an implementation plan for controlling mercury loads; and a surveillance and monitoring program. The goal of this amendment is to lower mercury levels in Clear Lake so that the beneficial uses of fishing and wildlife habitat are attained. **Slight relevance to Capay Valley Plan: reduced mercury levels in the water leaving Clear Lake and entering Cache Creek.**

County of Lake Public Works Department, “Clear Lake Basin (Upper Cache Creek Watershed) Management Plan”, draft February 2000.

The plan was initiated to deal with algae concerns in Clear Lake and was broadened to consider numerous water quality issues in the lake and the land-use practices that affect them. Its stated mission is to “integrate findings and conclusions of various studies into a single document, provide a balanced perspective on issues, and recommend effective policies and implementation measures that seek to improve watershed health.” The plan integrates findings of various studies, incorporated public input from workshops held in 1999 and 2000, and includes an initial action plan with implementation strategy and financing options (primarily public grant programs). Implementation measures include policies, physical projects, and land acquisition. **Moderate relevance to Capay Valley Plan: improved water quality leaving Clear Lake and entering Cache Creek; resource management collaboration with Lake County on shared goals within context of a whole watershed coordination effort such as the Cache Creek Watershed Forum.**

USDI Bureau of Land Management Ukiah Field Office, "Cache Creek Coordinated Resource Management Plan," Draft September 2002.

This document describes management opportunities and alternatives for public lands located primarily within the Cache Creek drainage in portions of Lake, Colusa, and Yolo Counties, from Clear Lake and Indian Valley Reservoir downstream to the confluence with Rumsey Canyon. The proposed action described in the plan would put highest priority on protecting the resource values (biological, cultural and scenic) of the area while secondarily allowing/accommodating a compatible level of primitive recreational activities (no motorized vehicles). The plan includes four alternatives that deal with these concerns with varying prioritization of recreational activities versus resource protection. The plan was presented to the public in fall 2002. It is anticipated that the Plan will be completed by February 2004. **High relevance to Capay Valley Plan: BLM land abuts the northern end of Capay Valley and may provide a model for public land management in Capay Valley; resource management collaboration with BLM on shared goals.**

County of Yolo Cache Creek Resources Management Plan, 1996 (revised 2002), and the Cache Creek Improvement Program.

The CCRMP is a creek management plan that focuses on a program of channel stabilization and habitat restoration, and prohibits commercial mining within the creek channel from the Capay Dam to the Settling Basin. The Cache Creek Improvement Program was adopted by the County as a means for implementing the goals and objectives of the CCRMP. The Cache Creek Conservancy and the County have the responsibility for the implementation of projects and activities under the Plan and Program. **High relevance to Capay Valley Plan: provides a model for invasive riparian vegetation management; resource management collaboration with Yolo County and the Cache Creek Conservancy.**

County of Yolo Off-Channel Mining Plan, 1996.

The OCMMP is the companion document to the CCRMP and serves to govern the operations and reclamation of mining activities located outside of the channel.

County of Yolo Cache Creek Nature Preserve Mercury Monitoring Program, 2000.

The program consists of a three-year mercury study at the Cache Creek Nature Preserve and environs. The program began in the Fall of 2000. **High relevance to Capay Valley Projects: this study will hopefully give indication of the range of levels of mercury in creek bank and bottom sediments.**

County of Yolo Integrated Water Management Plan, 1984 (revised 1994 and currently in revision process).

The Plan was developed to determine the County's principal water-related resource issues and what was needed to improve countywide water management and ensure the security of the County's water supplies over the long-term. **High relevance to Capay Valley Projects: the information and partnerships generated in developing the plan will provide useful support for project design and refinement of this Plan.**

County of Yolo Storm Water Management Plan, 2003.

The plan was developed as a requirement of the NPDES Phase II regulations. Additionally, the County in partnership with the Yolo County Flood Control and Water Conservation District has facilitated a joint NPDES permitting program. **Potentially high relevance to Capay Valley Plan: Conservation projects in the Valley will affect the quality of stormwater runoff.**

County of Yolo Floodplain Management.

The Director of the Planning and Public Works Department serves as the County Floodplain Administrator and administers Flood Hazard Development Permits required for projects within Cache Creek. **Potentially high relevance to Capay Valley Projects within the Cache Creek floodplain.**

Cache Creek Conservancy/County Invasive Weed Removal Program.

The program is implemented by the Conservancy, with support from the County and the Yolo County Flood Control and Water Conservation District, for the removal of tamarisk and arundo within lower Cache Creek. **High relevance to Capay Valley Plan: provides a model for invasive riparian vegetation management; resource management collaboration with Yolo County and the Cache Creek Conservancy.**

Yolo County Flood Control and Water Conservation District, "Water Management Plan," October 2000.

The mission of the YCFCWCD is "to plan, develop, and manage the conjunctive use of its surface and groundwater resources to provide a safe and reliable water supply, at a reasonable cost, to sustain the socioeconomic and environmental well-being of Yolo County." Through acquisition of Cache Creek water rights and development of the Cache Creek Dam, Indian Valley Reservoir, and the Capay Dam and miles of canals, the District is the primary surface water provider for Yolo County agriculture. The plan outlines District facilities and history and outlines actions for District management of existing and future water supplies. Actions include: public relations; water users workshops; water use, surface water

and groundwater monitoring; recharge projects; diversion projects; needs assessments; and drought management. While District water passes through Capay Valley via Cache Creek, the District has no facilities that deliver water to Capay Valley farmers. **Moderate relevance to Capay Valley Plan: the YCFCWCD shares an interest in the management of the Cache Creek channel.**

Yolo Bypass Working Group, Yolo Basin Foundation, and Jones & Stokes, "A Framework for the Future: Yolo Bypass Management Strategy." August 2001.

This document presents a locally-based concept for the future of the Yolo Bypass. The Working Group is a collection of landowners, water users, and public agencies working in the Bypass. After describing the physical conditions and stakeholder concerns, the document describes habitat opportunities and constraints within the Bypass within the context of 'agriculture with integrated habitat enhancement,' and 'habitat enhancement as the primary land use,' with relevant options described for each. The document also presents a set of recommended actions that include: identifying funding sources and partnerships; policy analysis; habitat design support; water and sediment quality analysis; project monitoring; support for the Yolo Bypass Hydraulic Issues Technical Advisory Committee; a bypass-specific safe harbor policy; and analysis of feasibility of bypass-specific "environmental water." **Slight relevance to Capay Valley Plan: conservation activities undertaken in Capay Valley should have a positive affect on water quality in the bypass.**

Capay Valley Plans

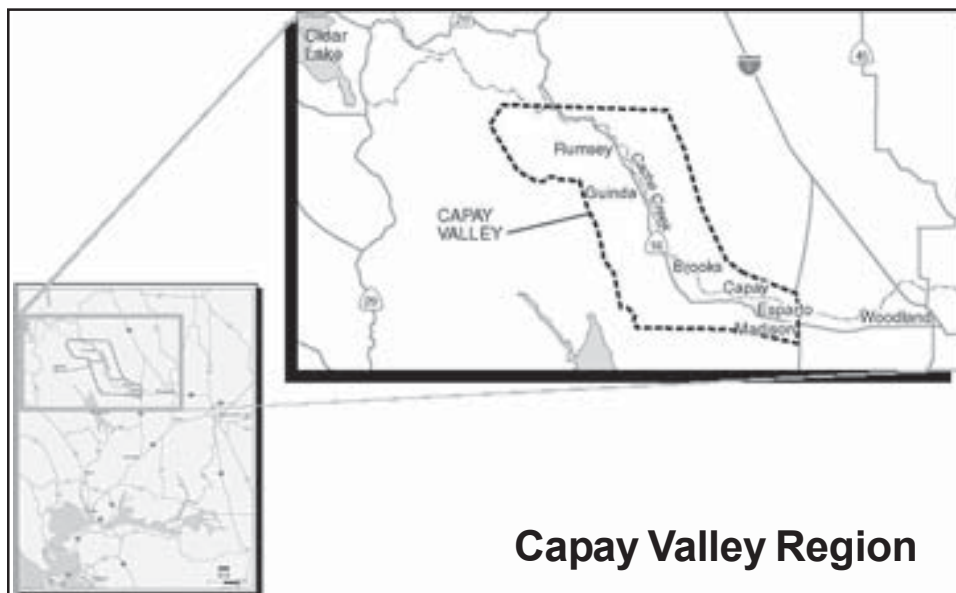
There are several important planning documents that have been prepared for Capay Valley. They include: the **Capay Valley Community Area Plan**, which became part of the Yolo County General Plan in 1983 and is currently being revised; the **Capay Valley Atlas**, which was released in the Fall 2003 and provides information on the natural resources, agriculture, people, and economy of the Capay Valley Region; the **Capay Valley Action Plan** (2003), a product of the Capay Valley visioning process that outlines the future direction of the community in four interrelated elements - agriculture and environment, economic development, recreation, transportation; the Capay Valley Vision Agriculture and Environment Task Force developed a **Capay Valley Agriculture Plan** (2003) to support the ongoing viability of agriculture in the region. Also ongoing is the "Cache Creek Watershed Forum," which is a multi-county cooperative effort for better management of the entire Cache Creek Watershed. The first fully-public meeting took place in Guinda in May 2002. The end product of this process, whether it be a plan, authority, set of collaborative projects, or something else, has yet to be determined. All of these are highly relevant to the implementation of the *Capay Valley Watershed Stewardship Plan*.

