Project Information

2005 Proposal Number: 0046

Proposal Title: **COW CREEK WATERSHED FISH PASSAGE BARRIER AND HABITAT EVALUATION**

Applicant Organization Name: **Western Shasta Resource Conservation District**

Total Amount Requested: $**472,229**

ERP Region: Sacramento Region

Short Description

This project will locate and catalog diversions by type and identify fish passage improvement and screen opportunites for diversions in the watershed below natural barriers.

Executive Summary

The 275,000−acre Cow Creek Watershed is the first major eastside tributary to the Sacramento River below Keswick and Shasta Dams in Shasta County. It has five major tributaries: Little Cow, Oak Run, Clover Creek, Old Cow and South Cow, with 174 stream miles all flowing in a southwesterly direction to form a main stem that annually empties 500,400 acre feet of water annually into the Sacramento River. The Cow Creek Ecological Management Unit is located in the North Sacramento Valley Ecological Management Zone as defined in the CALFED Ecosystem Restoration Program Plan, Volume II. This zone is important for the production of anadromous fish because of its location at the upper end of the Sacramento Valley. A majority of the spawning of salmon and steelhead occurs in this zone due to the stream flow patterns of the tributaries, gravel recruitment, and the fact that fish tend to concentrate in this area because they can no longer migrate beyond Keswick Dam located 19 river miles upstreamrojects occur throughout the Cow Creek Watershed which supplies 21% of the peak flow to the Sacramento River between Shasta Dam and Red Bluff. Through

the use of aerial photos and on−the−ground inspections us the CA Department of Fish and Game barrier checklist, this project will identify problematic man−made diversions in this watershed that contains 65 unscreened diversions from 1.0 to 27.61 cfs, of which 41 diversions are potentially affecting the production of both anadromous and native fishes within the watershed. Concurrent with this is the need to identify and quantify potential spawning and rearing habitat from the confluence with the Sacramento River to the natural barriers and prioritize actions that can be taken to retrofit structures or build diversion structures that will allow fish passage and prevent entrapment. The expected outcome is a database noting the problems and potential solutions for the identified problematic diversions and the identification of spawning and rearing habitat improvements, with estimated cost of construction or completion.

A. Project Description

1A. Project Problem:

Fish passage impediments and entrapment have been identified as key factors leading to anadromous fishery declines on Sacramento River tributaries. Early studies on the Sacramento river concluded that while small diversions individually may not induce mortality in high numbers, cumulatively the impact is substantial (Hallcock and Van Woert, 1959). In 1989, the Upper Sacramento River Fisheries and Riparian Habitat Management Plan identified the need to identify problematic diversions which affected fisheries (RAC, 1989).

Large investments by CALFED have been made to screen both large and small diversions in the Sacramento River Basin yet only 8% of small diversions have been properly screened (CALFED, 2004). Two fish screens in the Cow Creek Watershed are being installed on diversions previously identified by the California Department of Fish and Game (CDFG) under a current CALFED Watershed Program Grant (04-162-555-0). This successful project has created an excellent working relationship between government agencies and stakeholders in the Cow Creek Watershed. However, information is needed by both the participating resource managers and stakeholders regarding prioritization of funding to complete projects in a manner that improves fish passage and prevents entrainment at locations that offer the most opportunity for increased salmonid use and production.

In-stream diversion dams act as passage impediments for both upstream adult migration as well as downstream juvenile migration. During upstream migration, adult salmonids can be cut off from historic high-quality spawning habitat and/or delayed during critical migration periods. Inadequate fish screens, due to design or inadequate maintenance, or lack of screen altogether can trap spawning salmon and emigrating juveniles. Few of the 60+ diversions in the Cow Creek Watershed are screened and those few that likely do not meet current California Department of Fish and Game Standards (SHN, 2001). The only known diversions having fish screens that comply with DFG fish screen design criteria are PG&E diversions and ones being currently installed by the WSRCD with CALFED funding. Unscreened pumps in the lower section of the mainstem of Cow Creek also are a major source of mortality to juveniles.

The *Working Paper on Restoration Needs* (USFWS, 1995), compiled by the Anadromous Fish Restoration Program Core Group in 1995, identified Cow Creek and its tributaries as in "relatively good condition" related to salmon and steelhead spawning habitat. However, in the Cow Creek Watershed there are discrepancies in the amount of habitat available for salmonids. In 1965, CDFG reported that approximately 52 stream miles of salmon and steelhead habitat was available (SHN, 2001) while the UDSI BOR estimated over 60 miles of available habitat for spawning salmon (SHN, 2001). Additionally very little is known about the habitat conditions for salmonids in the watershed. The lack of information does not present resource managers with enough information to make informed decisions regarding barrier modification, screening priorities and potential run production numbers for salmonids.

The only available complete habitat survey estimates that this spawning area is sufficiently large to support utilization by over 15,000 salmon (USFWS, 1940). The stream system has not been altered by any large dams, water storage or gravel projects since the 1940s when the survey was completed. Sixty-five diversions were identified in the watershed with allotments of over 1.0 cfs; the largest agricultural allotment is 27.61 cfs. Twenty-seven of the diversions are located above

potential natural barriers, which exist in four of the five tributaries. The remaining 41 diversions are located below the natural barriers and are affecting salmonid habitat. Additionally, many small diversions exist within the watershed take less than 1 cfs out of the system. Known barriers are listed in Table 1. Maps of known diversions are presented in Appendix II.

Table 1. Natural Barrier Summary

Summary of Natural Barriers in the Cow Creek Watershed		
Tributary	Milepost	Barrier
Mainstem		No barriers referenced
South Cow Creek	17.6	PG&E Diversion (Ladder added 1978)
		Wagoner Canyon- some natural rock barriers
		Wagoner Canyon to Hooten Gulch. Dry during low flow due to diversion
	13	Wagoner Diversion Dam
Clover Creek		120-150 foot falls
Oak Run Creek		No formal survey. Report of 10-15 foot falls below Oak Run
Little Cow Creek		Cook and Butcher Diversion (below the Falls)

Cow Creek has been identified by CDFG and USFWS as a candidate for restoration of anadromous fisheries. A 1996 study by the RWQCB identified limiting elements in the watershed specific to anadromous fish resources as high temperature and low flow. In addition, the study identified high concentrations of fecal coliform in two of the five main tributaries. Three of the tributaries are 303(d) listed.

The *Working Paper on Restoration Needs* work group identified the primary limiting factors for Chinook salmon and steelhead as low fall and summer flows affecting attraction, migration, spawning, and rearing, caused in part by irrigation diversions. Irrigation diversions also affect steelhead by delaying or blocking adult upstream migration and the entrainment of juvenile migrants. The restoration report stated that, in general, agricultural diversions are unscreened, unladdered, and ditches unlined.

The proposed restoration plan included recommended actions to provide additional flow, improve fish passages, and reduce entrainment. To address additional flow, ditch piping feasibility studies are currently underway on five major irrigation systems to provide a better understanding of potential increases in agriculture efficiency, and the potential for less water to be drafted from the stream and dedication of water back to the system for increased stream health without loss of water rights.

The Central Valley Project Improvement Act Tributary Production Enhancement Report (CH2M HILL, 1998) states that agricultural diversions are unscreened resulting in the loss of juvenile fish emigrating from the watershed. The report identified six primary factors limiting anadromous fish production in Cow Creek, with primary factors two and three being barriers limiting upstream passage of adults and juvenile entrainment at irrigation and other unscreened diversions.

Cow Creek is one of the few streams in California that is not altered by a major storage dam. Fry (1961) attributed the decline in fall-run Chinook salmon numbers in Cow Creek primarily to irrigation diversions. There are no minimum flow requirements for many diversions. A loss of juvenile migrating fish to water diversions and entrainment of juvenile salmon and steelhead is assumed to occur in Cow Creek and the tributaries.

1B. Project Physical Setting:

Cow Creek is a large, uncontrolled tributary to the Sacramento River (Map in Appendix I.). Cow Creek Watershed ranks third behind the Cottonwood Creek and Stony Creek watersheds for producing the largest peak flood flows within the northern Sacramento Valley (DWR, 1969). Of these watersheds, Cow Creek is the most northerly and the only one located on the east side of the Sacramento River. It has been estimated that flood flows from the Cow Creek Watershed account for approximately 21 percent of the peak discharge for the Sacramento River between Shasta Dam and Red Bluff (DWR, 1969). The Cow Creek Ecological Management Unit is located in the North Sacramento Valley Ecological Management Zone as defined in the CALFED Ecosystem Restoration Program Plan, Volume II. This zone is important for the production of anadromous fish because of its location at the upper end of the Sacramento Valley. A majority of the spawning of salmon and steelhead occurs in this zone due to the stream flow patterns of the tributaries, gravel recruitment, and the fact that fish tend to concentrate in this area because they can no longer migrate beyond Keswick Dam located 19 river miles upstream.

The Cow Creek Watershed drains approximately 275,000 acres and encompasses five major tributaries, which are presented in as sub-watersheds Appendix II. The average annual discharge from the basin is approximately 500,400 acre-feet per year. The only available complete habitat survey estimates that this spawning area is sufficiently large to support utilization by over 15,000 salmon (USFWS, 1940). The stream system has not been altered by any large dams, water storage or gravel projects since the 1940s when the survey was completed.

Little Cow Creek, Oak Run Creek, Clover Creek, Old Cow Creek, and South Cow Creek flow in a southwesterly direction and form the mainstem of Cow Creek near Millville. These tributaries have been ranked as existing and potentially enhanceable habitat for Chinook salmon and steelhead. Limited data are available on the fish resources in the Cow Creek Watershed. Fall, late-fall, winter, and spring runs of Chinook salmon (*Oncorhynchus tshawytscha*) occur in the Sacramento River. Historical spawning areas were generally in the upper reaches of the Sacramento, Pit and McCloud Rivers, in addition to the many tributaries along the mainstem of the river. Since the construction of Shasta Dam (fill year 1943), spawning has been limited to the Sacramento River below the dam and river tributaries, and the majority of the chinook spawning is fall-run (Moyle, 1976). Juvenile winter Chinook salmon may use Cow Creek as rearing habitat (non-natal rearing) even though they may have hatched elsewhere in the Sacramento River system (DFG comments in SHN, 2001). The winter-run Chinook salmon is listed as endangered on both federal and California lists. Review of available information from DFG, USFWS, BLM, and other studies performed for various hydroelectric projects within the watershed, documents that fall-run and perhaps late-fall-run Chinook salmon, as well as steelhead, use this watershed for spawning and rearing.

Fall-run chinook salmon are believed to occur in all tributaries of the watershed below natural barriers. The distribution of fall-run Chinook is generally restricted to the valley floor and lower foothill elevations of Cow Creek and its major tributaries; however, smaller portions of the population can be expected to ascend to the upper-most waterfall barriers in the system (typically to an upper limit of 1,000 feet of elevation). More detailed study and analysis is required to precisely describe the distribution of spawning activity in the creek system. The data relating late-fall-run Chinook salmon are very limited. There are no estimates of the population of late fall-run in Cow Creek, although they have been documented there. According to DFG file data,

the most recent survey for late-fall-run spawning was an aerial survey of Cow Creek conducted on February 26, 1965.

Summer flows are a limiting factor for both adult and juvenile spring-run Chinook in the foothill reaches of the stream. Little is known about spring-run Chinook populations in the Cow Creek Watershed. The best available information is that Cow Creek is not part of the present range and distribution of spring-run Chinook salmon in the Central Valley of California (CDFG, 1999).

Winter-run chinook salmon are not believed to be present in the Cow Creek Watershed. The best available information indicates that the Cow Creek system is neither part of the present nor past range and distribution of winter-run Chinook salmon in the Central Valley of California (1997). However, recent studies have shown that Sacramento River tributaries may be used for non-natal rearing for this race of salmon (DFG, DWA comments, 2001).

Steelhead populations have not been estimated in Cow Creek. No specific studies have been conducted on Cow Creek to estimate the size of the steelhead-spawning run, although DFG (1965) estimated that Cow Creek supported annual spawning runs of 500 steelhead (current estimates would be much lower). Adult steelhead has been observed in North Cow, Old Cow and South Cow Creeks; however, it is unknown what percentage of the steelhead run utilizes the other tributaries. Most steelhead spawning in South Cow Creek probably occurs above South Cow Creek diversions. Additional spawning habitat occurs upstream of this reach, but it is much less abundant. Sightings of adult steelhead have been made at the South Cow Creek Campground (approximately 8.5 miles upstream of the South Cow Creek Diversion Dam) and in Atkins Creek, located just upstream from the campground. (DFG comments SHN, 2001).

Table 2. Cow Creek Salmonid Summary

Sensitive and Special Status Species Known to Inhibit Transiently Visit Cow Creek				
Fishes	**State**	**List Date**	**Federal**	**List Date**
Winter- run Chinook salmon[1] (*Oncorhynchus tshawytscha*)	SE	9-22-80	FE	2-3-94
Spring-run Chinook salmon (*Oncorhynchus tshawytscha*)	ST	2-5-99	FT[2]	11-15-99
Fall-run Chinook Salmon (*Oncorhynchus tshawytscha*)	SSC		C	
Late-fall run chinook salmon (*Oncorhynchus tshawytscha*)	SCC		C	
Steelhead-Central Valley ESU[3]				

(*Oncorhynchus mykiss*)				

Notes:
1. Federal: Sacramento River winter run chinook salmon
2. Federal: Sacramento Valley spring run ESU. Includes populatins spawning in the Sacramento River and its tributaries
3. The Sacramento and San Joaquin Rivers and theirtributaries

ESU= Evolutionsary Significant Species **SE**= State Endangered **FE**= Federally Endangered
ST= State Threatened **FT**= Federally Threatened **SCC**= California Species of Special Concern
C= USFWS Candidate Species

Land ownership in the watershed is mostly private with a few small areas in public ownership. Land use in the watershed includes rural residential, agricultural activities, timber harvesting, livestock grazing and hydropower production. The agriculture and livestock grazing operations in the watershed are predominantly small, multi-generational, family-owned operations with little available capital to individually evaluate, design and install fish screens and ladders.

None of the existing agricultural diversions in the Cow Creek Watershed are currently known to be laddered or screened with the exception of WSRCD implemented projects, according to DFG and National Marine Fisheries Service (NMFS) criteria. This project will locate, catalog diversions by type and identify fish passage improvement and screen opportunities for diversions in the watershed below natural barriers. *The Cow Creek Watershed Management Plan* was completed in 2005 with specific high priority objectives to rank diversions by impact on fisheries and develop a program to financially assist landowners to install screens and ladders. This project is the first step towards a comprehensive program to improve fish passage and entrapment in the Cow Creek Watershed. The ground work for developing positive working relationships with agricultural users has be set by the successful implementation of current work in the watershed and this project provides a unique opportunity to capitalize on the current level of support to continue current work forward within the watershed.

2. Goals and Objectives:
The goal of the project is to identify problematic man-made diversions in the watershed that may be affecting the production of both anadromous and native fishes within the watershed. Concurrent with this goal is the need to identify and quantify potential spawning and rearing habitat that will allow for prioritization of actions that can be taken to retrofit structures or build diversion structures that will allow fish passage and prevent entrapment.

The Specific Goals For the Project Include:
1. Identify and survey diversions for fish passage and entrapment.
2. Identify potential habitat within the watershed above and below diversions.
3. Using a Technical Advisory Committee, rank fish passage projects to ensure that a concise step-by-step process is followed to ensure the largest gains per restoration action over time.
4. TAC evaluation of natural barriers for fish passage and prepare summary conclusions on anadromous fish passage potential under certain conditions.

3. Conceptual Models:

Data and information regarding migration barriers and mortality to salmonids in the Cow Creek Watershed is lacking making mortality and fish passage impediment impossible to quantify. A simple Conceptual Model for this project can be created based on two proven assumptions: 1) Fish are prevented from migrating upstream and downstream by diversions in the Cow Creek Watershed during periods of in and out-migration; and 2) There is mortality of both Juvenile and adult salmonids resulting from entrainment in diversion ditches. Both of these conditions have been identified both in the Cow Creek Watershed and the Bay Delta system. The working hypotheses behind the project are: 1) Modification of barriers to improve fish passage will increase access to available spawning habitat upstream, and 2) Modification of diversions to prevent entrainment will decrease both adult and juvenile mortality.

The models presented in Appendix III illustrate both pre- and post-diversion conditions relating to the modification of barriers. While this project will not induce the post treatment conditions it will outline a plan and methodology to meet those conditions in the most efficient and cost effective way possible. In the pre-treatment model, fish model diversions and screens reduce the ability of the system by reducing available habitat, entraining adult fish and juveniles inducing mortality and in some instances affect the geomorphic processes in the creek exasperating problems with passage conditions and potential spawning habitat. The end result is the reduction in the ability of the Cow Creek Watershed to produce self sustaining natural runs of salmonids.

The implementation of projects that reduce fish impediment and entrainment will increase the ability of the system to maintain self-sustaining populations of salmonids by increasing access to available habitat uspstream and reducing or eliminating mortality associated with entrainment or pump induced mortality. This is demonstrated in the post improvement model. This model also takes into account water diversion efficiency work underway in the watershed to maintain larger summer flows and reduce temperature resulting from less water in the creek and elevated temperature tailwater returning to the creek.

Uncertainties with the model revolve around the flow and temperature of the creek in the late spring and early fall when creek conditions induce fish to in migrate. Removal of diversions may occur both before and after such migration cues occur reducing the validity of the model in some sections of the Cow Creek Watershed. Additionally, with the little habitat information available the expectation of the model to predict more use of upstream habitat is dependent on its existence. If the value of habitat above a modified passage impediment is non-existent or less optimal than below the diversion than the model fails. The information gathered during this project will increase the ability to better quantify both impediment to acceptable spawning habitat and entrainment.

4. Approach and Scope of Work:

Task 1: Project Management -The Western Shasta Resource Conservation District (WSRCD) has an extensive and successful history of conservation project implementation and conservation assessments. The WSRCD will be responsible for the performance of the work by all participating agencies, and for the preparation of contracts for project monitoring. The WSRCD will provide all technical and administrative services as needed for completion of the work, review all work performed, and coordinate budgeting and scheduling to assure that the work is

completed within budget, on schedule, and in accordance with approved procedures, applicable laws, and regulations.

The WSRCD will ensure that all agreement requirements are met through completion of quarterly status reports submitted to the CALFED Project Representative. The WSRCD will be responsible for the dissemination of all monitoring reports and the scheduling of presentations resulting from monitoring reports. The WSRCD will complete all data handling requirements to ensure the long term availability of all documents pertaining to the monitoring.

Task 2: Technical Advisory Committee - The WSRCD will convene a Technical Advisory Committee (TAC) consisting of representatives from each partner agency in the project. The TAC will also recruit members and technical advisors from within the local community to assist in project implementation. The TAC will meet quarterly to review progress of each of the four monitoring groups to discuss opportunities for collaboration within the groups and within the community. The TAC will work with the WSRCD to monitor progress on project goals and to facilitate communication with the community. The results of annual monitoring reports will be presented at TAC meetings to provide adaptive management feedback for future design and management decisions.

Task 3: Procurement of aerial Photos - (waiting on ENPLAN and should have them today)

Task 4. Data Evaluation and Land Ownership Contact -
Sub Task 4.1. Diverson/ Barrier Mapping Location Mapping
Diversion locations within the watershed will be gathered from existing adjudication documents, public outreach, and evaluation of the aerial photos. A GIS layer will be created denoting the locations of diversions on the five tributaries below the five natural barriers as well as the location of the known natural barriers with in the watershed.

Sub Task 4.2. Parcel Map Creation
A GIS overlay will than be created denoting property boundary and ownership for the entire length of the mainstem and the five tributaries. The necessity for this is derived from the fact that many ditch users do not own the property where the diversion is located. Additionally, permission will be requested for habitat surveys (Task 7)

Sub Task 4.3. Landowner Contact and Outreach
Working with the Cow Creek Watershed Management Group, the WSRCD will contact landowners for permission to access property for the purpose of surveying diversions, natural barriers (Task 6) and available habitat (Task 7). The working relationship that has been fostered in the watershed has been a direct result of the communication linkage between project proponents and the landowners. Therefore, all ditch users will be contacted and presented with and informational packet consisting of material regarding the installation of fish screens and structural modifications to promote fish

Subtask 4.4. Entry Permit Mapping
Property data and permission information will be entered into database that will be used to complete follow up contacts with stakeholders who have not responded and focus outreach

efforts to promote support of the project in areas where there has been as lack of entry permits that grant permission.

Parcel maps for the county of Shasta will be used to contact landowners regarding permission to survey both barriers and habitat and to contact irrigation ditch users for the dissemination of information regarding the positive benefits of fish screens, regulatory obligations and potential funding and technical assistance

Task 5. Barrier Prioritization and Evaluation - Once a list of barriers is developed for the watershed and temporary entry permits are in place, barriers will be evaluated using a CDFG Checklist to evaluate pre-existing conditions and the potential for ladders, screens, and other physical changes to improve fish passage impediment and entrainment. Physical measurement of the diversion will be taken, photographs, both of the diversion and upstream and downstream conditions will be recorded. This information will be cataloged for review and evaluation.

Task 6. Natural Barrier Evaluation- Prominent natural barriers exist that restrict salmonid to the low elevation portions of the Cow Creek Basin. Each of the 5 main Cow Creek tributaries has a significant change instream gradient (slope) accompanied by a waterfall at the transition point. Little Cow Creek has Diddy Wells Falls, a 15' bedrock falls that may be a partial barrier to upstream migrants during normal flows. Oak Run Creek s is reported to have a unknown waterfall downstream from the town of Oak Run. Clover Creek has Clover Creek Falls a greater than 100' bedrock falls, which is recorded as an impassable barrier to all upstream migrants. Old Cow Creek has Whitmore Falls, a 12' bedrock falls which maybe partial barrier to upstream migrants during normal flows. South Cow Creek has the Wagner Canyon Boulder cascades reported as a steep gradient.

While several of the falls are impassable Little Cow Creek, Old Cow Creek and South Cow Creek may have the potential for fish passage. Without a thorough understanding of the potential for fish passage at these locations resource managers are hindered in their ability estimate the total amount of habitat for each species. This is critical above the barriers where lower summer temperatures may support salmonid use throughout the year.

A complete survey of the three potential passage locations will be completed including complete surveys, evaluation of conditions during normal and high flow winter conditions. Utilizing this data, a report will be generated using performance measures of the salmonids in the watershed to determine whether or not steelhead and salmon can migrate past the stream features based on Chapman methodology.

Task 7. Habitat Evaluation below natural Barriers - This task will allow the Technical Advisory Group to rank diversions on the tributaries based not only on the extent of the problems at the diversion, but also on the amount of suitable habitat available for salmonid use above the barrier. This task will also allow for a more accurate prediction of the available production of fish in the watershed. To complete this task habitat evaluation will follow Level III survey procedures outlined in the California Salmonid Stream Habitat Restoration Manual. The use of this format will allow government agencies to be able to analyze and use the data in a known and tested format that matches other work completed on waterbodies in the region. Surveys will be competed following the outlined protocols and data sheets. Information on stream channel type a habitat inventory and large woody debris surveys will be completed. Data will be compiled from

CDFG data sheets into a draft summary report for review and comment by the TAC. A final Habitat Inventory Report for the Cow Creek Watershed will be completed.

Task 8. Draft and Final Project Report - Results for Tasks 5, 6 and 7 will be combined into on document that prioritizes diversion (barrier and pump) for passage improvements based on location and available habitat. The report will also present findings of the habitat surveys and detailed analysis of the natural barriers within the watershed. A draft report will be presented to the TAC for review and comment before being finalized. As part of the final report process the WSRCD will host an informational seminar that presents the report by section for pubic outreach.

Task 9. Final Grant Report - The final grant report will be completed and submitted on time with a final invoice.