The Capay Valley Community

(this section written by Capay Valley Vision)

Geography

The Capay Valley Region comprises the following unincorporated communities: Madison, Esparto, Capay, Brooks, the Rumsey Rancheria, Guinda, and Rumsey. All communities are situated along State Highway 16. Additional settlements include the areas of Lamb Valley and Hungry Hollow further off from the Highway 16 transit corridor.



The unincorporated town of Esparto is the largest community, located 15 miles west of the Yolo County seat in Woodland. Esparto was established in the late 1800's as a railroad development and many of the buildings along the main thoroughfare reflect the historic origins of the town. Currently, Esparto is recognized as the Valley's economic and social hub. Esparto hosts the Valley's library and has an active chamber of commerce for area merchants. School children from many of the unincorporated communities from Madison to Rumsey are driven or bussed into Esparto everyday to attend one of the local public schools.

Capay Valley Community Organizations

Agricultural
Advisory
Committee

Cache Creek
Conservancy

Cache Creek
Watershed
Stakeholders
Group

Capay Valley
Citizens Advisory
Committee

Capay Valley
General Plan
Advisory
Committee

Capay Valley Fire
District

Capay Valley
Vision

Capay Valley
Voluntary Fire
Department
Auxiliary

Capay Valley
Water Users
Association

Citizens for Capay
Valley

County of Yolo

Country Villa
Estates

Countryside
Community
Church

ER Finest

Esposito Athletic
Boosters

Esparto Baptist Church
 Esparto Boy Scouts
 Esparto Citizens Advisory Committee
 Esparto Community Services District
 Esparto District Chamber of Commerce
 Esparto FFA
 Esparto Fire Protection District
 Esparto Healthy Start Collaborative
 Esparto High School ASB
 Esparto Lions Club
 Esparto Little League
 Esparto PTSA
 Esparto Unified School District
 Esparto VFW Post
 Esparto-Capay Valley 4-H
 Friends of the Esparto Regional Library
 Grange Women's Association
 Guinda Community Church
 Guinda Pre-school
 Hoes Down Festival

Population

According to population figures from the 2000 United States Census, the Capay Valley Region has a population of just over 3,900. The population of Esparto accounts for 42% of the estimated area population (1,858). The Capay Valley Region has been settled for generations and includes a rich history of diverse populations.

The native tribes of California were the original inhabitants of the valley. Today, the Rumsey Band of Wintun Indians lives on the Tribal Rancheria just north of the community of Brooks. According to the recently published tribal figures, the Rumsey Rancheria's population includes 23 adults and 22 children. The Rumsey Band of the Wintun Indians were forcibly removed from their ancestral lands during the late 1800's. During the 1920's, surviving Tribe members were settled on a Rancheria in the hills above Rumsey. The rancheria was relocated in 1942 to its current site near Brooks. Cache Creek Indian Bingo and Casino, a popular gaming destination, is owned and operated by the Rumsey Band of the Wintun Indians and is the largest private employer in Yolo County.

Since the days of the Mexican land grants, many different types of people have lived in the Valley and there is a proud tradition of tolerance and support for all cultures in the area. Historically, the Capay Valley Region was viewed as a safe place for African American farmers during a period when they were losing their land in Southern states. This tradition continues today as more Latino families settle in the area and start agricultural enterprises of their own; 42% percent of Esparto residents surveyed by the U.S. Census Bureau are Latino. The Latino population of the Capay Valley is itself varied and diverse. They include the more transient migrant population that enter into the valley area during peak planting and harvesting seasons; year-round farm laborers who frequently live on local farms; and second or third generation families that have chosen to make this community their home and may or may not be associated with the agriculture industry.

Industry and Employment

Significant changes to the landscape did not likely begin until European settlement and activity in Capay Valley began in the 1840s with the Guesissosi and Rancho Canada de Capay grants. At that time, cattle grazing was the area's principal economic activity. Land speculation, subdivision of parcels, and planting of grain, grapevines, and fruit trees began in the 1860's. Also at that time, scattered ranches and tiny settlements developed along the primitive

road leading to the quicksilver (mercury) mines in the canyon country to the west. By the 1870s several small schools were established in the Capay Valley and by 1890, a railroad line extended from Winters to Rumsey for passenger and agricultural freight traffic. By 1900, the population of the Capay Valley was recorded at 1,381.



photo by Phil Hogan

Dominant crops shifted over the years from fruit orchards, to almonds, and, more recently, to walnuts as markets changed and growing conditions required. Agricultural development was fueled in no small part by water development projects such as the Rumsey Ditch Association's eight-mile irrigation canal from Cache Creek above Rumsey to north of Guinda, the Yolo Water and Power Company's dam across the outlet of Clear Lake that feeds into Cache Creek (1914), and the Indian Valley Dam in 1975. During the 1980s, a new trend in valley agriculture began as organic growers began intensive farming in the area, gradually building markets and expanding their acreage in a variety of crops. By 1995 the valley's organic agriculture brought in nearly one million dollars in revenues, as reported by the county Agricultural Commissioner, and the figure grew to more than \$3 million in 2001. Cattle and sheep ranching is common in the foothill and mountainous areas surrounding Capay Valley.

Landmark
Buckeye Lodge
#195

Leo's

M M Club

Nimble Needles
Quilt Guild

Rumsey
Improvement
Association

Rumsey Water
Users Association

St. Martin's Altar
Society

St. Martin's
Knights of
Columbus

The Valley Voice

Western Yolo
Recreation Center
Association

Western Yolo
Grange

Yolo County Farm
Bureau

Yolo County
FC&WCD

Yolo County RCD

Yolo County Safe
Communities

Farming and other local enterprises are not enough to sustain all the Valley residents. Many travel outside of the Valley for work. Davis, Woodland, and Vacaville are all nearby employment centers for area residents. Long commutes along Highway 16 are a frequent occurrence.

A major employer and economic force in Capay Valley is the Cache Creek Indian Bingo and Casino. In the year 2001 the casino drew more than a half a million visitors, and its operations continue to expand. The casino in 2002 employed more than 1,500 individuals year-round, paid almost \$40 million in salaries and benefits, and maintained more than 125 local and 350 regional vendor accounts. In 2003, the Casino initiated a significant expansion program that will



include a luxury resort hotel and golf course. Associated potential impacts on the local environment and traffic conditions dominated community discussions of the future of the Capay Valley community as this Plan was being developed.

Resource Issues

Community Identified Resource Concerns

The previous section gives the setting for Stakeholders Group and motivations that individuals had for participating. Several primary issues were a recurring theme at watershed meetings, such as: Streambank erosion along Cache Creek and tributaries; eradication and/or management of invasive plants such as Tamarisk, Arundo, and Yellow Starthistle throughout Capay Valley; the health effects of mercury in Cache Creek on humans and wildlife; and the current permitting system functioning as a hindrance to watershed restoration and management activities.