5. Performance Measures:
Performance measures for this project will be in the form written technical documentation of the project describing survey protocols, data collected, analysis performed, final results and recommendations. Additionally, information transfer and landowner participation will be recorded through outreach and temporary entry permit execution/

6. Feasibility:
The Cow Creek Fish Passage Barrier and Habitat Evaluation is the next critical step in the restoration of the Cow Creek watershed anadromous fish populations. The evaluation approach presented in the previous sections is feasible and appropriate for the evaluation of "next step" restoration actions taken in the Cow Creek Watershed. All partner agencies have a long history of successful joint project implementation with the WSRCD. The proposed project adds and strengthens the current information that is drawn from restoration activities on the watershed. The WSRCD, CCWMG, and the participating agencies have demonstrated the ability to successfully plan and implement fisheries restoration projects, both in a timely manner and within budget. Previous funding support from CALFED (#04-162-555-0) is being used to successfully implement fish screens on two previously identified problem diversions, demonstration tailwater ponds and ditch piping feasibility studies on five large diversions to increase water quality and quantity.

The Cow Creek Fish Passage Barrier Evaluation is subject to all local, state, and federal environmental regulatory requirements. No permits are required for the implementation of this project.

7. Data Handling and Storage:
Because of the size and complexity of the various phases of this project, a large volume of data and project-related information will be generated. It is essential that the project data be handled and stored to guarantee both its scientific validity and its accessibility to staff and to other professional entities. Quality Control/Quality Assurance and information availability are both essential components of the data handling and storage process.

Data handling and storage will be coordinated by WSRCD with data components located at the appropriate agency offices. Project data will be stored y in Microsoft Word, Microsoft Excel, AutoCad Land Development Desktop 2 and 3. All design documents produced will be saved in

PDF format for ease of viewing and sharing.. WSRCD will be the central clearing-house for all reports and data, which can be made accessible through e-mail, the WSRCD web site and online at The Watershed Information Model, an online data catalog that currently has over 747 archived documents and resources on watersheds in Shasta County including Cow Creek Watershed. The WSRCD will additionally incorporate procedures to archive data files on CD's, duplicated and stored off-site as a precaution.

8. Information Value:
Because of the significance of the current work taking place in the watershed and its unique situation, Cow Creek has been, and will likely continue to be, the focus of extensive agricultural improvements, experimentation, monitoring, demonstration projects, and technical information development. The final report from this project will be used to guide the implementation of fish passage improvement in the watershed by both landowner groups and agencies.

A comprehensive workshop will be held at the end of the project to inform restoration teams working on other systems of the project's outcomes, and will include the solicitation of their recommendations and as well as a detailed discussion of the issues faced by project staff. A presentation will also be submitted for inclusion in at CALFED conferences and through other scientific venues, such as professional conferences and journals

9. Public Involvement and Outreach:
The education and outreach program for this project has multiple facets. Individual members of the CCWMG and TAC have given, and will continue to give tours of the watershed to other agencies and educational institutions on a regular basis and to keep them updated on the results of the project. Presentations on the progress of the project will be given CCWMG community meeting held throughout the year. Additionally, this project will provide information to agricultural users regarding fish screen and passage issues including where to go to get information, permits, benefits of the improvements to fisheries, regulations regarding fish screens and fish passage and potential funding sources to help complete projects. This project will also directly affect the membership of the CCWMG by increasing awareness and support for the group within the watershed.

B. Applicability to CALFED Bay-Delta Program and ERP Goals, and priorities .

This proposal directly addresses ERP goals for the solicitation, goals outlined in the CALFED Bay-Delta Program Ecosystem Restoration Multi-Year Program Plan (Years 5-8), ERP Draft Stage 1 implementation Plan, CALFED and CVPIA priorities s addressed by the Cow Creek Fish Passage Barrier Evaluation Project fall within the 'Restoration Priorities for the Sacramento Region', of the Draft Stage 1 Implementation Plan, and include several of the Stage 1 priorities:

1. ERP Priorities
Restoration Priority 1: *Develop and implement habitat management and restoration actions in collaboration with local groups such as the Sacramento River Conservation Area Non-Profit Organization.* Past work in the Cow Creek Watershed has been completed in partnership between federal, state and local agencies working with the Cow Creek Watershed Management

Group and other stakeholders. This project will continue the partnership, expanding agency-stake holder relationships in the watershed.

Restoration Priority 2: *Restore fish habitat and fish passage particularly for spring-run Chinook salmon and steelhead trout and conduct passage studies*. This project meets this priority by evaluating fish passage in a watershed with an identified run of steelhead trout.

Restoration Priority 4. *Restore geomorphic processes in stream and riparian corridors.*" This project through the evaluation of barriers will evaluate geomorphic changes that may be occurring in the available habitat both below and above large diversions that directly affect fish passage and use of habitat within the watershed.

ERP Goals and Objectives

Goal 1: Endangered and Other At-risk Species and Native Biotic Communities

Achieve recovery of at-risk native species dependent on the Delta and Suisun Bay as the first step toward establishing large, self-sustaining populations of these species; support similar recovery of at-risk native species in San Francisco Bay and the watershed above the estuary; and minimize the need for future endangered species listings by reversing downward population trends of native species that are not listed. This proposal directly addresses this goal by promoting actions that will increase available habitat and reduce mortality for anadromous species dependent on the Cow Creek Watershed for spawning and rearing habitat

Objective 1: *Achieve, first, recovery and then large self-sustaining populations of the following at-risk native species dependent on the Delta, Suisun Bay, and Suisun Marsh: Central Valley winter-, spring- and fall/late fall run Chinook salmon ESUs, Central Valley steehead.* This project will lead to the recovery of. and self sustaining populations of anadromous fish including fall and late-fall run chinook salmon and Central Valley Steelhead by providing a scientifically based plan for improving fish passage and reducing mortality in a large watershed, Additionally, the proposal will provide resource managers with a better understanding of the potential of the watershed to produce viable anadromous fish runs that are self sustaining.

Goal 2: Ecological Processes

Rehabilitate natural processes in the Bay-Delta estuary and its watershed to fully support, with minimal ongoing human intervention, natural aquatic and associated terrestrial biotic communities and habitats, in ways that favor native members of those communities. The proposal will set the ground work to restore the natural ecological processes that promoted anadromous fish use in the watershed prior to development of extensive water use in the watershed. By allowing fish passage restoration of proper run timing and reduction in non-natural juvenile and adult mortality will be reduces and both from fish passage and screening.

Goal 3: Harvested Species

Maintain and/or enhance populations of selected species for sustainable commercial and recreational harvest, consistent with the other ERP strategic goals. This proposal will directly lead to increased runs of salmonids which will help sustain commercial and recreational harvest.

Objective 1: *Enhance fisheries for salmonids, white sturgeon, pacific herring, and native cyprinid fishes.* Fall run and late-fall run and central valley steelhead are an important to the

economy of both Shasta County and the Bay Delta system. The potential to increase the number of salmonids in the Cow Creek watershed will enhance the fisheries through the bay Delta

Goal 4: Habitats
Protect and/or restore functional habitat types in the Bay-Delta estuary and its watershed for ecological and public values such as supporting species and biotic communities, ecological processes, recreation, scientific research, and aesthetics. The potential for this project to quantify the potential habitat available for salmonids and provide unimpeded use of the habitat directly relates to this goal and will allow resource managers to have a better understanding of habitat conditions and potential improvement projects.

Objective 1: *Restore large expanses of all major habitat types, and sufficient connectivity among habitats, in the Delta, Suisun Bay, Suisun Marsh, and San Francisco Bay to support recovery and restoration of native species and biotic communities and rehabilitation of ecological processes. These habitat types include tidalmarsh (fresh, brackish, and saline), tidal perennial aquatic (including shallow water and tide flats), nontidal perennial aquatic, tidal sloughs, midchannel island and shoal, seasonal wetlands, riparian and shaded riverine aquatic, inland dune scrub, upland scrub, and perennial grasslands.* This project will provide a scientifically valid approach to increasing access to shaded riverine aquatic habitat and will restore native species of anadromous fish in habitats previously unavailable to them as a result of fish passage impediments.

Objective 2: *Restore large expanses of all major aquatic, wetland, and riparian habitats, and sufficient connectivity among habitats, in the Central Valley and its rivers to support recovery and restoration of native species and biotic communities and rehabilitation of ecological processes. These habitat types include riparian and shaded riverine aquatic, instream, fresh emergent wetlands, seasonal wetlands, other floodplain habitats, lacustrine, and other freshwater fish habitats.* This project promotes connectivity between habitats by identifying barriers that prevent fish from utilizing suitable spawning and rearing habitat within the Cow Creek Watershed.

Objective 4: *Minimize the conversion of agricultural land to urban and suburban uses and maintain open space buffers in areas adjacent to existing and future restored aquatic, riparian, and wetland habitats, and manage agricultural lands in ways that are favorable to birds and other wildlife.* This proposal will set the groundwork for the implementation of action that will promote restoration of aquatic resources and species and protect the rural agricultural aspects of the watershed.

2. Solidification Priorities:

1. Projects that contribute to understanding the relative effectiveness of different conservation-based farming practices and systems, and their contribution to larger restoration efforts.
This project will directly contribute to effectiveness of high priority conservation based farming practices that have been identified as important practices to contribute to the re-establishment of resilient, self sustaining salmonid runs in the Cow Creek Watershed.

2. Projects that develop and implement agricultural activities that benefit MSCS covered species.
The agricultural activities outlined in the project will lead to benefits that directly relate to fall run, and late Fall Run Chinook salmon, Central Valley Steelhead and potentially winter run-chinook salmon(all big R species) by increasing available habitat for spawning, rearing and holding, and prevent entrapment of both adults and juveniles.

3. Projects that facilitate permitting or regulatory assurances that support agricultural activities benefiting MSCS-covered species.
This project will assure that screening and ladder projects in the watershed conform to Fish and Game and NOAA standards for fish screens and provide outreach and information ensuring that when screens are installed proper permitting accompanies the process.

MSCS Big R Species:
The Cow Creek watershed currently supports 10 native fish species that are susceptible to entrapment in diversions and may be affected by passage impediment. Of the 10 three listed as multi species conservation strategy species. Species include the Central Valley Steelhead (R) and its Critical Habitat Designation, Central Valley fall-late fall run Chinook salmon (R). Both of these species use the watershed for spawning and rearing. Additionally there is potential for non natal rearing of juvenile winter run Chinook salmon (R) near the confluence of the mainstem of Cow Creek and the Sacramento River, which is a location where pumps may cause mortality.

Priority Areas:
The Cow Creek Watershed falls within the Sacramento River between Keswick Dam and Verona. The Cow Creek Watershed is northernmost uncontrolled tributary to the Sacramento River. The Cow Creek Watershed ranks third behind Cottonwood Creek and Stony Creek watersheds for the largest peak flows within the Northern Sacramento Valley (DWR, 1969) and is estimated to produce 21%of the peak discharge for the Sacramento River between Shasta Dam and Red Bluff.

4. ERP Restoration Program Milestones for the Sacramento River Basin:
This proposal measures progress toward ERP milestones in two multi species conservation strategies milestones. Milestone 67, unimpeded upstream and downstream passage for salmon and steelhead on the Sacramento River Basin Tributaries will be furthered by laying the ground work for adding additional miles of passage for salmon and steelhead (67C) and increasing the amount of impediments improved (67D). Likewise, Milestone 72, the installation positive fish barriers on 25% of diversions will be furthered by laying the ground work for a detailed implementation process in the watershed that will allow the an increase of the current amount of small diversions (8%) closer to target goals (72A). Additionally the project will identify any diversions that may have been screened without disclosure to government agencies (72B)

5. Relationship to Other Ecosystem Restoration Actions or Program Investments:
The general purposes of the CVPIA are identified by Congress in Section 3402(a) to "protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California." This proposal requests funds to specifically address two CVPIA anadromous fish stressors.

- *Blockage of or Reduced Access to Suitable Habitat*

The limiting factors for the three species/races of fish addressed by this project (Sacramento Basin fall-run Chinook salmon, late-fall-run Chinook salmon, and steelhead) are all ranked as "Highly Significant" (Table 3. CALFED Draft Stage 1 Implementation Plan).