For the purposes of developing this Plan, the Steering Committee and the Watershed Plan Committee assembled a more comprehensive list of resource concerns for Capay Valley as they had been raised throughout the group's history. These resource concerns served to guide the development of the Goals and Objectives for this watershed plan. The stakeholder identified resource concerns are listed below as recorded at a meeting in November 2002:

Resource Concerns

- Upland Erosion and Sedimentation
- Streambank Erosion
- Invasive Plants (Starthistle, Tamarisk, Arundo, etc.)
- Oak Woodland Preservation/Restoration
- Grassland Preservation/Restoration
- Brush Management
- Native Vegetation
- Wildlife Habitat
- Feral Pigs
- Water Quality
- Boron
- Mercury
- Conductivity
- Groundwater Recharge
- Flooding
- Illegal Resource Extraction
- Private Property Rights
- Farmland Protection
- Recreational Uses

With group approval, the Watershed Coordinator then summarized and categorized the elements of that list for planning purposes as shown in the box below. These categories were used to focus the discussion that generated the Goals and Objectives outlined in the following section.

Categorized Resource Concerns:

Erosion: Rangeland, Farmland (agricultural runoff), Streambank (property loss)

Invasive Vegetation: Rangeland, Farmland, Riparian, Roadsides (Tamarisk, Arundo, Starthistle, etc.)

Native Vegetation: Perennial grasslands, Oak woodlands, Farm Edges IPM, Riparian areas

Water Quality and Water Resources: Mercury, Boron, Conductivity, Sediment, Nutrients (from livestock, wildlife, and fertilizers), Groundwater, Surface water, Conservation, Flooding

Wildlife and Wildlife Habitat: Beneficial wildlife, Harmful wildlife, Habitat needs, Endangered/Threatened Species

Recreational Opportunities: Public land, Parks, Cache Creek

Land Use: Agricultural land protection/conservation, Private property rights, Resource Extraction

Stewardship Goals, Objectives and Recommended Actions

To address the above-listed resource concerns, stakeholder group participants established an appropriate set of goals. At subsequent meetings, participants developed and refined objectives for accomplishing each goal. This section outlines each goal, its respective objectives, and recommended actions for either the group or individual volunteer landowners to meet the stated objectives. These goals also provide a framework with which Capay Valley residents can coordinate their efforts to improve the health of the Cache Creek watershed. The means for the recommended actions will be a combination of shared resources and grants for which the watershed group and the RCD will collaborate for grant writing and technical support. Attached to this plan is a recommended 3-year action plan that outlines steps and a recommended timeline for initial plan implementation.

Goal 1: To manage watershed lands to minimize unnatural rates of erosion and sedimentation.

Objective 1.1: Reduce streambank instability and erosion

Recommended Actions:

Group:

- Pursue the development of a programmatic permit for Capay Valley that allows landowners to take appropriate actions in a timely manner
- Develop a prioritized list of potential streambank stabilization project sites on Cache Creek

Voluntary individuals or small groups:

- Establish riparian buffers between stream channels and adjacent land use
- Vegetate streambanks with native vegetation to maintain bank stability
- Manage livestock to control access to streams and riparian areas
- Remove and/or control non-native invasive vegetation in the stream channel and riparian areas
- Increase rainfall infiltration in upland areas and decrease peak flows by establishing native perennial grasses on rangelands and open spaces
- Use streambank stabilization practices found in the *Capay Valley Conservation and Restoration Manual*

Objective 1.2: Reduce erosion resulting from agricultural activities

Recommended Actions:

Voluntary individuals or small groups:

- Use cover crops where possible between rows in permanent crops and over winter in annual cropping systems.
- Establish hedgerows on field edges, roadsides, and adjacent to irrigation canals
- Establish vegetated filter strips at the tail end of irrigated crop land and orchards
- Construct tailwater return systems with cleanable sediment traps
- Establish riparian buffer strips using native vegetation between agricultural land and stream channels

- Vegetate irrigation ditches and canals with native perennial grasses
- Develop dispersed water supplies to better manage animal impact on watering areas.
- Implement management intensive grazing for livestock where appropriate
- Use practices found in the *Capay Valley Conservation and Restoration Manual* and *Bring Farm Edges Back to Life!*

Objective 1.3: Reduce erosion from new and existing roads

Recommended Actions:

Group:

- Promote the methods for road design and maintenance found in the Handbook for Forest and Ranch Roads: A Guide for planning, designing, constructing, reconstructing, maintaining and closing wildland roads (Weaver and Hagans, 1994)

Voluntary individuals or small groups:

- Utilize joint access wherever possible to minimize the construction of new roads in rural areas
- Revegetate disturbed soil with native grasses and forbs and cover with straw mulch or erosion control fabric as appropriate
- Regularly maintain existing roads to provide for adequate drainage
- Divert drainage from roadways to existing natural swales and streams
- Outslope roads wherever possible to minimize the use of inboard ditches
- Use rolling dips instead of water bars to divert water from the road surface

Objective 1.4: Increase the use of erosion control techniques and practices for existing land uses

Recommended Actions:

- Include erosion control and sediment control plans as priorities when planning soil disturbing activities and projects
- Revegetate disturbed soil with native grasses and forbs and cover with straw mulch or erosion control fabric as appropriate
- Use practices found in the *Capay Valley Conservation and Restoration Manual*

Objective 1.5: Make the community aware of the causes of erosion

Recommended Actions:

Group:

- Conduct periodic tours of successful erosion control projects
- Provide periodic trainings to demonstrate the practices used to reduce erosion
- Provide residents of Capay Valley with ongoing information about erosion control techniques through community workshops, articles in the Valley Voice, quarterly newsletters and a website
- Make the *Capay Valley Conservation and Restoration Manual* available to all Capay Valley residents
- Make the *Capay Valley Watershed Stewardship Plan* available to all Capay Valley residents
- Encourage active participation in the Cache Creek Watershed Stakeholders Group and the tributary stewardship teams
- Develop a multi-year, multi-disciplinary place based youth education program that involves the community and local schools in resource conservation and restoration projects

Goal 2: To use and manage both surface and ground water wisely to meet current and future needs.

Objective 2.1: Determine water resources for the tributary watersheds and Cache Creek in Capay Valley

Recommended Actions:

Group:

- Support the implementation of a groundwater study to determine groundwater reserves, dynamics, and vulnerability

Objective 2.2: Increase water use efficiency

Recommended Actions:

Group:

- Establish a local CIMIS station in Capay Valley and encourage the use of CIMIS information by water users in Capay Valley
- Encourage the use of low water use vegetation for residential and commercial landscapes

Volunteer individuals or small groups:

- Utilize properly designed gray water reuse systems for on site irrigation
- Collect rainfall from roof surfaces and store in cisterns for on site irrigation in the summer
- Install tailwater return systems on irrigated crop land
- Utilize efficient agricultural irrigation techniques and methods where appropriate

Objective 2.3: Use a watershed approach for analyzing flooding issues

Recommended Actions:

Group:

- Encourage participation in the Cache Creek Watershed Stakeholders Group and tributary stewardship teams
- Use the Cache Creek Watershed Stakeholders Group and tributary stewardship teams as planning forums for developing flood management plans for Cache Creek and its tributaries
- Hold an annual ditch cleanup day in each tributary watershed that involves the whole affected community in maintaining local drainage systems
- Inform and discuss with other members of the drainage area any plans to alter the direction or amount of runoff in the system

Objective 2.4: Support creative and collaborative solutions to water supply needs

Recommended Actions:

Group:

- Encourage conjunctive use of ground water and surface water in the watershed
- Use the Capay Valley Water Users Association, the Cache Creek Watershed Stakeholders Group and tributary stewardship teams as forums for discussing water supply issues

Objective 2.5: Make the community aware of water supply issues

Recommended Actions:

Group:

- Provide residents of Capay Valley with ongoing information about water conservation techniques through community workshops, articles in the Valley Voice, quarterly newsletters and a website
- Use Capay Valley parks and public gardens as demonstration sites for low water use landscapes
- Encourage participation in the Cache Creek Watershed Stakeholders Group and tributary stewardship teams
- Make the *Capay Valley Watershed Stewardship Plan* available to all Capay Valley residents
- Develop a place based youth education program per Obj. 1.5.

Goal 3: To maintain and improve water quality for all water users.

Objective 3.1: Prevent ground water and surface water contamination from nutrients, chemicals and sediment.

Recommended Actions:

Volunteer individuals or small groups:

- Direct surface water flows away from well heads to avoid contaminated surface water movement into wells
- Store fuels, pesticides, fertilizers and other chemicals away from wells and streams and out of floodplains
- Manage livestock to minimize access to streams and riparian areas
- Implement proper erosion control practices (see Goal 1)
- Incorporate Integrated Pest Management techniques in home gardens and agricultural production

Objective 3.2: Determine sources of water quality impairment

Recommended Actions:

Group:

- Encourage participation in the Yolo County Farm Bureau Water Quality Coalition in coordination with the Sacramento Valley Water Quality Coalition to address the guidelines of the Conditional Waiver
- Provide landowner education for self-directed, simple and confidential water quality monitoring techniques

Objective 3.3: Make the community aware of causes (i.e. products and practices) of water quality impairment

Recommended Actions:

Group:

- Provide residents of Capay Valley with ongoing information about water conservation techniques through community workshops, articles in the Valley Voice, a quarterly newsletter and a website
- Encourage participation in the Cache Creek Watershed Stakeholders Group and tributary stewardship teams

- Make the *Capay Valley Watershed Stewardship Plan* available to all Capay Valley residents
- Develop a place based youth education program per Obj. 1.5

Goal 4: To maintain and improve watershed habitats to support a diversity of native plants and animals.

Objective 4.1: Protect existing native plant and animal communities, habitats, and wildlife corridors

Recommended Actions:

Group:

- Identify and map existing examples of intact native plant communities
- Identify critical wildlife habitat areas in Capay Valley

Objective 4.2: Reestablish native plant communities

Recommended Actions:

Volunteer individuals or small groups:

- Plant native vegetation on unfarmed or unproductive corners of agricultural land
- Install native vegetation hedgerows along field edges, fence lines and roadsides
- Expand existing riparian areas using native vegetation
- Install native vegetation around ponds
- Fence stockponds and install off-pond watering systems to control livestock access
- Install native vegetation along irrigation canals and ditches as appropriate
- Use practices found in the *Capay Valley Conservation and Restoration Manual*

Objective 4.3: Establish and maintain wildlife corridors between open spaces

Recommended Actions:

Group:

- Provide coordination and planning support for coordinated riparian enhancement along Cache Creek and its tributaries

Volunteer individuals or small groups:

- Install native vegetation hedgerows along field edges, fence lines and roadsides
- Enhance and connect riparian areas that are contiguous across property lines to increase both wildlife habitat and property value
- Install native vegetation along irrigation canals and ditches as appropriate
- Use practices found in the *Capay Valley Conservation and Restoration Manual*

Objective 4.4: Manage non-native invasive vegetation

Recommended Actions:

Group:

- Develop invasive vegetation management strategies in cooperation with the Yolo County Weed Management Area (WMA) to coordinate regional invasive vegetation management efforts
- Develop an Invasive Riparian Vegetation Management Strategy for Cache Creek and its tributaries
- Coordinate invasive non-native riparian management in Capay Valley with similar efforts (i.e. Cache Creek Conservancy, County of Yolo, BLM-Ukiah) throughout the Cache Creek watershed
- Develop a programmatic permit and permit coordination program for Capay Valley that allow landowners to take appropriate actions in a timely manner

Volunteer individuals or small groups:

- Remove invasive non-native riparian vegetation from the stream channel and riparian areas (i.e. Tamarisk, Arundo, Perennial Pepperweed)
- Replace invasive non-native riparian vegetation with native vegetation appropriate to the site
- Plant native perennial grasses on roadsides, ditch banks, and on rangelands to compete with non-native species
- Utilize a diverse set of practices (e.g. prescribed burning, herbicides, grazing, mowing, mulching, etc.) in developing invasive vegetation management strategies
- Use practices found in the *Capay Valley Conservation and Restoration Manual*

Goal 5: To promote land management practices that maintain and improve local natural resources and habitats and support a productive and sustainable agricultural economy.

Objective 5.1: Use a watershed approach when making natural resource decisions

Recommended Actions:

Group:

- Encourage participation in the Cache Creek Watershed Stakeholders Group and tributary stewardship teams
- Encourage the development of tributary stewardship teams and tributary stewardship action plans
- Support and participate in the annual Cache Creek Watershed Forum
- Encourage whole farm and ranch planning
- Make the *Capay Valley Watershed Stewardship Plan* available to all Capay Valley residents
- Create and encourage the use of a watershed section at the Esparto Library that contains guides on watershed management and local watershed information
- Provide residents of Capay Valley with ongoing information about watershed management through community workshops, articles in the Valley Voice, quarterly newsletters and a website

Objective 5.2: Increase the awareness and use of sustainable agricultural practices

Recommended Actions:

Group:

- Support the implementation of the *Capay Valley Agricultural Action Plan*
- Encourage participation in the Agriculture and Environment Task Force of Capay Valley Vision
- Provide residents of Capay Valley with ongoing information about sustainable agricultural practices through community workshops, articles in the Valley Voice, quarterly newsletters and a website
- Promote practices found in the *Capay Valley Conservation and Restoration Manual*

Objective 5.3: Support a marketing effort that promotes Capay Valley products

Recommended Actions:

- Encourage sustainable agricultural practices that demonstrate good stewardship as a component of marketing Capay Valley products
- Conduct workshops to encourage involvement in a marketing effort that promotes good stewardship
- Encourage and support the development and use of a Capay Valley brand and label that identifies products produced in Capay Valley

Objective 5.4: Encourage appropriate land protection measures to allow willing farmers to keep their land in agricultural production

Recommended Actions:

Group:

- Support informational workshops on conservation easements and agricultural easements as a means to improve the profitability of marginal agricultural land and to keep current agricultural land in agricultural production and affordable to future farmers
- Cooperate with the Yolo Land Trust for assistance with easement planning and transactions

Goal 6: To promote a watershed approach for decisions involving Cache Creek by supporting communication and collaboration among all stakeholders.

Objective 6.1: Support an open forum for meaningful discussion of issues concerning the watershed including public-private land management issues

Recommended Actions:

Group:

- Use the Cache Creek Watershed Stakeholders Group as a forum for discussing important watershed issues in a manner consistent with the Group Charter and Operating Principles
- Encourage participation in the Cache Creek Watershed Stakeholders Group and tributary stewardship teams

Objective 6.2: Increase awareness of watershed issues

Recommended Actions:

Group:

- Use the Valley Voice to keep residents informed of important watershed issues
- Maintain a website that residents can use to access information about the watershed
- Host speakers and workshops on important watershed topics
- Create and encourage the use of a watershed section at the Esparto Library that contains guides on watershed management and local watershed information
- Develop a multi-year, multi-disciplinary place based youth education program that involves the community and local schools in resource conservation and restoration projects

From Plan to Project

This plan will have two tiers of implementation: projects, studies and educational programs implemented by the Stakeholders Group; and projects implemented by individual landowners or small groups (such as Tributary Stewardship Teams described below). The Yolo County RCD in cooperation with the Stakeholders Group can provide technical, coordinating, and grant-writing support for individual and larger projects such as coordinated weed control in Cache Creek itself. The RCD is also committed to supporting landowners with permit applications for conservation work.

The next course of action for the Stakeholders Group and any Tributary Stewardship Teams is to develop specific workplans with timelines, responsibilities, resource needs (funding, equipment, supplies, labor, etc.) and success criteria (e.g., 95% weed kill after two years) clearly laid out. Information for developing cost and time estimates for specific projects is available at the end of this Plan document under “Resources,” through the RCD and NRCS, and the *Capay Valley Conservation and Restoration Manual* (free to all Capay Valley residents). Some work will be possible just with pooled resources among landowners (equipment and time and cheap materials), while other work may involve significant costs. With detailed project information, organizations such as the RCD and NRCS can also assist the project proponents in locating funders and developing grant proposals to pay for larger projects.