- *Unscreened or Inadequately Screened Diversions*

The limiting factors for the three species/races of fish addressed by this project (Sacramento Basin fall-run Chinook salmon, late-fall-run Chinook salmon, and steelhead) are ranked as "Highly Significant", "Moderately Significant" and "Moderately Significant", respectively (Table 3. CALFED Draft Stage 1 Implementation Plan).

6. Additional Information for Proposals Involving Land or Easement Acquisition:
No Land or easements are being acquired within this grant proposal.

7. Relationship to Other Ecosystem Restoration Actions, Monitoring Programs, or System-wide Ecosystem Benefits:
This project is one of the key steps identified in the Cow Creek Watershed Management Plan that was created with input from the CDFG, USFWS, NOAA fisheries, DWR, SWRCB, and CVRWQCB. Future ecosystem restoration projects will depend on building cooperative relationships with local landowners through the demonstration projects proposed by this project. This project is a linkage between other projects currently underway within the watershed. Current action is being taken to address water temperature and increased instream flow for the benefit of salmonids and to increase stream health. These actions may lead to increased likelihood of immigration, spawning, rearing and outmigration in the watershed. Without the protections and access provided by ladders and screens the benefits water related actions may be minimized as passage impediment and entrapment would still occur, potentially affecting larger number of fish.

C. Qualifications – Summaries of the professional biographies of project participants:

WSRCD

Mary Schroeder, District Manager, received a B.S. degree in Forest Industries Management from Ohio State University, Columbus, Ohio. She has over 25-years business management experience in natural resource and wood products industries. As chief administrative officer of the District, Mary is responsible for directing the District's business and field operations consistent with the strategic plan. Mary will oversee general administration of the grant, and ensure adherence to budget and timeline.

Michael Harris, Projects Manager for watershed restoration, fisheries, and wildlife. He has a B.S. in Biology from California State University-Sacramento, and a B.A. in Economics from the University of California-Davis, and is completing his Master of Science in Biological Conservation from the California State University-Sacramento. Michael's experience includes habitat sampling; scheduling and data management; vertebrate sampling of mammals, reptiles and amphibians; monitoring of avian species. His publications include 2001 and 2002 California Department of Transportation –Carmel River Mitigation Bank Report. Michael's thesis will be titled "Small Mammal Microhabitat Analysis of a Restoration Site." Michael will work directly with all project participants to monitor their work and measure their progress toward project monitoring goals.

Shiloe Braxton, Project Coordinator, has a B.S. in Environmental Science from Humboldt State University. Shiloe's skills include Ecology, Biometrics, Technology and the Environment, Wildland Hydrology, and Wildlife Management. Currently the Bear Creek Watershed Coordinator, Shiloe also works on erosion control projects and has worked on surveying Northern Goshawk populations.

John Ribinsky is a Project Coordinator who has been with the RCD since 1999. John holds a Grade II Water Treatment Certification and his responsibilities include water and gravel sampling, as well as stream habitat, revegetation and fuels reduction. He has fully implemented more than a two dozen projects since joining the RCD, including gravel injections, erosion control, and wildfire rehabilitation.

Chris Glover, WSRCD GIS Specialist, holds a Certificate of Completion in GIS from Shasta College, as well as a B.S. in Human Development from the University of California, Davis. He has several years experience in GIS including continuing education in Mobile GIS and is responsible for maintaining and expanding the district's library of spatial and non-spatial data, GIS data research and management, and GIS map production. His duties support the GIS needs for current and future WSRCD projects. He is the Project Coordinator for the Watershed Information Model, overseeing semi-annual updates, monthly reporting and frequent public outreach.

Subcontractors:
ENPLAN was chosen as the company has current photos available that meet the needs of the project. No other contractor currently has photographic data that can be used to complete this project. Other contractors in the area have the ability to complete the photography of the watershed needed for the project but would require new flights that would significantly increase the cost of the photos and subsequently the overall cost of the project.

Organizational Structure: The WSRCD organizational structure begins with a 7-member volunteer Board of Directors who are ranchers, foresters, biologists. The District Manager is responsible for the all staff, contracting and financial records, followed by the Project Manager, who will facilitate the monthly meetings of the Technical Advisory Committee (TAC), a group of scientific representatives from multiple agencies and other interested parties. The TAC operates on a consensus basis when reviewing each step of the Project. The Project Manager supervises project coordinators and GIS specialist in landowner agreements, locating and analyzing each diversion..

D. Cost:

The total estimated cost to complete the Fish Passage Barrier Evaluation for the Cow Creek Watershed is $472,229. This includes:

Task 1 - Project Management	27,048
Task 2 – Technical Advisory Committee	29,929
Task 3 – Community Outreach	21,769
Task 4 – Aerial Photo Purchase	51,750
Task 5 - Data Evaluation and Contacts	36,103
Task 6 – Barrier Prioritization and Evaluation	80,500

Task 7 – Natural Barrier Evaluation	17,250
Task 8 – Habitat Evaluation From Confluence to Natural Barriers	187,450
Task 9 – Draft and Final Project Reports	17,565
Task 10 – Final Grant Report	2,865

There is a cost share associated with this proposal through the Technical Advisory Committee. This cost share is based on 6 agency representatives 12 TAC meetings, two hours per TAC meeting or 144 hours @ $45/hr = $6,480 plus 4 CCWMG representatives 12 TAC meetings, two hours/meeting or 96 hr @ $20/hr = $1,920 for a total of $8,400.

E. Compliance with Standard Terms and Conditions:

WSRCD agrees to comply with all standard terms and conditions of the grant agreement.

F. Literature Cited

California Dept. of Fish and Game. 1998. *Report to the Fish and Game Commission: A status review of the spring-run chinook salmon (Oncorhyncus tshawytscha) in the Sacramento River drainage.* Candidate Species Status Report 98-01. Inland Fisheries Div., Sacramento CA.

California Dept. of Fish and Game. 2002. *California Salmonid Stream Habitat Restoration Manual.* Native Anadromous Fish and Watershed Branch

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CH2MHill. 1998. *Central Valley Project Improvement Act Tributary Production Enhancemet Report*. Prepared for U.S. Fish and Wildlife Service, Central Valley Fish and Wildlife

Department of Water Resources, 1969. *Hydrologic and Water Rights Analysis for Selected Sacramento Valley Spring Run Streams Magnitude and Frequency of Flood in California, Upper Sacramento River Basin Investigation,* Bulletin No. 150-1

Fry, D. H., Jr. 1961. *King salmon spawning stocks of the California Central Valley, 1940-1959.* California Fish and Game 47(1):55-71.

Hallcok, R.J. and W.F. Van Woert. 1959. *A Survey of Anadromous Fish Losses in Irrigation Diversions from the Sacramento and San Joaquin River.* California Department of Fish and Game 45:227-296.

Moyle, P. B. 1976. *Inland Fisheries of California.* University of California Press, Berkeley. Pg.406

National Marine Fisheries Service. 1997. *NMFS proposed recovery plan for the Sacramento River winter-run chinook salmon.* Southwest Region, Long Beach CA.

Resource Agency of California. 1989. *Upper Sacramento Fisheries and Riparian Management Plan.*

SHN Consulting Engineers and Geologists, 2001. Cow Creek Watershed Assessment

U.S. Fish & Wildlife Service. 1940. *An Investigation of Fish Salvage Problems in Relation to Shasta Dam*. Special Scientific Report No. 10.

USFWS, 1995. *Working Paper on Restoration Needs: Habitat Restoration Actions to Improve Natural Production of Anadromous Fish in Central Valley of California.* Volume 1-3.

G. Nonprofit Verification

WSRCD is a special district considered local government and is not a non-profit.

ATTACHMENTS

ENPLAN

12.14.05

A. QUOTATION

TO: Michael Harris
Western Shasta Resource Conservation District (WSRCD)

FROM: Devon Hedemark

PRODUCT

The orthoimagery will be delivered in the NAD 83 State Planes Coordinate System (Zone 1), and compressed in Mr. SID format for increased speed and simplification of storage. Mr. SID reader software will be provided at no charge. Two types of orthoimagery coverage's are offered: 1) film-based conventional natural color and 2) multi-spectral satellite delivered as a natural color and separate near-infrared orthoimagery dataset. Per our conversation, the Multi-Spectral would be most appropriate.

COSTS

Multi-Spectral Natural Color Orthoimagery $45,000

Cow Creek Watershed Area (500 sq mi)
2-foot pixel resolution.
Pan-sharpened.
Derived from fresh 2005 satellite imagery.
Rectified digitally.
Mosaicked and compressed in GeoExpress (MrSID) format.

Appendix I.