Plan and Project Evaluation and Adaptive Management

Monitoring Program

Once the statement of success criteria is established for the tasks and the objectives, a monitoring program to track attainment and maintenance of the criteria is necessary. The following text is pulled from the Yolo Co. RCD’s do-it-yourself guide, *Monitoring on Your Farm*:

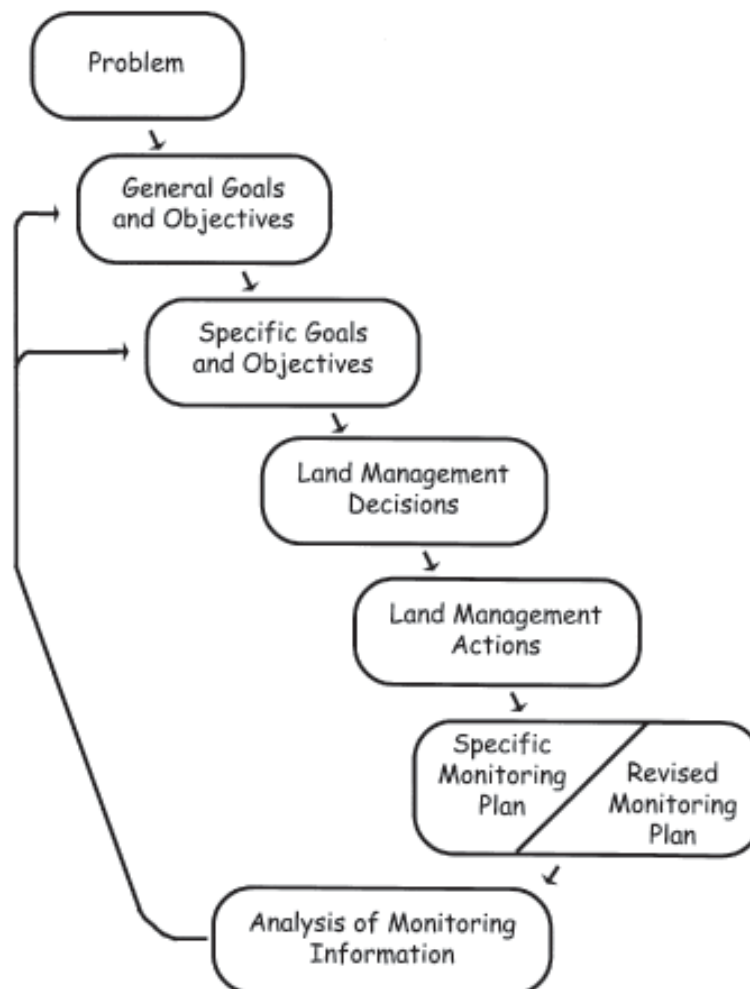
Your monitoring program may allow you to:

1. Establish some “baselines.” These are basically definitions of your existing situation.
2. Follow general trends or normal fluctuations in natural resource conditions
3. Track specific species – how they increase, decrease, stay the same
4. Follow changing use of resources by wildlife

5. Improve the management on your land (determine its effectiveness and modify it accordingly)
6. Help you decide if you are meeting your goals or going in the right direction
7. Measure economic success
8. Involve other members of your family in the farm
9. Help you avoid regulation
10. Help you get to know your farm or ranch better
11. Address personal or community issues

The information you get through monitoring fits into a feedback loop (see “Adaptive Management Flow Chart,” below), allowing you to change your management decisions to fit reality. Although you may be convinced from the start that the changes you intend to make will be an improvement,

Adaptive Management Flow Chart



that may or may not actually be true. You may *think* you are seeing a change happening, but are you really *sure*? Monitoring can help you find out if your new way of treating the land is actually a benefit or a detriment. You may be surprised. Try to maintain a “neutral” frame of mind.

From a landscape viewpoint, your small pieces of localized information may make important contributions to a broader understanding of the area you live in, and may give you a sense of how each small area contributes to the intricate functioning of the larger whole. This understanding leads to more effective solutions if problems exist or arise, and shows you how to work *with* the land and not *against* it. There may be local or regional landuse or resource issues that are important to you as well as your neighbors. Monitoring information, especially if gathered by several landowners, can be a powerful tool for addressing these issues, so try getting your neighbors involved. They may be able to share the work.

Reassess the Plan Based on Monitoring Data and Adjust as Necessary

This is perhaps the single most important part of community-based watershed stewardship. A consistent and regular reassessment of assumptions and progress will allow the group to adapt to changes and remain focused on the desired outcome condition. With the opportunity to reassess and adjust the stewardship assumptions comes a greater degree of cooperation and inclusiveness. It is also the only way to assure that changes in the community and watershed are recognized and included as time passes. It gives an opportunity to all to communicate successes and share the knowledge gained by error to maintain a creative and open approach to community management of its watershed..

Tributary Stewardship Teams

The Cache Creek Watershed Stakeholders Group determined that the most effective method for planning and implementing resource conservation and habitat restoration projects in Capay Valley is at the tributary sub-watershed scale. It is recommended that landowners form Tributary Stewardship Teams to accomplish project planning and implementation in their sub-watershed. The size of the “sub-watershed” that a Tributary Stewardship Team might address can vary. In some cases landowners who do not live next to a stream may be connected to neighboring landowners by swales or drainage ditches or share a concern

Clarify and Verify Interests

Many times interests may seem identical or very similar among the various stakeholders. It is important to articulate any subtle, but important variances among apparently similar interests. In many cases, it may also be possible to include several stated interests in a single simplified statement. They may be very general or very specific. Looking beyond the apparent in this area will often uncover supporting interests that were not obvious at first. (A farmer may want to remove portions of land from production, for instance, but cannot afford to give up the cash flow. An interested organization may wish to increase open, unused space and thus provide some compensation to the farmer to allow the land to be restored to wildlife habitat. Without communication, these common interests may not surface.)

regarding invasive weeds. On the other hand a Tributary Stewardship Group could form to tackle the varied issues and work to improve the health of one of the entire tributary sub-watersheds, from the Blue Ridge to Cache Creek. Ultimately, those decisions and the detailed work for establishing the needs and priorities for individual tributaries remains to be determined by the landowners and stakeholders on those drainages. The method used to develop this plan is a model for landowner tributary groups and is outlined below through adaptation of an paper developed by Dennis Bowker, formerly of the Napa County RCD.

Tributary Stewardship Action Plan Development

The following is an outline of a process that Tributary Stewardship Teams can use to guide the development of tributary stewardship action plans for their tributary watersheds. Although it is necessary to present the process sequentially, many of the parts are carried out simultaneously. The order of presentation is an organizational order, and not necessarily a chronological order. Each watershed will generate a different flow of events. The outline is intended as a guide to producing a plan, not as a hardened “recipe” for plan construction. The physical needs of the natural resources in a watershed; the economic and cultural realities of the community; the regulatory and political needs in the area; and the personal preferences of the plan facilitators must be addressed and included as plan construction progresses. Interest based analysis; consensus building; goal-focused conflict resolution; and above all, creativity, are all parts of the stewardship approach to watershed planning.

I. Identify Stakeholders

Stakeholders in a watershed include a wide variety of interests. The biological natural resources of a watershed are included on the list by virtue of being included in the diverse human interests. Even if you are planning for a very localized area, it is important to consider the impact your efforts might have on the larger watershed and the people in it. Land owners and managers; government agencies at all levels; citizen interest groups; civic organizations; schools; churches; trade organizations; and many other interests are found in nearly every watershed. It is important to include the interests of every stakeholder from the beginning of plan development. While some stakeholders may not be involved in the details of your planning process, it is beneficial for everyone in the larger watershed to at least be aware of your activities. Imagination is a valuable asset when identifying and keeping stakeholders informed.

The primary stakeholders in the tributary stewardship action plan development process will be the residents, land owners, and land managers within the tributary watersheds. These people will form the cores of the

Tributary Stewardship Teams. Other stakeholders might include NRCS or RCD employees or a consultant that is providing technical assistance to the team; members of local interest groups and other tributary stewardship teams that may want to provide assistance or share resources; and teachers and students that may assist with planning and implementing projects outlined in the plan. Tributary Stewardship Teams can use the Cache Creek Watershed Stakeholders Group as a forum for informing the larger Capay Valley community of their activities.

II. Identify Stakeholder Interests

Identifying and understanding basic interests is crucial to development of a cooperative, voluntary planning process. Patience and an open mind are the most valuable tools for determining stakeholder interests. Interests include the hopes and concerns of the stakeholders identified above, but not the options chosen to meet the interests. To this end, any stated “problems” for stakeholders are best restated to identify the interest that is not being met, and that causes a particular situation to be labeled as a problem (a “problem” of declining water quality, for instance, can be stated as an interest in having good water quality).

In reality, most of the interest identification will take place simultaneously with the identification of the stakeholders (it is hard to identify stakeholders without also identifying what the stake is!). This stage of the process involves the listing of the interests only. Judgment as to the appropriateness of any given interest is not related to whether the interest exists. Efforts at this point must be to identify interests and to attempt to understand the relative value of the interests to the respective stakeholder. Stewardship programs can break down at this early stage owing to lack of patience and an attempt to alter interests because they are judged by someone other than the stakeholder to be inappropriate or harmful. As interests are identified, they should be separated from specific ownership, since the effort is to satisfy interests, not alter individual entities. Tributary Stewardship Team can generate this information through large and small meetings or even individual interviews with their neighbors. While large meetings may be efficient for gathering the most people at one time, they rarely provide the most open discussion. They can be very productive later when communication and trust in the interest-based process have been developed and the mutual education process has begun.

Creative Investigation

1. Historical Analysis

Environmental Impact Statements are often an excellent aid in finding interests. Local libraries also may hold government assessments, proposals and reports that can have great value in determining interests. Occasionally local newspapers and local service clubs have historical archives that yield information with relatively little effort.

2. “Perspective” Analysis

As interests and stakes are determined, relative impacts should be determined that relate to the perspective of an entire watershed. Impacts which seem severe on any given site may not be as significant from the watershed perspective as other, seemingly less severe impacts. Bank erosion on a small parcel, for instance, may not be as immediately detrimental to the watershed as a larger area that contributes pollutants from a wide zone. Additional perspective analysis may consider the relative benefits of suggested options in any given area to the health of the watershed. Small, disconnected enhancement projects may do less to stabilize a watershed than a connected series of enhancements that individually may not be as thorough, but cumulatively add greater habitat or soil protection value.

III. Develop Goals (“Vision”, Mission Statement, etc.)

The goal or goals for the tributary stewardship action plan should be clear but non-specific, and should describe a desired condition, rather than a closely defined product. It should be as inclusive as possible. A stewardship action plan goal should address the following criteria:

- It should promote consistency of perspective among the many different stakeholders and constituencies involved in the planning process;
- It should be compatible with the values of the stakeholders establishing the goal;
- It should be unaffected by political change;
- It must be a *positive* goal, without proscription or restriction;
- It must be flexible enough to persist over time (adaptability);
- And it must include the interests of all segments of the community or organization affected by the plan.

It should describe the desired state or condition of the community in general, easily understood terms. The goal of any given group may be implicit or explicit, and may be developed in the beginning of the process, or it may evolve as the stewardship evolves.

IV. Define Objectives to Measure Progress Toward Goal Attainment

Combining a creative look at available technology and the information about interests discovered above will develop a list of concepts and practices (options) to meet the system needs (interests). Each proposed solution and/or enhancement should be represented by some measurable result, which is identified as an *objective*. The goal selected earlier will be indirectly defined by the objectives listed here. While the goal may not be empirically measurable, its attainment will be assumed once these listed objectives have been reached. The management monitoring program will enable the group to reflect on the chosen options and success criteria, and to make adjustments as necessary as the management program continues.

V. Describe Tasks Necessary to Achieve the Listed Objectives

Once a list of objectives is completed, a cooperative plan of action for discrete tasks should be established with a level of detail that suits the watershed group *and its funders*. This should include:

- A. **What** is to be done?
- B. **How** it is to be done?
- C. **Who** is responsible for getting it done?
- D. **When** it is to be completed?
- E. Clear statement of **success criteria**

It is in the construction and execution of the task list that creative cooperation delivers the most benefit. Sharing assets, interests and resources while developing task lists will make implementation of the plan less expensive and more efficient. Preparation of the list, therefore, should include as much cooperative effort as possible, while keeping compartmentalization to a minimum.

Establish a Monitoring Program

Once the statement of success criteria is established for the tasks and the objectives, a monitoring program to track attainment and maintenance of the criteria is necessary. The Yolo RCD guide to *Monitoring on Your Farm* provides guidelines and low-cost techniques for such a program that landowners would want to undertake themselves.

Reassess the Plan Based on Monitoring Data and Adjust as Necessary

This is perhaps the single most important part of community-based watershed stewardship. A consistent and regular reassessment of assumptions and progress will allow the community to adapt to changes and remain focused on the desired outcome condition. With the opportunity to reassess and adjust the stewardship assumptions comes a greater degree of cooperation and inclusiveness. It is also the only way to assure that changes in the community and watershed are recognized and included as time passes. It gives an opportunity to all to communicate successes and share the knowledge gained by error to maintain a creative and open approach to community management of its watershed.

Permits for Conservation Work

Several of the practices listed in this Plan, when implemented, will require you to adhere to Federal and State laws and regulations, even if the work is being done on private land. In most cases agency representatives will work with individuals and citizen's groups to see that well planned projects are implemented and that the environment is truly improved and protected. It is their job to see that projects comply with the environmental laws and they typically would rather work with you rather than against you.

While a task for the RCD and Stakeholders Group is to develop a Coordinated Permit process for the region, that will take time. In the meantime, the RCD is committed to helping landowners with this process as staff are available. Below are tips on wading through the process as well as summary information about the various potential permits that may be required for conservation work in or along waterways. More detailed information is available in the *Capay Valley Conservation and Restoration Manual*, available from the Yolo County RCD and the Esparto Library.

Suggested Strategies for Improving Agency Coordination and Review for Stream Enhancement Projects on Farms

- 1) Consult with agencies early.** Consultation with federal, state and/or local agencies should begin as early as possible in planning your project. This way potential concerns can be addressed and potential problems identified.
- 2) Develop a written description of site plans of your proposed project.** Expect that with each agency, you will need to provide a written description as well as a map and site plan of your project at your meeting. The plan should describe current conditions and land use and future project benefits in terms of things like erosion and flood control, water quality or habitat improvement.
- 3) Avoid and minimize adverse environmental impacts.** These are “terms” you will hear frequently from the agencies. What this means is that you should consider ways to design your project to eliminate or where possible reduce impacts on the environment (i.e., minimize the amount of grading near streams or take out only a limited amount of mature vegetation). Consider different ways to achieve both your project objectives and protect the environment. This may be done by including suggestions offered by the agencies during your early consultation.

- 4) **Approach the process with a positive attitude.** It may surprise you, but the agencies are generally very happy to see enhancement projects on farms. At the same time, they must request certain things under law that may often make the whole process seem needlessly complex. Everyone has to follow the same sets of rules, so a little patience and humor will make it an easier and quicker process. Be firm and polite, answer their questions, and take time to explain, remember they are not farmers and do not always understand your operation. Try when possible to remind them of the positive, long-term benefits of what you're doing for the environment.
- 5) **When in doubt, ask lots of questions.** Good news, in some cases, a project may not need a permit! If you are not sure whether your project is in that category contact the appropriate agency. Moving ahead without all the proper permits or without following the terms of the permits may end up costing you time, money and headaches.
- 6) **Record the process.** Make notes of all your contacts and conversations with each agency over time. When you have reached an agreement about some part of the project or the entire project, follow-up with a letter confirming your understanding and request that the agency confirm it as well.
- 7) **Ask for help!** Yolo County RCD and NRCS Woodland Field Office are ready to provide guidance and support with agency discussions and to assist in project design.

Summary of Resource Agencies, Permits, and Contact Information

FEDERAL AGENCIES

Under **Section 404 of the Clean Water Act**, the U.S. Army Corps of Engineers has authority over placement of dredge or fill material or excavation in waters of the United States. The Army Corps has authority over “water of the U.S.” including wetlands, streams, creeks, and rivers. This includes any channels that convey natural runoff, including intermittent or seasonal streams, even if they have been straightened or realigned. A Section 404 permit is always needed for any discharge activity below the “ordinary high water” level, which is the water level at a flow equal to the mean annual flood event. The

term “discharge activity” includes any activity that would affect the surface water conveyance or capacity of the channel.