1. Location Map
2. Watershed Map
3. Fisheries Habitat Map For the Cow Creek Watershed

FIGURE 1
GENERAL VICINITY

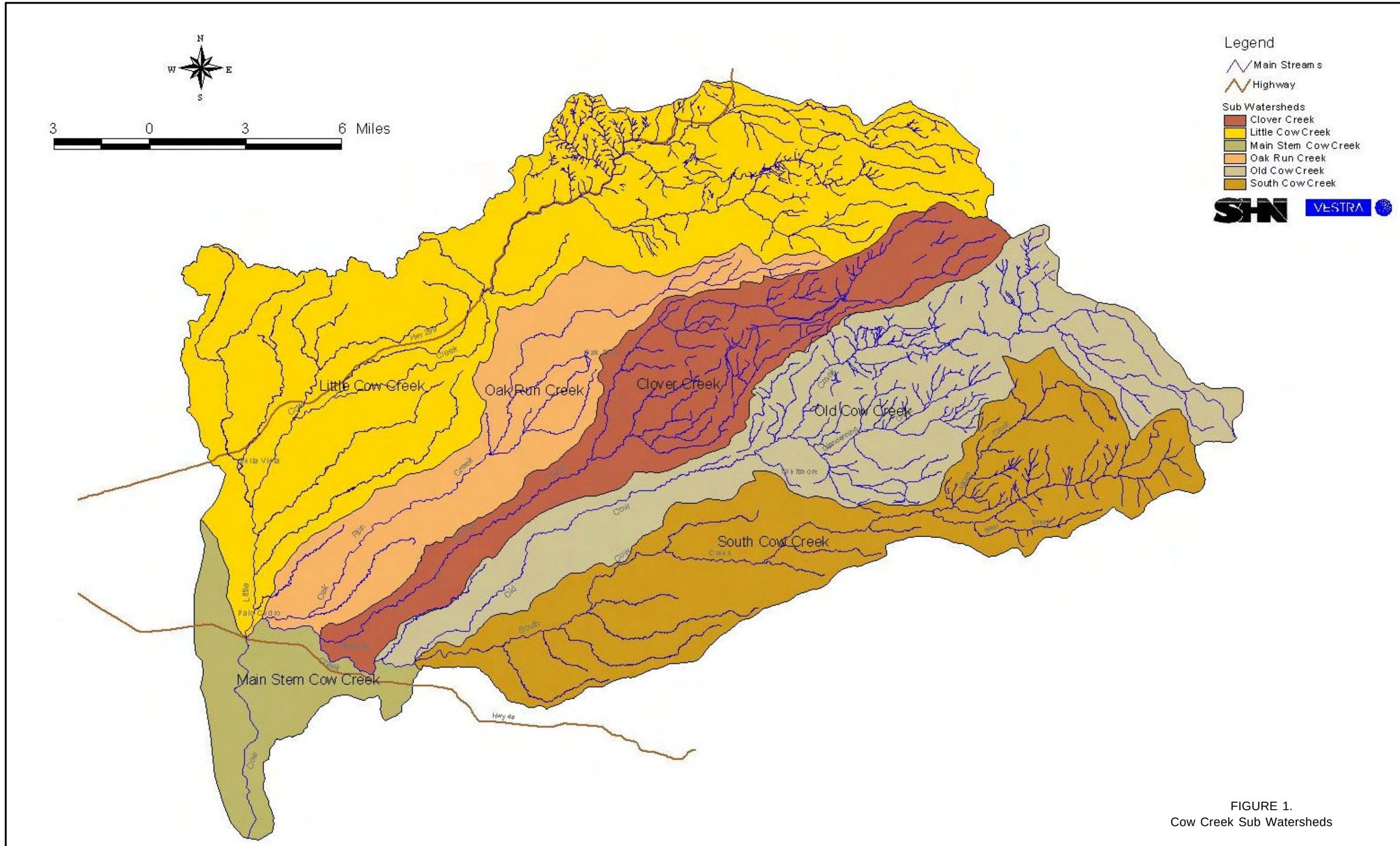


FIGURE 1.
Cow Creek Sub Watersheds

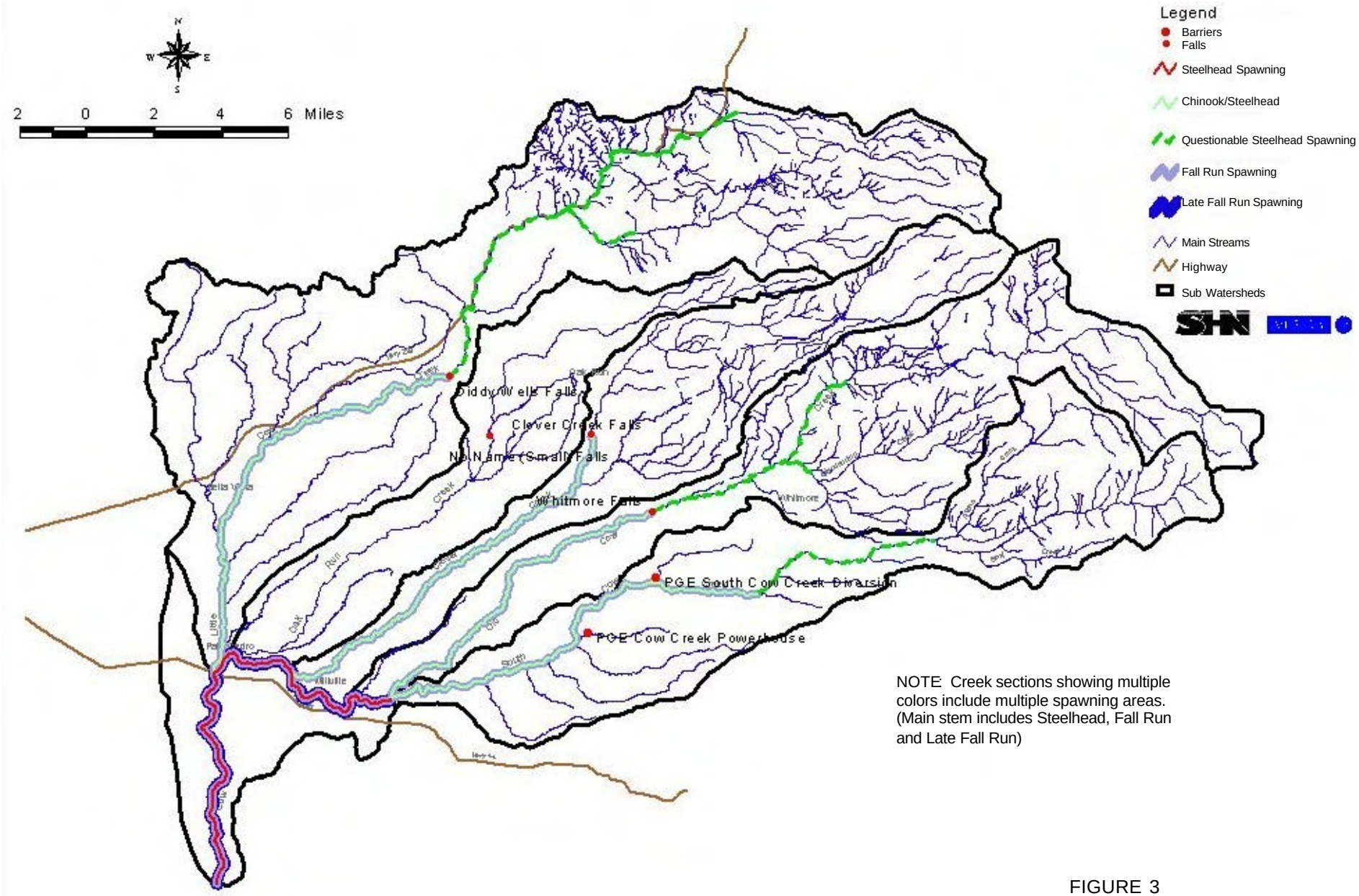


FIGURE 3
AVAILABLE ANADROMOUS FISH HABITAT

Reference: DFG

Appendix II.

Known Diversion Maps of the Cow Creek Watershed

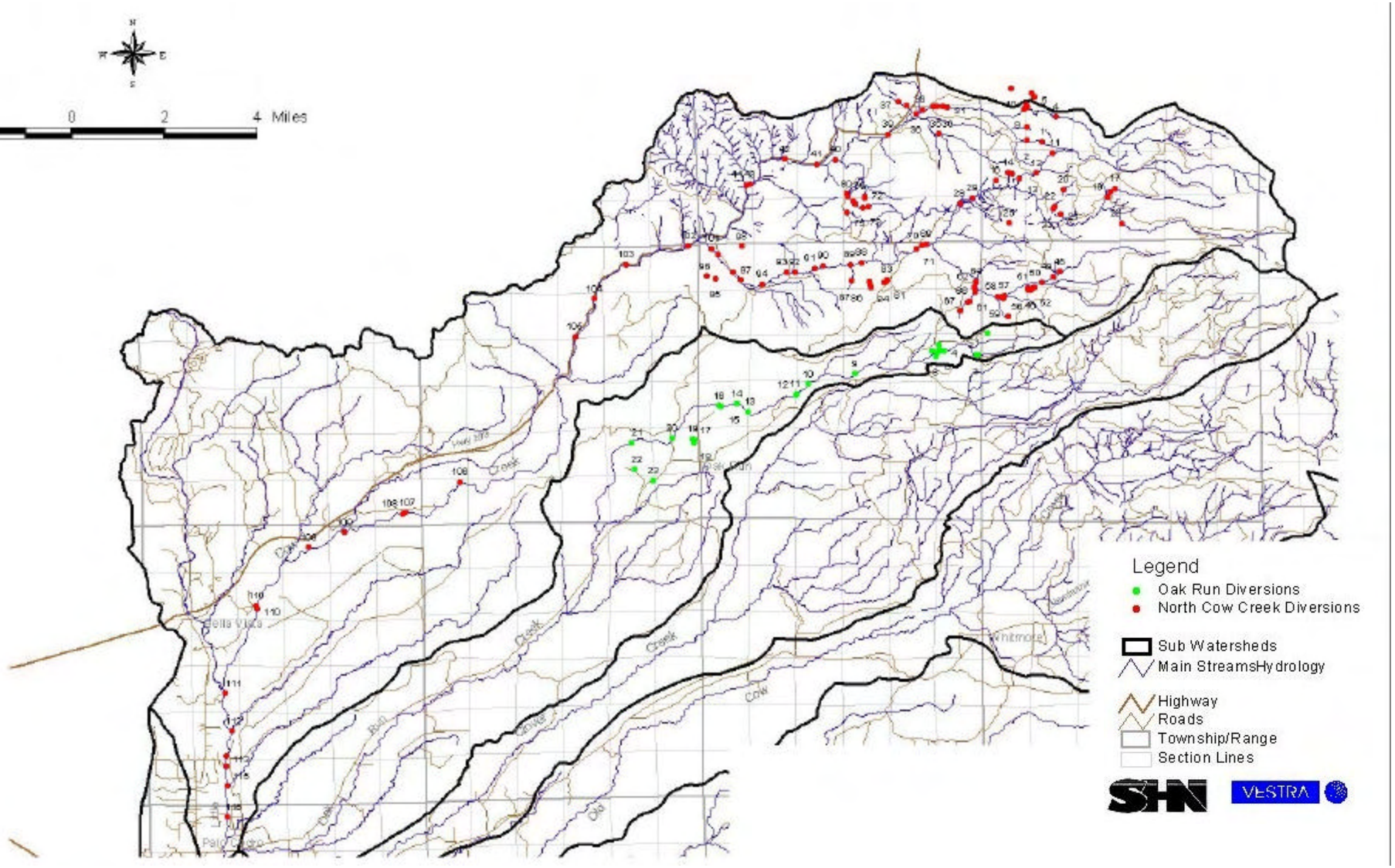


FIGURE 4
OAK RUN & NORTH/LITTLE COW CREEK DIVERSIONS

Reference: DWR 1923 Maps

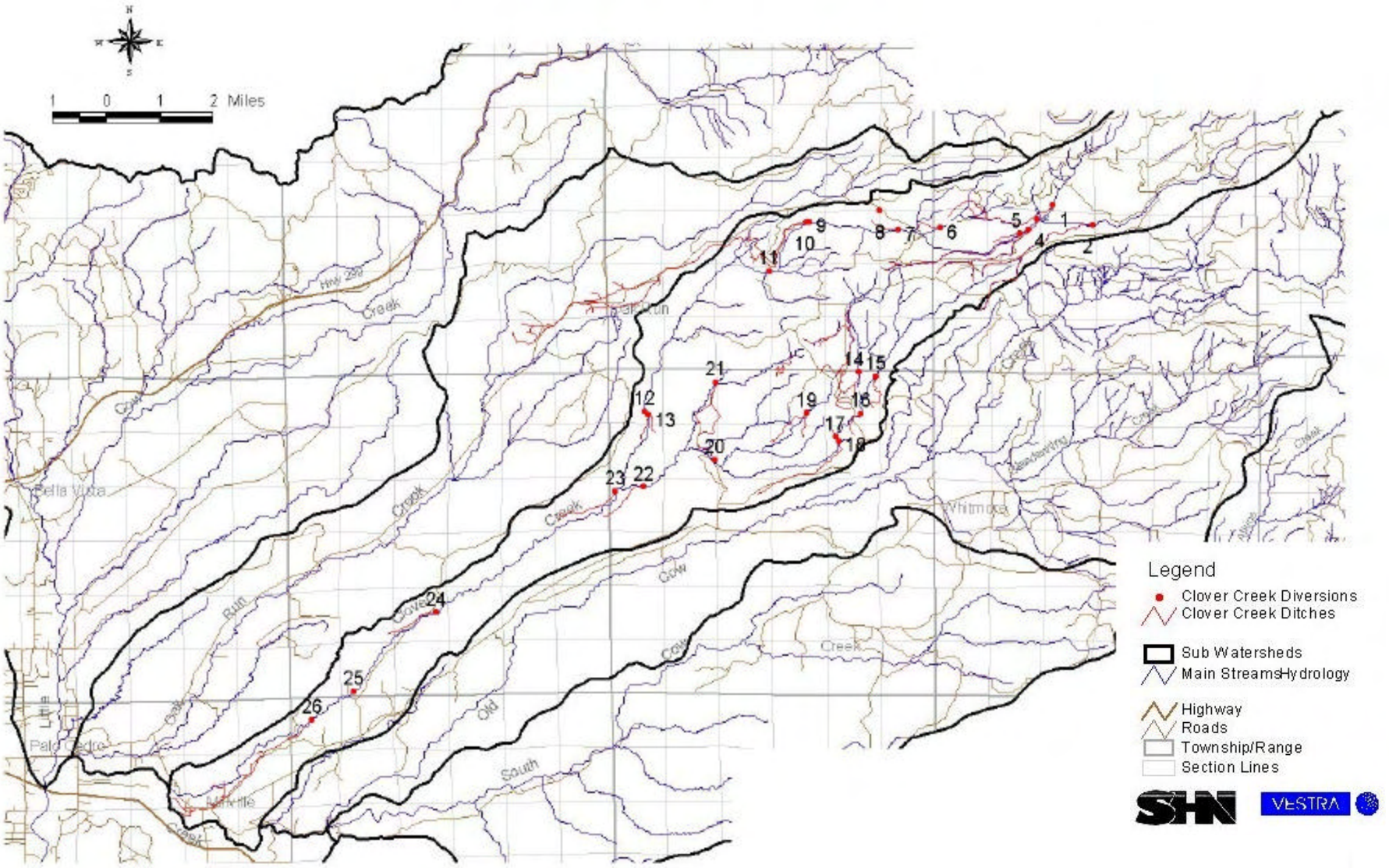


FIGURE 5
CLOVER CREEK DIVERSIONS & DITCHES

Reference: DWR 1927 Maps

S

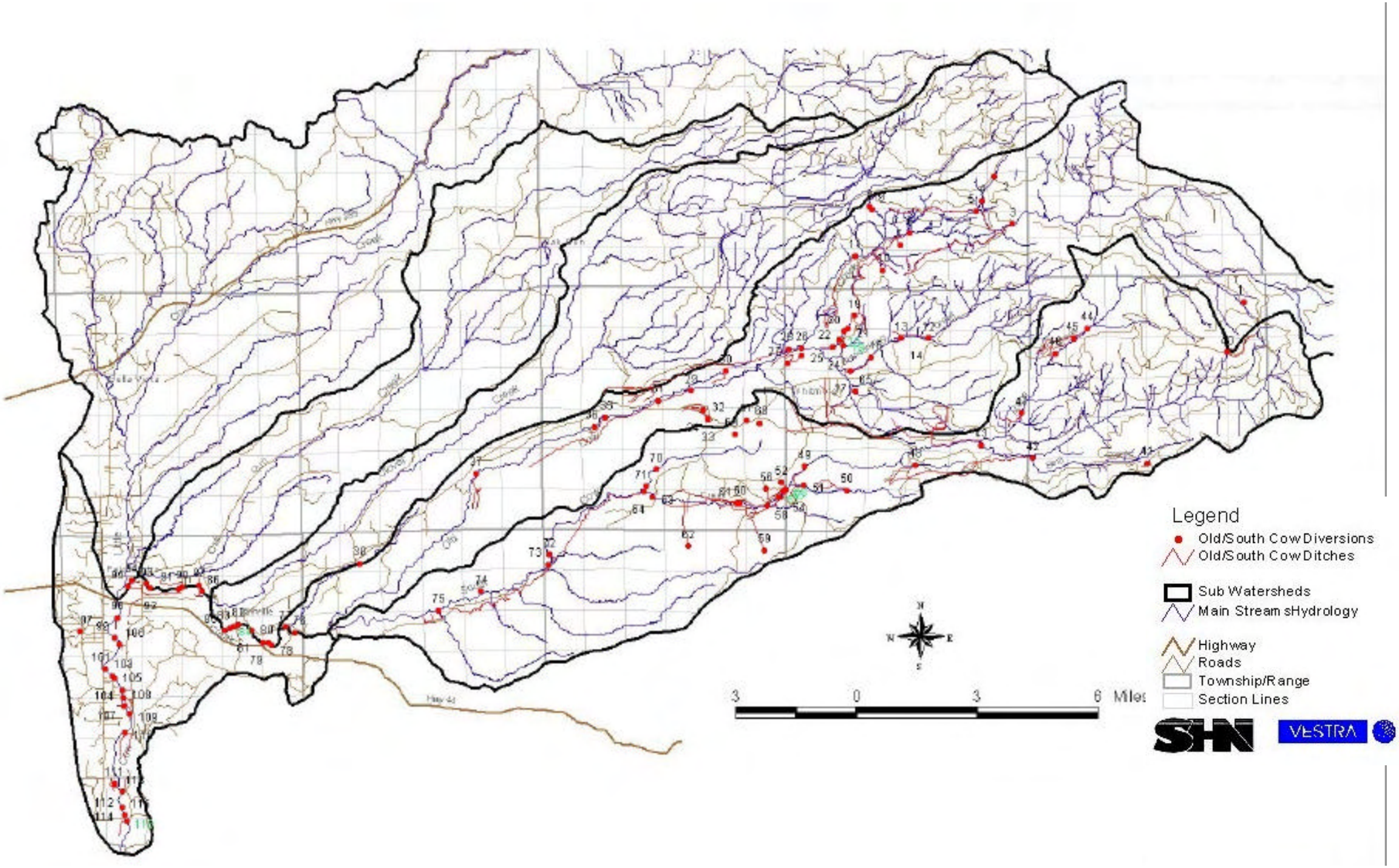


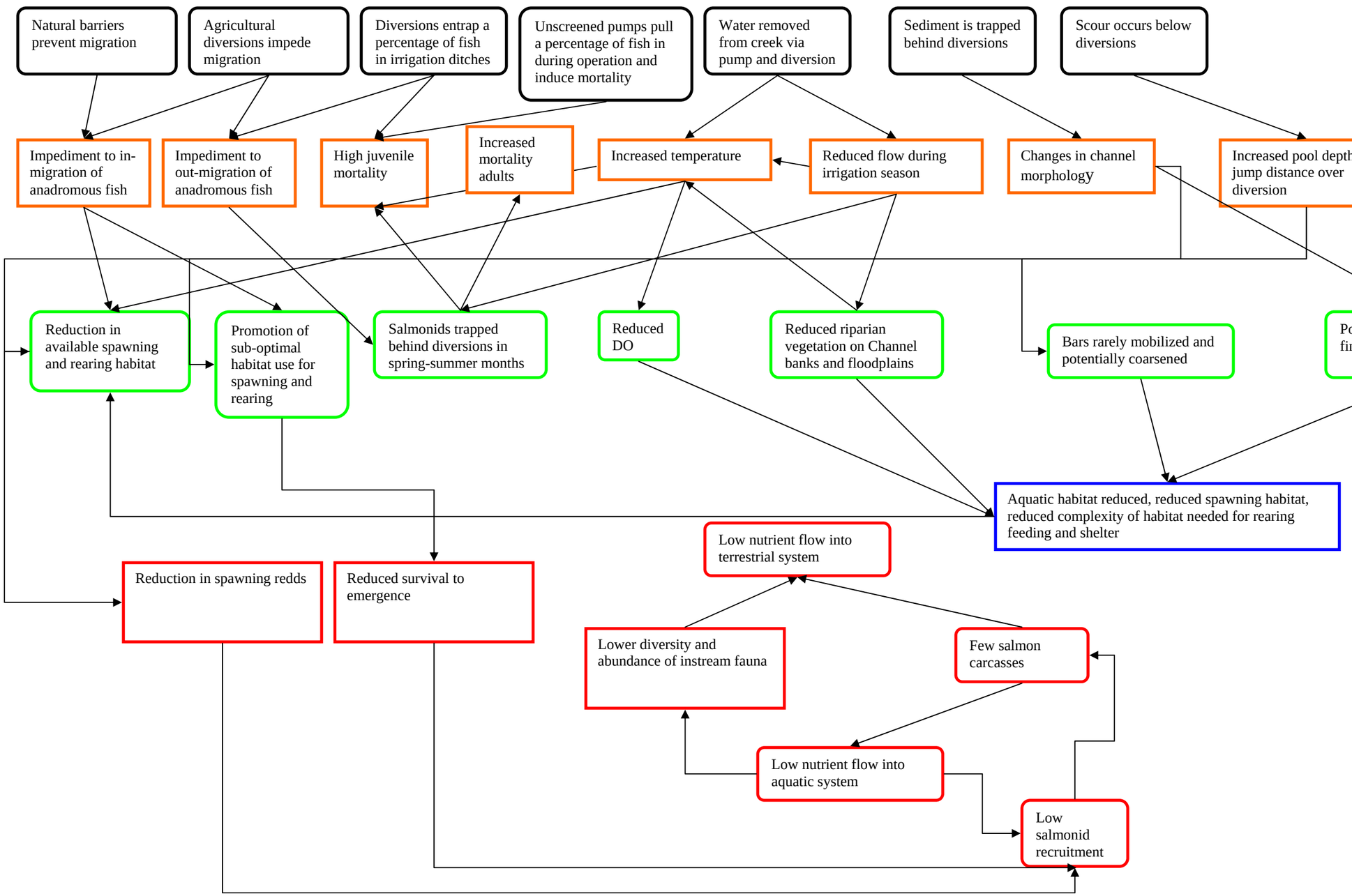
FIGURE 6
OLD COW & SOUTH COW CREEK DIVERSIONS & DITCHES (COW CREEK ADJUDICATION)

Reference: DWR 1969 Maps

Appendix III.

1. Existing Condition Conceptual Model for the Cow Creek Watershed
2. Post Diversion Improvement Conceptual Model for the Cow Creek Watershed

Cow Creek Watershed Existing Conditions Conceptual Model



Resource Conditions in the Cow Creek Watershed

Riverine Process

Habitat Use

Habitat Response

Biotic Response

Post Diversion Improvement Conceptual Model for the Cow Creek Watershed

Natural barriers prevent migration

Agricultural Diversions Prevent Migration

Diversions entrap fish in irrigation ditches

Unscreened Pumps pull fish in during Operation and induce Mortality

Water removed from creek via Screened pump and diversion

Sediment is trapped behind Diversions

Scour occurs below diversions

Resource Conditions In The Cow Creek Watershed

Salmon migrate to natural barriers

High Juvenile mortality

Increased mortality adults*

Outmigration of anadromous fish happens earlier in Spring Summer than in natural conditions

Increased temperature

Reduced flow during irrigation season

Changes in channel morphology

Increased pool depth and jump distance over diversion

Riverine Process

Increase in available spawning and rearing habitat

Promotion of sub-optimal habitat use for spawning and rearing

Salmonids trapped behind diversions in spring-summer months

Reduced DO

Reduced riparian vegetation on Channel banks and floodplains

Bars rarely mobilized and potentially coarsened

Pools likely filled with fine and coarse sediment

Habitat Use

Aquatic habitat reduced only by flow and temperature in the lower reaches (below 100oft) in summer, increased spawning habitat, increased complexity of habitat needed for rearing feeding and shelter.

Habitat Response

Increase in spawning redds

Higher nutrient flow into terrestrial system

Higher diversity and abundance of instream fauna

More salmon carcasses

Increased nutrient flow into aquatic system

Higher salmonid recruitment

Biotic Response

Tasks And Deliverables

Task ID	Task Name	Start Month	End Month	Personnel Involved	Deliverables
1	Project Management	1	36	Schroeder, Mary	Signed Temporary Entry Permits, bid packet, pre-bid meeting sign in sheet, list of bids received, contractor agreement, monthly or quarterly progress reports.
2	Technical Advisory Committee	2	35	Harris, Michael	List of Technical Advisory Committee members, roles and responsibilities, meeting notices, agendas, minutes.
3	Community Outreach	3	35	Braxton, Shiloe	Community meetings before and after project to explain the project, gather input, summarize, explain results to the community. Design and distribute brochures about water diversions and the importance of fisheries and ecosystem restoration.
4	Aerial Photo Purchase	3	5	Harris, Michael	Purchased aerial photos of tributaries from ENPLAN
5					

	Data Evaluation and Land Ownership Contacts	4	17	Harris, Michael	Landowner agreements, data collected, evaluation of data, map diversions using GIS
6	Barrier Prioritization and Evaluation	5	30	Harris, Michael	On site barrier evaluabtions, prioritization, report
7	Natural Barrier Evaluations	6	30	Harris, Michael	On site evaluations of natural barriers, summary report
8	Habitat Evaluation from confluence with Sacramento River to natural barriers	6	30	Harris, Michael	On site habitat evaluation above and below natural barriers at at diversions
9	Draft and final project reports	30	34	Harris, Michael	Prepare draft project report for review by TAC and grantor; complete final project report.
10	Final gratn report	34	36	Schroeder, Mary	Prepare final grant report.