Suggested Consultation and Design Strategies:

- When possible, design your project to stay above the “ordinary high water” level and to avoid jurisdictional wetlands. You may request assistance from NRCS, the Army Corps or others to determine if jurisdictional wetlands exist or to determine the “ordinary high water” level at your project site.
- Provide the Army Corps’ Regulatory Branch with a complete project description and invite their representative for a site visit to do an early review of your project. They can then help you to determine if a permit is needed to address potential regulatory concerns.
- Ask the Army Corps to confirm in writing that they do not have jurisdictional authority if no discharge activity will occur below the “ordinary high water” level as part of the project.
- If the work below the high water line is required, suggest that the Army Corps review the project under a Nationwide permit for restoration projects.

Contact: Justin Cutler, Regulatory Branch. U.S. Army Corps of Engineers, 1325 J Street, Sacramento, CA. (916) 557-5250.

The **Federal Endangered Species Act (ESA)** protects threatened and endangered species and their habitat. The most important provision of the ESA prohibits the “take” of any species listed by the U.S. Fish and Wildlife Service. Take is defined as activities or projects that may directly kill, harass or harm a species. It also prohibits activities or projects that modify or destroy the habitat of imperiled plants and animals.

Suggested Consultation or Design Strategies:

- Request that NRCS help you to determine if your project will trigger review by the U.S. Fish and Wildlife Service.
- If you are working with a federal agency like the NRCS, act in concert with them when consulting with the U.S. Fish and Wildlife Service. This is an example of a situation where it will be important to provide both agencies with a project description in order to begin an informal discussion to review your project and determine any potential regulatory requirements.
- If there are concerns with impacts to listed species, you will be asked to design and implement your project to avoid or minimize them. The U.S. Fish and Wildlife Service will provide you with written information about special conditions that need to be included in your project.

Contact: Brian Twedt or Jan Knight, U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Suite W-2605, Sacramento, CA 95825. Telephone: (916) 414-6645

The **National Environmental Policy Act (NEPA)** requires all federal agencies, (e.g. NRCS, U.S. Fish and Wildlife Service, Army Corps) to describe the overall environmental effects of their activities. These activities might include the work of the NRCS when it provides technical or cost share assistance through recommendation of best management practices.

Suggested Consultation or Design Strategies:

- If NRCS, or another federal agency, provides technical assistance and/or is a cost share partner on the proposed project, they would prepare the documentation for the proposed project under NEPA.

Contact: Phil Hogan, District Conservationist, USDA NRCS Woodland Service Center, 221 W. Court Street, Woodland, CA 95695. Telephone: (530) 662-3027 ext. 3.

Section 106 of the National Historical Preservation Act (NHPA) requires federal agencies, (e.g. NRCS, U.S. Fish and Wildlife Service, Army Corps) to coordinate with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) regarding the effects a project may have on properties listed, or eligible for listing, on the National Register of Historic Places (NRHP). This can include anything from historic homes to archeological artifacts such as Native American burial mounds.

Suggested Consultation or Design Strategies:

- If a federal agency is involved in your project, request that they coordinate a records search with the Northwest Information Center, California Historical Resources File System, at Sonoma State University. This search will identify any known cultural or archeological artifacts in your project vicinity.

STATE AGENCIES

The State and Regional Water Resources Control Board (SWQCB and RWQCB) review all Section 404 permit applications for compliance with **Section 401 of Clean Water Act (Water Quality Certification or Waiver)**. Section 401 primarily concerns water quality compliance. If after you have consulted with the Army Corps and that agency does not require a project permit, you do not have to seek a permit from either the SWQCB or the RWQCB.

Contact: Richard McHenry, Water Resource Control Engineer for Yolo County, Central Valley Region, California Regional Water Quality Control Board, 3443 Routier, Suite A, Sacramento, CA 95827. Telephone: (916) 255-3000

Section 1600 of the Fish and Game Code requires the California Department of Fish and Game (DFG) be consulted when a project or activity will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake and/or use materials from a streambed. It is important to consult with this agency for any project or activity that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow seasonally or permanently through a bed or channel with banks that support fish or other aquatic life. It also covers watercourses having a surface or subsurface flow that support or has supported riparian vegetation. A Streambed Alteration Agreement issued by the Department of Fish and Game covers these type of project impacts.

Suggested Consultation or Design Strategies:

- Meet with DFG for a consultation to visit the project site to determine if there is a need for a Streambed Alteration Agreement.
- If needed, request that DFG send you a notification package for a Streambed Alteration Agreement.
- Before a Streambed Alteration Agreement may be issued, DFG may determine that the further project review is needed under CEQA (see below) before they are able to issue the final agreement to the landowner.

Contacts: Dale Watkins, Environmental Specialist III, California Department of Fish and Game, Sacramento Valley and Central Sierra Region, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95695. Telephone: (916) 358-2842 Or, Steve Jimenez, Region 2 Warden, CDFG, P.O. Box 385, Woodland, CA 95776. Telephone: 530-682-7088. Email: sjimenez@dfg.ca.gov

California Environmental Quality Act (CEQA) requires that state and local government agencies (e.g., Yolo County, DFG) consider the environmental consequences of projects over which they have discretionary authority before moving forward on those projects.

Suggested Consultation or Design Strategies:

- If CEQA compliance is required for your projects, work closely with the state or local lead agency (e.g. DFG or Yolo County) in pulling together the environmental documentation.

Contact: Dale Watkins, Environmental Specialist III, California Department of Fish and Game, Sacramento Valley and Central Sierra Region, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95695.
Telephone: (916) 358-2842

The **California Endangered Species Act (CESA)** protects threatened and endangered species listed by the state. Similar to the federal Endangered Species Act, the DFG must review any projects or activities that have the potential to jeopardize listed species or destroy their habitat if reasonable and prudent alternatives may be developed to avoid it. At the same time DFG reviews the notification package for a Streambed Alteration Agreement, it will determine if the project complies with CESA and outline appropriate conditions for avoiding or minimizing impacts to state-listed species.

Contact: Dale Watkins, Environmental Specialist III, California Department of Fish and Game, Sacramento Valley and Central Sierra Region, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95695.
Telephone: (916) 358-2842

LOCAL AGENCIES

Yolo County Flood Damage Prevention Ordinance requires that a development permit be obtained from the Yolo County Community Development Agency for all construction in special flood hazard areas as mapped on the Flood Insurance Rate maps for Yolo County. Development is interpreted to include grading and any alteration or relocation of a watercourse.

Suggested Consultation or Design Strategies:

- Contact Yolo County regarding the proposed project. If the project is located within the flood hazard area (100-year floodplain as mapped by FEMA) a development permit may be required. If the project area is not located within the flood hazard area, the County should not have regulatory requirements for the proposed activities.

Contact: Linda Fiack, Resource Manager, Planning and Public Works Department, County of Yolo, 292 West Beamer Street, Yolo County, Woodland, CA. 95695. Telephone: (530) 666-8019

The **Yolo County Flood Control and Water Conservation District (YCFCWCD)** uses portions of sloughs in Yolo County as irrigation water conveyance canals.

Suggested Consultation or Design Strategies:

- Discuss your proposed project with the District to assure that the project design and ongoing maintenance of the project site are compatible with the Districts' operation.

Contact: Charles Pulley, Yolo County Flood Control & Water Conservation District, Woodland, CA 95695. Telephone: (530) 662-0265

The **Yolo County Resource Conservation District (RCD)** and the **Natural Resources Conservation Service (NRCS) Woodland Field Office** provide technical assistance for getting riparian restoration and enhancement projects on-the-ground.

Suggested Consultation or Design Strategies:

- Discuss your proposed project with the RCD or the NRCS to received guidance, support, and technical assistance, and assess potential cost-share opportunities.

Contact: Yolo RCD and NRCS Woodland Field Office, 221 W. Court Street, Suite 1, Woodland CA 95695. Telephone: (530) 662-2037, ext 3.