Total Project Budget Summary by Task and by Fiscal Year

Note: This budget summary **automatically links** to the costs and totals on the **"Budget Detail"** worksheet.
DO NOT CHANGE FORMULAS OR ENTER NUMBERS INTO ANY CELLS EXCEPT THE SHADED CELLS for "Cost Share" and "Other Matching Funds"

BUDGET SUMMARY	Total Amount for Year 1	Total Amount for Year 2	Total Amount for Year 3	Total Amount for All Years
Total Costs for Task One	$ 9,569.20	$ 8,510.00	$ 8,968.80	$ 27,048.00
Total Costs for Task Two	$ 9,547.07	$ 9,993.04	$ 10,389.10	$ 29,929.21
Total Costs for Task Three	$ 6,973.88	$ 7,282.60	$ 7,512.63	$ 21,769.10
Total Costs for Task Four	$ 51,750.00	$ -	$ -	$ 51,750.00
Total Costs for Task Five	$ 30,381.16	$ 3,224.60	$ 2,496.19	$ 36,101.95
Total Costs for Task Six	$ -	$ 80,500.00	$ -	$ 80,500.00
Total Costs for Task Seven	$ -	$ 17,250.00	$ -	$ 17,250.00
Total Costs for Task Eight	$ -	$ 158,700.00	$ 28,750.00	$ 187,450.00
Total Costs for Task Nine	$ -	$ -	$ 17,565.05	$ 17,565.05
Total Costs for Task Ten	$ -	$ -	$ 2,865.80	$ 2,865.80
Total Costs for Task Eleven	$ -	$ -	$ -	$ -
Total Costs for Task Twelve	$ -	$ -	$ -	$ -
Total Costs for Task Thirteen	$ -	$ -	$ -	$ -
Total Costs for Task Fourteen	$ -	$ -	$ -	$ -
Total Costs for Task Fifteen	$ -	$ -	$ -	$ -
Total Costs for Project Tasks	$ 108,221.30	$ 285,460.24	$ 78,547.58	$ 472,229.12
1/Cost Share	$ 2,800.00	$ 2,800.00	$ 2,800.00	$ 8,400.00
2/ Other Matching Funds	$ -	$ -	$ -	$ -

1/ *Cost share funds* are specifically dedicated to your project and can include private and other State and Federal grants. Any funds listed in this line must be further described in the text of your proposal (see Chapter 3, Section D, of the PSP document)

2/ *Other matching funds* include other funds invested consistent with your project in your project area for which the ERP grant applicant is not eligible. Any funds listed in this line must be further described in the text of your proposal (see Chapter 3, Section D, of the PSP document)

BUDGET FOR TASK ONE (Administrative)	TOTAL AMOUNT TASK 1 All Years	Year 1			Year 2			Year 3		
		Amount per hour	Number of Hours	Total Amount for Year 1	Amount per hour	Number of Hours	Total Amount for Year 2	Amount per hour	Number of Hours	Total Amount for Year 3
Personnel										
District Manager	$ 936.00	$ 25.00	12	$ 300.00	$ 26.00	12	$ 312.00	$ 27.00	12	$ 324.00
Project Manager	$ 6,912.00	$ 23.00	96	$ 2,208.00	$ 24.00	96	$ 2,304.00	$ 25.00	96	$ 2,400.00
Secretary	$ 1,152.00	$ 15.00	24	$ 360.00	$ 16.00	24	$ 384.00	$ 17.00	24	$ 408.00
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 9,000.00**			**$ 2,868.00**			**$ 3,000.00**			**$ 3,132.00**
[1/] Benefits as percent of salary	28%			$803.04			$840.00			$876.96
Personnel Total (salary + benefits)	**$11,520.00**			**$3,671.04**			**$3,840.00**			**$4,008.96**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 10,720.00			$ 3,900.00			$ 3,300.00			$ 3,520.00
2/ Travel and Per Diem	$ 1,280.00			$ 750.00			$ 260.00			$ 270.00
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 12,000.00**			**$ 4,650.00**			**$ 3,560.00**			**$ 3,790.00**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ 1,248.16			$ 1,110.00			$ 1,169.84
Total Costs for Task One	**$ 27,048.00**			**$ 9,569.20**			**$ 8,510.00**			**$ 8,968.80**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

2/ Travel expenses and per diem must be at rates specified by the Department of Personnel Administration. The contractor is required to maintain travel receipts and records for auditing purposes. No travel out of the state of California shall be reimbursed unless prior written authorization is obtained from the State.

3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

Proposal Number 0046
Proposal Name Cow Creek Watershed Fish Passage Barrier and Habitat evaluation

Detailed Budget Breakdown by Task and by Fiscal Year

Western Shasta RCD

BUDGET FOR TASK TWO	TOTAL AMOUNT TASK 2 All Years	Year 1 Amount per hour	Year 1 Number of Hours	Year 1 Total Amount for Year 1	Year 2 Amount per hour	Year 2 Number of Hours	Year 2 Total Amount for Year 2	Year 3 Amount per hour	Year 3 Number of Hours	Year 3 Total Amount for Year 3
Personnel										
Project Coordinator	$ 18,240.00	$ 19.50	300	$ 5,850.00	$ 20.30	300	$ 6,090.00	$ 21.00	300	$ 6,300.00
Project Manager1	$ 1,440.00	$ 23.00	20	$ 460.00	$ 24.00	20	$ 480.00	$ 25.00	20	$ 500.00
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 19,680.00**			**$ 6,310.00**			**$ 6,570.00**			**$ 6,800.00**
1/ Benefits as percent of salary	28%			$1,766.80			$1,839.60			$1,904.00
Personnel Total (salary + benefits)	**$25,190.40**			**$8,076.80**			**$8,409.60**			**$8,704.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 750.00			$ 200.00			$ 250.00			$ 300.00
2/ Travel and Per Diem	$ 85.00			$ 25.00			$ 30.00			$ 30.00
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 835.00**			**$ 225.00**			**$ 280.00**			**$ 330.00**
5/ Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ 1,245.27			$ 1,303.44			$ 1,355.10
Total Costs for Task Two	**$ 29,929.21**			**$ 9,547.07**			**$ 9,993.04**			**$ 10,389.10**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

BUDGET FOR TASK THREE	TOTAL AMOUNT TASK 3 All Years	Year 1 Amount per hour	Year 1 Number of Hours	Year 1 Total Amount for Year 1	Year 2 Amount per hour	Year 2 Number of Hours	Year 2 Total Amount for Year 2	Year 3 Amount per hour	Year 3 Number of Hours	Year 3 Total Amount for Year 3
Personnel										
Project Coordinator	$ 8,755.20	$ 19.50	144	$ 2,808.00	$ 20.30	144	$ 2,923.20	$ 21.00	144	$ 3,024.00
Watershed Coordinator	$ 4,725.00	$ 20.00	75	$ 1,500.00	$ 21.00	75	$ 1,575.00	$ 22.00	75	$ 1,650.00
	$ -	$ -		$ -	$ -		$ -	$ -		$ -

	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 13,480.20**			**$ 4,308.00**			**$ 4,498.20**			**$ 4,674.00**
[1/] Benefits as percent of salary	28%			$1,206.24			$1,259.50			$1,308.72
Personnel Total (salary + benefits)	**$17,254.66**			**$5,514.24**			**$5,757.70**			**$5,982.72**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 750.00			$ 250.00			$ 250.00			$ 250.00
2/ Travel and Per Diem	$ 925.00			$ 300.00			$ 325.00			$ 300.00
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 1,675.00**			**$ 550.00**			**$ 575.00**			**$ 550.00**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ 909.64			$ 949.90			$ 979.91
Total Costs for Task Three	**$ 21,769.10**			**$ 6,973.88**			**$ 7,282.60**			**$ 7,512.63**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

BUDGET FOR TASK FOUR	**TOTAL AMOUNT TASK 4 All Years**	**Year 1** Amount per hour	**Year 1** Number of Hours	**Year 1** Total Amount for Year 1	**Year 2** Amount per hour	**Year 2** Number of Hours	**Year 2** Total Amount for Year 2	**Year 3** Amount per hour	**Year 3** Number of Hours	**Year 3** Total Amount for Year 3
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -

	$ -	$ -			$ -			$ -			$ -			$ -
Personnel Subtotal	**$ -**				**$ -**				**$ -**			**$ -**
[1/] Benefits as percent of salary					$0.00				$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**				**$0.00**				**$0.00**			**$0.00**
Other Costs	**Total All Years**				**Total Year 1**				**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -				$ -				$ -			$ -
2/ Travel and Per Diem	$ -				$ -				$ -			$ -
3/ Equipment	$ -				$ -				$ -			$ -
4/ Sub-Contractor ENPLAN for aerial photos	$ 45,000.00				$ 45,000.00				$ -			$ -
4/ Sub-Contractor	$ -				$ -				$ -			$ -
4/ Sub-Contractor	$ -				$ -				$ -			$ -
4/ Sub-Contractor	$ -				$ -				$ -			$ -
4/ Sub-Contractor	$ -				$ -				$ -			$ -
Other Costs Subtotal	**$ 45,000.00**				**$ 45,000.00**				**$ -**			**$ -**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%				$ 6,750.00				$ -			$ -
Total Costs for Task Four	**$ 51,750.00**				**$ 51,750.00**				**$ -**			**$ -**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

		Year 1			Year 2			Year 3		
BUDGET FOR TASK FIVE	**TOTAL AMOUNT TASK 5 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
Project Manager photo interpretation	$ 3,680.00	$ 23.00	160	$ 3,680.00	$ -		$ -	$ -		$ -
GIS Specialist map creation	$ 6,240.00	$ 19.50	320	$ 6,240.00	$ -		$ -	$ -		$ -
Project Coordinator landowner contacts	$ 11,460.00	$ 17.00	500	$ 8,500.00	$ 18.00	80	$ 1,440.00	$ 19.00	80	$ 1,520.00
Project Coordinator entry permit mapping	$ 1,720.00	$ 17.00	80	$ 1,360.00	$ 18.00	20	$ 360.00	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 23,100.00**			**$ 19,780.00**			**$ 1,800.00**			**$ 1,520.00**
[1/] Benefits as percent of salary	28%			$5,538.40			$504.00			$425.60
Personnel Total (salary + benefits)	**$29,568.00**			**$25,318.40**			**$2,304.00**			**$1,945.60**

Other Costs	Total All Years			Total Year 1			Total Year 2			Total Year 3
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 750.00			$ 350.00			$ 250.00			$ 150.00
2/ Travel and Per Diem	$ 1,075.00			$ 750.00			$ 250.00			$ 75.00
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 1,825.00**			**$ 1,100.00**			**$ 500.00**			**$ 225.00**
5/ Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ 3,962.76			$ 420.60			$ 325.59
Total Costs for Task Five	**$ 36,101.95**			**$ 30,381.16**			**$ 3,224.60**			**$ 2,496.19**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

		Year 1			Year 2			Year 3		
BUDGET FOR TASK SIX	**TOTAL AMOUNT TASK 6 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
1/ Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor ENPLAN Civil Engineering services	$ 70,000.00			$ -			$ 70,000.00			$ -

4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 70,000.00**			**$ -**			**$ 70,000.00**			**$ -**
[5/] Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ -			$ 10,500.00			$ -
Total Costs for Task Six	**$ 80,500.00**			**$ -**			**$ 80,500.00**			**$ -**

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

		Year 1			Year 2			Year 3		
BUDGET FOR TASK SEVEN	**TOTAL AMOUNT TASK 7 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
[1/] Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor ENPLAN for habitat evaluation, data summary, report	$ 15,000.00			$ -			$ 15,000.00			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 15,000.00**			**$ -**			**$ 15,000.00**			**$ -**

[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ -			$ 2,250.00			$ -
Total Costs for Task Seven	**$ 17,250.00**			**$ -**			**$ 17,250.00**			**$ -**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet

4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")

5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

		Year 1			Year 2			Year 3		
BUDGET FOR TASK EIGHT	**TOTAL AMOUNT TASK 8 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
[1/] Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor ENPLAN Level Three Habitat Evaluation, report	$ 163,000.00			$ -			$ 138,000.00			$ 25,000.00
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 163,000.00**			**$ -**			**$ 138,000.00**			**$ 25,000.00**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ -			$ 20,700.00			$ 3,750.00
Total Costs for Task Eight	**$ 187,450.00**			**$ -**			**$ 158,700.00**			**$ 28,750.00**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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No travel out of the state of California shall be reimbursed unless prior written authorization is obtained from the State.

Detailed Budget Breakdown by Task and by Fiscal Year

3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet
4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")
5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

BUDGET FOR TASK NINE	TOTAL AMOUNT TASK 9 All Years	Year 1 Amount per hour	Year 1 Number of Hours	Year 1 Total Amount for Year 1	Year 2 Amount per hour	Year 2 Number of Hours	Year 2 Total Amount for Year 2	Year 3 Amount per hour	Year 3 Number of Hours	Year 3 Total Amount for Year 3
Personnel										
District Manager	$ 2,160.00	$ -		$ -	$ -		$ -	$ 27.00	80	$ 2,160.00
Project Manager	$ 5,625.00	$ -		$ -	$ -		$ -	$ 25.00	225	$ 5,625.00
Project Coordinator	$ 3,360.00	$ -		$ -	$ -		$ -	$ 21.00	160	$ 3,360.00
Secretary	$ 612.00	$ -		$ -	$ -		$ -	$ 17.00	36	$ 612.00
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 11,757.00**			**$ -**			**$ -**			**$ 11,757.00**
[1/] Benefits as percent of salary	28%			$0.00			$0.00			$3,291.96
Personnel Total (salary + benefits)	**$15,048.96**			**$0.00**			**$0.00**			**$15,048.96**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 150.00			$ -			$ -			$ 150.00
2/ Travel and Per Diem	$ 75.00			$ -			$ -			$ 75.00
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 225.00**			**$ -**			**$ -**			**$ 225.00**
[5/] Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ -			$ -			$ 2,291.09
Total Costs for Task Nine	**$ 17,565.05**			**$ -**			**$ -**			**$ 17,565.05**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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3/ Please provide a list and cost of major equipment ($5,000 or more) to be purchased, and complete "Equipment Detail" Worksheet
4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")
5/ Indicate rate in column immediately to the right of this cell; and provide a description of what expenses are covered by overhead. If overhead is > 15% must provide justification

BUDGET FOR TASK TEN	TOTAL AMOUNT TASK 10 All Years	Year 1 Amount per hour	Year 1 Number of Hours	Year 1 Total Amount for Year 1	Year 2 Amount per hour	Year 2 Number of Hours	Year 2 Total Amount for Year 2	Year 3 Amount per hour	Year 3 Number of Hours	Year 3 Total Amount for Year 3
Personnel										

District Manager	$ 1,080.00	$ -		$ -	$ -		$ -	$ 27.00	40	$ 1,080.00
Project Manager	$ 750.00	$ -		$ -	$ -		$ -	$ 25.00	30	$ 750.00
Secretary	$ 612.00	$ -		$ -	$ -		$ -	$ 17.00	36	$ 612.00
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ 2,442.00**			**$ -**			**$ -**			**$ 2,442.00**
[1/] Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$2,442.00**			**$0.00**			**$0.00**			**$2,442.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ 50.00			$ -			$ -			$ 50.00
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ 50.00**			**$ -**			**$ -**			**$ 50.00**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)	15%			$ -			$ -			$ 373.80
Total Costs for Task Ten	**$ 2,865.80**			**$ -**			**$ -**			**$ 2,865.80**

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BUDGET FOR TASK ELEVEN	**TOTAL AMOUNT TASK 11 All Years**	**Year 1** Amount per hour	**Year 1** Number of Hours	**Year 1** Total Amount for Year 1	**Year 2** Amount per hour	**Year 2** Number of Hours	**Year 2** Total Amount for Year 2	**Year 3** Amount per hour	**Year 3** Number of Hours	**Year 3** Total Amount for Year 3
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -

	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
1/ Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
5/ Overhead Percentage (Applied to Personnel & Other Costs)				$ -			$ -			$ -
Total Costs for Task Eleven	**$ -**			**$ -**			**$ -**			**$ -**

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		Year 1			Year 2			Year 3		
BUDGET FOR TASK TWELVE	**TOTAL AMOUNT TASK 12 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
1/ Benefits as percent of salary				$0.00			$0.00			$0.00

Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
5/ Overhead Percentage (Applied to Personnel & Other Costs)				$ -			$ -			$ -
Total Costs for Task Twelve	**$ -**			**$ -**			**$ -**			**$ -**

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		Year 1			Year 2			Year 3		
BUDGET FOR TASK THIRTEEN	**TOTAL AMOUNT TASK 13 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
1/ Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -

Detailed Budget Breakdown by Task and by Fiscal Year

2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
5/ Overhead Percentage (Applied to Personnel & Other Costs)				$ -			$ -			$ -
Total Costs for Task Thirteen	**$ -**			**$ -**			**$ -**			**$ -**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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BUDGET FOR TASK FOURTEEN	**TOTAL AMOUNT TASK 14 All Years**	**Year 1**			**Year 2**			**Year 3**		
		Amount per hour	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
1/ Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -

Other Costs Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)				$ -			$ -			$ -
Total Costs for Task Fourteen	**$ -**			**$ -**			**$ -**			**$ -**

1/ Indicate your rate, and change formula in column immediately to the right of this cell

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		Year 1			Year 2			Year 3		
BUDGET FOR TASK FIFTEEN	**TOTAL AMOUNT TASK 15 All Years**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 1**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 2**	**Amount per hour**	**Number of Hours**	**Total Amount for Year 3**
Personnel										
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
	$ -	$ -		$ -	$ -		$ -	$ -		$ -
Personnel Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
[1/] Benefits as percent of salary				$0.00			$0.00			$0.00
Personnel Total (salary + benefits)	**$0.00**			**$0.00**			**$0.00**			**$0.00**
Other Costs	**Total All Years**			**Total Year 1**			**Total Year 2**			**Total Year 3**
Operating Expenses: (ex: seed, plant materials, irrigation supplies, software, office supplies, etc)	$ -			$ -			$ -			$ -
2/ Travel and Per Diem	$ -			$ -			$ -			$ -
3/ Equipment	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
4/ Sub-Contractor	$ -			$ -			$ -			$ -
Other Costs Subtotal	**$ -**			**$ -**			**$ -**			**$ -**
[5/]Overhead Percentage (Applied to Personnel & Other Costs)				$ -			$ -			$ -
Total Costs for Task Fifteen	**$ -**			**$ -**			**$ -**			**$ -**

Detailed Budget Breakdown by Task and by Fiscal Year

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4/ Please list each subcontractor and amounts (if subcontractor not selected yet, use function like "ditch construction subcontractor")
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Environmental Compliance

CEQA Compliance

Which type of CEQA documentation do you anticipate?
− none *Skip the remaining questions in this section.*
− negative declaration or mitigated negative declaration
− EIR
X categorical exemption *A categorical exemption may not be used for a project which may which may cause a substantial adverse change in the significance of a historical resource or result in damage to scenic resources within an officially designated state scenic highway.*

If you are using a categorical exemption, choose all of the applicable classes below.

− Class 1. Operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. The types of "existing facilities" itemized above are not intended to be all−inclusive of the types of projects which might fall within Class 1. The key consideration is whether the project involves negligible or no expansion of an existing use.

− Class 2. Replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

− Class 3. Construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

− Class 4. Minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

X Class 6. Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

– Class 11. Construction, or placement of minor structures accessory to (appurtenant to) existing commercial, industrial, or institutional facilities, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

Identify the lead agency.
Western Shasta Resource Conservation District
Please write out all words in the agency title other than United States (Use the abbreviation "US".) and California (Use the abbreviation "CA".).

Is the CEQA environmental impact assessment complete?
No.

If the CEQA environmental impact assessment process is complete, provide the following information about the resulting document.

Document Name

State Clearinghouse Number

If the CEQA environmental impact assessment process is not complete, describe the plan for completing draft and/or final CEQA documents.

Western Shasta RCD staff will prepare the Categorical Exemption documentation and file it with the Shasta County Clerk for 30 days.

NEPA Compliance

Which type of NEPA documentation do you anticipate?
X none *Skip the remaining questions in this section.*
– environmental assessment/FONSI
– EIS

– categorical exclusion

Identify the lead agency or agencies.

Please write out all words in the agency title other than United States (Use the abbreviation "US".) and California (Use the abbreviation "CA".).

If the NEPA environmental impact assessment process is complete, provide the name of the resulting document.

If the NEPA environmental impact assessment process is not complete, describe the plan for completing draft and/or final NEPA documents.

Successful applicants must tier their project's permitting from the CALFED Record of Decision and attachments providing programmatic guidance on complying with the state and federal endangered species acts, the Coastal Zone Management Act, and sections 404 and 401 of the Clean Water Act.

Please indicate what permits or other approvals may be required for the activities contained in your proposal and also which have already been obtained. Please check all that apply. If a permit is *not* required, leave both Required? and Obtained? check boxes blank.

Local Permits And Approvals	Required?	Obtained?	Permit Number (If Applicable)
conditional Use Permit	–	–	
variance	–	–	
Subdivision Map Act	–	–	
grading Permit	–	–	
general Plan Amendment	–	–	
specific Plan Approval	–	–	
rezone	–	–	
Williamson Act Contract Cancellation	–	–	
other	X	–	

Landowner Permission			

State Permits And Approvals	Required?	Obtained?	Permit Number (If Applicable)
scientific Collecting Permit	–	–	
CESA Compliance: 2081	–	–	
CESA Complance: NCCP	–	–	
Lake Or Streambed Alteration Agreement	–	–	
CWA 401 Certification	–	–	
Bay Conservation And Development Commission Permit	–	–	
reclamation Board Approval	–	–	
Delta Protection Commission Notification	–	–	
state Lands Commission Lease Or Permit	–	–	
action Specific Implementation Plan	–	–	
SWRCB Water Transfer Approval	–	–	
other	–	–	

Federal Permits And Approvals	Required?	Obtained?	Permit Number (If Applicable)
ESA Compliance Section 7 Consultation	–	–	
ESA Compliance Section 10 Permit	–	–	
Rivers And Harbors Act	–	–	
CWA 404	–	–	
other	–	–	

Permission To Access Property	Required?	Obtained?	Permit Number (If Applicable)
permission To Access City, County Or Other Local Agency Land Agency Name	–	–	
permission To Access State Land Agency Name	–	–	

permission To Access Federal Land Agency Name	**_**	**_**	
permission To Access Private Land Landowner Name	**_**	**_**	

If you have comments about any of these questions, enter them here.

Most of the land in this watershed is privately owned, so we do not expect any other permissions except from private landowners. Currently ten of the 41 landowners are already signed up for other conservation work with the Natural Resources Conservation Service. The Cow Creek Watershed Management Group will assist with landowner permissions, which are not expected to be a problem.

Land Use

Does the project involve land acquisition, either in fee or through easements?
X No. *Skip to the next set of questions.*
– Yes. *Answer the following questions.*

How many acres will be acquired by fee?

How many acres will be acquired by easement?

Describe the entity or organization that will manage the property and project activities, including operation and maintenance.

Is there an existing plan describing how the land and water will be managed?
X No.
– Yes. *Cite the title and author or describe briefly.*

Will the applicant require access across to or through public or private property that the applicant does not own to accomplish the activities in the proposal?
– No. *Skip to the next set of questions.*
X Yes. *Answer the following question.*

Describe briefly the provisions made to secure this access.

Landowner Temporary Entry Permits will be signed with landowners to analyze the water diversions. In the current CALFED projects in the Cow Creek Watershed we have had almost 100% landowner participation due to the work of the DOC funded Cow Creek Watershed Coordinator, who is also a resident in the watershed.

Do the actions in the proposal involve physical changes in the current land use?
X No. *Skip to the next set of questions.*
– Yes. *Answer the following questions.*

Describe the current zoning, including the zoning designation and the principal permitted uses permitted in the zone.

Describe the general plan land use element designation, including the purpose and uses allowed in the designation.

Describe relevant provisions in other general plan elements affecting the site, if any.

Is the land mapped as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance under the California Department of Conservation's Farmland Mapping and Monitoring Program?
– No. *Skip to the next set of questions.*
X Yes. *Answer the following questions.*

Land Designation	Acres	Currently In Production?
Prime Farmland	**3855.78**	**X**
Farmland Of Statewide Importance	**1095**	**X**
Unique Farmland	**110.29**	**X**
Farmland Of Local Importance	**4412.23**	**X**

Is the land affected by the project currently in an agricultural preserve established under the Williamson Act?
– No. *Skip to the next set of questions.*
X Yes. *Answer the following question.*

Is the land affected by the project currently under a Williamson Act contract?
– No. *Skip to the next set of questions.*
X Yes. *Answer the following question.*

Why is the land use proposed consistent with the contract's terms?

There are 75,121 acres in Williamson Act contracts in the Cow Creek Watershed. Projects that will result from this study will have the added protection of the Williamson Act.

Describe any additional comments you have about the projects land use.

We were not able to identify the number of irrigated acres in the watershed, which might have been helpful in this proposal.