Resources

Community Education

Successful watershed stewardship relies on a well-informed, well-trained, participatory community. It is important that everyone in the watershed community not only understand natural resource or environmental issues, but also social, cultural, health, and economic issues as well. All of these issues are connected in many ways. Goal 6 in this watershed plan recommends several actions that can be taken to keep the community informed on watershed issues, such as regular meetings, newspaper articles, websites, newsletters, and brochures. One of the most effective, long-lasting, and comprehensive methods for community learning is through a process known as place-based learning, which is described below. Additionally, two local sources for information and assistance on developing a place-based learning program in Capay Valley, the SLEWS Program and Adopt-A-Watershed, are described below.

Place-Based Learning

Place-Based Learning is a teaching and learning process that uses the local environment and community as the context for learning. Place-Based Learning focuses learning on the central concepts and principles of multiple disciplines, involves students in problem-solving and other meaningful tasks, allows students to work autonomously to construct their own learning, and culminates in realistic, student-generated products.

THE FEATURES OF PLACE-BASED LEARNING INCLUDE:

- Place (local environment and community) is context
- Project is the curriculum
- Engages students in service learning—learning connected to real work that meets a real community need
- Student driven
- Standards based
- Collaborative, reciprocal partnership between students and the community

The SLEWS Program

The SLEWS Program (Student and Landowner Education and Watershed Stewardship), based in Winters, aims to provide students with hands-on, place-based, integrated learning opportunities in order to cultivate stewardship, a sense of community and connections to their watershed. By adopting sites as long-term class projects, students carry out ecosystem restoration activities on privately owned farms and ranches in their local watershed.

The SLEWS Program builds on previously forged relationships between local landowners (farmers and ranchers), environmental organizations, resource agencies, and educators, to create an innovative approach to both natural resource conservation and environmental education. The program uniquely combines community-based stewardship with private lands, blending economically viable agriculture with ecosystem restoration, benefiting landowners, students, teachers, and wildlife in the watershed.

To learn more about the SLEWS Program visit the FARMS Leadership, Inc. website (www.farmsleaders.org) or contact them at (530) 795-1520.

Adopt-A-Watershed (AAW)

Adopt-A-Watershed's vision is for education to serve as the cornerstone of a sustainable community, in which all citizens live their lives consciously choosing actions that ensure a healthy quality of life for current and future generations. AAW's environment-based education programs promote this by engaging students in activities that lead to an understanding of sustainability and how their choices and actions impact the community and the environment. AAW empowers communities to care for their watersheds and enhance student learning through local leadership development, educational tools, and access to a network of resources.

At the watershed level AAW works with school and community groups to help them achieve:

- Effective school and community leadership teams supporting student efforts
- Widespread community and educational awareness and support
- A collaborative system of community and educational partners
- Education practices in schools that use the watershed as the learning context
- Active, continuous monitoring of watershed health
- Students participating in meaningful and significant community-based work that is valued and recognized by the community as credible
- Active school and community involvement in local watershed projects
- Watershed management and environmental planning groups actively participating in high quality watershed education
- Watershed communities connected, communicating, and supported within a facilitated regional/statewide structure

For more information about the program, visit the Adopt-A-Watershed website (www.adopt-a-watershed.org) for more information or contact them at (530) 628-5334.

Conservation Technical Assistance and Funding Programs

Technical Assistance

The following is a brief list of local organizations that can provide technical assistance for natural resource planning and project implementation:

USDA Natural Resources Conservation Service
221 W. Court St., Suite 1
Woodland, CA 95695
(530) 662-2037 ext. 3

Yolo County Resource Conservation District
221 W. Court St., Suite 1
Woodland, CA 95695
(530) 662-2037 ext. 5
www.yolored.org

Cache Creek Conservancy
34199 Co. Rd. 20
Woodland, CA 95695
(530) 661-1070
www.cacheconserv.org

Audubon CA Farm and Rangeland Stewardship Program
5265 Putah Creek Rd.
Winters, CA 95694
(530) 795-2921
www.audubon.org/willow_slough/

University of California Cooperative Extension
70 Cottonwood St.
Woodland, CA 95695
(530) 666-8143

Cost-Share Programs

On the following page is a brief list of federal and state programs that provide funding to landowners for implementing resource conservation and restoration work on private lands. These are competitive funding programs that require a cash or in-kind match from the landowner wanting to implement a project. For a more comprehensive list, please contact the RCD.

U.S.D.A Farm Service Agency (FSA) & Natural Resources Conservation Service (NRCS)

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)

The purpose of the Environmental Quality Incentives Program (EQIP) is to promote environmental quality and agricultural production. Cost share payment incentives of up to 50% are offered to farmers and ranchers to install conservation practices on their land. Some of the practices available for cost share are fencing, irrigation water management, tree and shrub planting, pond establishment, nutrient management, and hedgerow establishment. EQIP is a competitive program based on environmental points earned from the planned practices. Landowners may enter into contracts of up to ten years, with a one-year minimum. There is a \$450,000 cost limit per individual over the lifetime of the 2002 Farm Bill. For more information, contact your local NRCS field office at (530) 662-2037 ext. 3.

WILDLIFE HABITAT INCENTIVES PROGRAM (WHIP)

Under the Wildlife Habitat Incentives Program (WHIP) wildlife habitat is developed or improved on the private land of cooperating owners. This voluntary program cost shares up to 75% for landowners wanting to establish upland, wetland, riparian, or aquatic habitats on their property. Contracts typically span five to ten years. Shorter agreements may be offered in the case of a wildlife emergency. Greater cost share percentages are given to those wishing to enter into agreements of more than fifteen years. There is a \$50,000 contract cost limit. For more information, contact your local NRCS field office at (530) 662-2037 ext. 3.

EMERGENCY WATERSHED PROGRAM (EWP)

The objective of EWP is to assist sponsors and individuals in implementing emergency measures to relieve urgent hazards to life and property, caused by natural disasters. Aid provided through EWP may include financial and technical assistance in removing debris from streams, protecting destabilized streambanks, the establishment of cover on critically eroded lands, and the purchase of floodplain easements. For this program NRCS provides up to 75% of the funds needed, the community or a local sponsor pays the remaining 25%. For more information, contact your local NRCS field office at (530) 662-2037 ext. 3.

US Fish and Wildlife Service (USFWS)

PARTNERS FOR FISH & WILDLIFE (PFW)

This program provides technical and financial support to the landowner interested in *restoring* wildlife habitat on his or her property. USFWS will guide an interested landowner through the process of determining the possibilities of the

piece of land and developing a plan for developing habitat. Depending on the project, landowners can apply for cost share on up to 50% of the cost for implementing the plan. The Fish & Wildlife Service's emphasis in this program is on restoring habitats that protect special status species and that will be self-sustaining in the long run. Candidate projects include creating shallow water areas, revegetating with native plants, and erecting fence along riparian areas to exclude livestock. Interested landowners can call program coordinator Philip Morrison at 916.414.6457 or visit the USFWS informational website at www.r1.fws.gov/capfw/pfw.html.

Wildlife Conservation Board (WCB)

INLAND WETLAND CONSERVATION PROGRAM (IWCP)

The objectives of the IWCP include the enhancement of wetlands and other wildlife habitat on private land. The WCB has set this program up so that the interested landowner works together with a “local sponsor” (a local agency or non-profit organization—an RCD is one example) to develop and maintain a wetland project. The WCB can offer up to 50% cost share through the local sponsor for the project implementation. The WCB can also buy conservation easements on property that landowners would like to maintain as wetland wildlife habitat. The program is funded by the State Habitat Conservation Fund, which is established for availability through 2020. For more information, call the WCB Wetlands Program Manager, Peter Perrine at 916.445.1109.

CALIFORNIA RIPARIAN HABITAT CONSERVATION PROGRAM (CRHCP)

This is a statewide program created in 1991 to support efforts towards protection and restoration of riparian habitat. Landowners interested in receiving program support must work with a local non-profit organization or agency such as the RCD. The WCB will support a project with the requirement that the applicant and other partners provide at least 25% matching contribution, whether in funds or in-kind. Criteria for project selection include: 1) inclusion in a larger watershed planning effort; 2) benefit to many species, especially “listed” species; 3) physical link to other habitat in good condition. The WCB requests that landowners sign an agreement to maintain a project for at least ten years after construction. For more information, contact program coordinator Scott Clemmons at 916.447.1072 or visit their website at www.dfg.ca.gov/wcb.

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